Self-Study Report

Southeastern Oklahoma State University

for the

Aviation Accreditation Board International

1 November, 2016
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OVERVIEW
OUTLINE FOR A SELF-STUDY REPORT

Preparation of the Self-Study Report

The Self-Study Report serves three purposes: (1) to guide the aviation unit (and its faculty) through a critical review of its operations; (2) to provide information to AABI so that a fair evaluation of the program can be made; and (3) to serve as a historical document for the aviation unit. These purposes should be kept in mind when preparing the report. Sufficient information should be provided without being superfluous. However, extra information may be included to enhance the historical value of the document.

(Experience has shown that the value and quality of the Self-Study is directly proportional to the extent of aviation faculty involvement in the Self-Study process. The Self-Study should be a report of the entire faculty and should reflect their input.)

Adjustments must be made to the terminology to fit local conditions (i.e., semester/quarter, college/school, ACT/SAT or international equivalent). Use the terms and accounting procedures of your institution for student credit hours, full-time faculty and full-time students. If the aviation unit offers a graduate program, its relationship to the undergraduate program should be discussed where appropriate. Information available in published literature may be included in the report by appropriate reference.

Where applicable, additional sheets may be inserted immediately following the pages to which they pertain. Such pages should be numbered with the number of the preceding page plus a sequence number (i.e., 36-1 for the preprinted page, then 36-2, etc.). Major additional information should be placed in an appendix. Label appendices with the sequential letters (i.e., A, B, C, etc.), and number the pages of each appendix. Separate the major sections with a divider. Sections I through Section X should constitute Volume I; and Section XI, the Appendices, Volume II.

For institutions completing a preliminary Self-Study Report, the sections to be completed are noted in the Table of Contents.

Distribution of the Self-Study Report

Upon its completion, the institution submits two (hard) copies and an electronic version of the Self-Study Report to the Executive Director of AABI, and one copy to the Chair of the Accreditation Committee. If the institution is approved for the on-site visit, additional copies will be provided to the Visiting Team members by the institution. The exact number will depend on the size of the Team but will be at least three.
SECTION I

INTRODUCTION

Aviation Unit

Provide background information about the aviation unit, i.e. describe its origins, developmental history, current organizational structure and aviation program(s).

The aviation program began offering a Bachelor of Science degree in 1967 and was housed in the School of Technology. In the early 70’s the program included the A&P training but was moved from the university system to the VOTECH system in the early 80’s. The aviation program bought aircraft and began conducting flight training in Durant in the late 70’s. In the early 80’s the School of Technology was reorganized and the aviation program was moved to the School of Business.

In 2000 the aviation program added the Aviation Management degree as well as the Master of Science Degree in Aerospace Administration. At this time the aerospace department accepted the role of Parent University in the Oklahoma City Aviation Education Alliance and began offering all degree options at Tinker Air Force Base.

In 2001 the organizational structure of the Aviation Department changed and developed into the Aviation Sciences Institute with separate aviation departments and the Master of Science Degree in Aerospace Administration was changed to Master of Science Degree in Aerospace Administration and Logistics.

At that time the structure and placement of the Aviation Sciences Institute was:

- President, Southeastern Oklahoma State University
- Vice President for Academic Affairs
- Dean – John Massey School of Business
- Director, Aviation Sciences Institute & Chair of Graduate Studies
  - Chair, Flight Department and
  - Chair, Department of Aviation Management

In 2004 SOSU partnered with Oklahoma City Community College and Rose State College to begin a joint effort to accommodate students by offering the undergraduate management degrees and the graduate degree.

In 2012 SOSU evolved from a university with three Schools with their own Deans to a solitary Dean of Instruction. The ASI, technically still a part of ther John Massey School of Business, became just one of many departments under the single Dean of Instruction.

In 2014 the Director of the ASI retired and the school administration elected not to fill that position resulting in the two department Chairs acting as Interim-Co-Directors. In January of 2015 the two ASI Department Chairs officially became Co-Directors of the ASI under the now re-named Executive Dean of Instruction and the Chair of Aviation Magament also assumed the duties as Chair of the Graduate Program.

In July of 2016 the Executive Dean of Instruction retired and the school administration elected not to fill that position. This left SOSU with no one in a position as Dean. This shit to zero deans required further changes in the structure of the university. At the time of this writing the ASI falls under the following administrative structure:
The overarching goal of the Aviation Sciences Institute has remained to provide a quality education that promotes safe and efficient operations within the aerospace industry.
## SECTION II

**STUDENTS - Professional Pilot**  
(AABI 201, Criteria 2.1, 3.1)

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II. A. Student Criterion

Describe the process by which your institution meets the following criteria. Cite appropriate evidence and describe where it may be found/evaluated by the visiting team:

1. Evaluates, advises, and monitors students to determine its success in meeting program objectives

Before graduation, each professional pilot major will have been evaluated 15 times by the Chief Flight Instructor, Assistant Chief flight Instructor, or a designated Check Instructor. These evaluations, referred to as stage checks, are one on one and contain both an oral and flight component. Successful completion of these stage checks is required before recommendation to the FAA for certification. Additionally, each professional pilot major will be evaluated by the FAA during 6 practical examinations (check rides) and 6 computerized knowledge exams.

Taken from the University’s web page, www.Se.edu

Senior Assessment

All students at Southeastern are required to participate in a variety of assessment activities. Exit-level assessment is conducted during the senior year in the major field. Assessments within the major may also be required at other times. In addition to the above activities, students are required to respond to surveys and submit samples of their work for portfolios.

Students are advised of the following: (Taken from the University’s web page, WWW.SE.EDU)

- Southeastern Oklahoma State University helps students plan for graduation by providing clear information about requirements that you and your advisor can use to plan your course work and by providing sufficient places in the classes you will need. You also will use the Schedule of Classes, departmental materials, and other sources of information to develop and monitor your plan for graduation.
- To graduate in four years you need to complete 30-32 semester hours each year. Some students do this by taking 15 semester hours one semester and 16 in the other; others will take fewer hours each semester but schedule summer classes to make up the difference.
- In order to graduate in four years, you will need to be somewhat flexible sometimes you will have to take a class at a time that may not be completely convenient, or you may need to substitute an alternative class for one that is unavailable during a specific semester or at a specific time.
- Attending class is only part of earning a degree. To do well, you will need to maintain a ratio of class time to study time of at least two hours of study for every one hour of class credit. This ratio means that enrolling in 15-16 semester hours assumes a 30-hour-per-week study commitment, or a total of 45-48 hours each week devoted to your degree. Over the course of a week, even a 45-hour commitment can allow for a part-time job, a social life, and other activities. But good time management skills are very important. This may be a subject you will want to discuss with your advisor.
- Every semester you should review your plan with your advisor to be sure that you are still on track and to incorporate any changes that are appropriate.
How the Plan Works

• If you are interested in a four-year degree, you should meet with your advisor early in your freshman year to develop your graduation plan and request a four-year Graduation Plan Agreement.
• Once your plan is complete, you should sign the four-year Graduation Plan Agreement and file a copy with your advisor and the Dean of the School of your major program.
• Every semester, you and your advisor will check your plan to help you see the overall picture. The plan will serve as your map to your graduation goal.

2. Has and enforces policies for the acceptance of transfer students and for the validation of courses taken for credit elsewhere

Residence Experience requirements specific to the Professional Pilot program can be found on page 103 of the 2009-2011 academic catalog. It states the following:

One-third of all Professional Pilot Major-Minor courses must be accomplished in residence at Southeastern Oklahoma State University. In addition, the Professional Pilot degree requires that at least the last two flight courses, to include the corresponding ground courses, must be accomplished in residence. In the event a student applying for admission to the aviation program exceeds the two-thirds maximum flight credit hours at the time of application, a special committee may be convened to establish a satisfactory flight curriculum to meet the one-third residency requirement, and, if possible, avoid repetition. It is possible that courses may be repeated. In no case will the requirement to accomplish the last two flight courses in residence be waived. Once a student is admitted to Southeastern’s Aviation Sciences Institute, all flight training credit must be completed at SE or through another regionally accredited university aviation program.

Advance Standing credit may be offered for FAA Airman Certificates and Ratings in accordance with the ASI Advance Standing policy. Page 8 of Our Standard Operating Procedures manual (SOP) states the following:

After enrolling at Southeastern, credit will only be granted for that flight training accomplished with the ASI or another approved and accredited collegiate aviation program.

According to Southeastern admissions policies “work taken at junior or community colleges cannot be counted in meeting the upper-division requirements of Southeastern Oklahoma State University. Upper-division requirements relate to junior and senior (3000/4000 level) courses of study. Students who believe that their courses taken at a junior college are equivalent to courses taught at Southeastern Oklahoma State University may take an Advance Standing examination to validate that level of achievement.” Please refer to the SOSU undergraduate catalog for additional information.

In order to earn college credit through advance standing, the student must hold that certificate or rating (FAA) prior to enrollment at Southeastern. Students may not apply for advance standing credit until their final semester of their senior year. This will be accomplished in conjunction with their graduation clearance letter.

Student who would like college credit for previous flight training must contact the Chief Flight Instructor to schedule an evaluation. Evaluation sessions will contain both a ground and flight component and must be completed before the student begins their flight training within the Aviation Sciences Institute. These sessions will be completed on a first come first serve basis and will be scheduled at time suitable to the Chief Flight Instructor.

Once a flight student is admitted to Southeastern Oklahoma State University’s Aviation Sciences Institute, all flight training credit must be completed in residence or, with prior approval of the Department Chair, through another university aviation program.
Every attempt will be made to minimize the need to repeat previous training. In all cases, the amount and type of credit granted is at the complete discretion of the Chief Flight Instructor.

Information concerning acceptance of transfer students to the university and validation of courses taken for credit elsewhere can be found on pages 26-28 of the 2009-2011 academic catalog.

**Admission By Transfer**

A transfer student is any undergraduate student with greater than six attempted credit hours, excluding remedial (zero-level courses) or pre-college work and excluding credit hours accumulated by concurrently enrolled high school students.

**Transfer Students From Within the Oklahoma State System**

An undergraduate student who wishes to transfer to Southeastern Oklahoma State University from another State institution may do so under the following conditions:

1. All students must meet the curricular requirements as outlined for new freshman admission before transferring to Southeastern Oklahoma State University.
2. Students transferring to Southeastern before achieving 24 attempted semester credit hours, must meet the academic performance standards as required for new freshman admission and must have a grade-point average high enough to meet Southeastern’s retention requirements.
3. Students who do not meet Southeastern’s performance requirements for new freshman admission and are transferring after achieving 24 or more attempted semester credit hours must have a grade-point average high enough to meet Southeastern’s retention requirements, based on regularly graded (A, B, C, D, F) college work.

Transfer students may be subject to College Placement testing.

**Transfer Students from Out-of-State Institutions**

Undergraduate students wishing to transfer from an out-of-state college or university to Southeastern Oklahoma State University must meet Southeastern’s entrance requirements as outlined above and fulfill the appropriate criteria listed below:

1. Submit official transcripts of record from all colleges or universities accredited by the The Higher Learning Commission: A Commission of the North Central Association of Colleges and Schools or other regional associations and meet the following criteria:
   a. Be in good standing with the institution from which s/he plans to transfer.
   b. Have made satisfactory progress (an average grade of “C” or better; 2.0 on 4.0 scale) in the institution from which s/he plans to transfer.
2. Official transcripts of record from institutions not accredited by a regional association may be accepted in transfer when appropriate to the student’s degree program and when the University has had an opportunity to validate the courses or programs.
   a. Each nonresident undergraduate applicant must meet both conditions listed in Criteria 1 above.
   b. Each nonresident undergraduate applicant who meets Criteria 1 will also be required to validate the transferred credit by making satisfactory progress (an average of “C” or better; 2.0 on 4.0 scale) for at least one semester.

**Transfer Probation**

Students who do not meet the academic criteria for transfer students, including curricular/skills requirements set for new freshman admission, and have not been formally suspended may be admitted as “transfer probation” students.
Students seeking admission in this category must fulfill the following criteria:

1. Apply in writing to the Office of Admissions.
2. Be interviewed by the Director of Admissions.
3. Have participated or participate in the ACT or similar battery of tests.
4. Be screened for skills deficiencies.

A student admitted with a deficiency (either curricular or skills), will be referred to the Advising Center for supervision in removing the deficiency within the first 12 hours of enrollment.

Students in this category are admitted on probation and must maintain a 2.0 GPA each semester, excluding activity/performance courses, while on probation to raise their cumulative retention/graduation GPA to the designated level, as detailed in the retention requirements. In addition, a student will not be able to pre-enroll while on probation so retention standards can be monitored.

Articulation Policy

In accordance with the Oklahoma State Regents for Higher Education, Southeastern Oklahoma State University fully participates in the articulation policy for the transfer of students among Oklahoma public institutions. A student transferring to Southeastern Oklahoma State University with an Associate of Arts or an Associate of Science degree from any State System institution will be considered to have completed the general education requirements of the baccalaureate degree. There may be some exceptions to this policy, where some students may have to take additional courses in general education to meet minimum professional certification requirements as defined by the State.

Articulation Agreements

Southeastern Oklahoma State University has articulation agreements with four junior colleges in North Texas: Collin County Community College, Grayson County College, Paris Junior College, and North Central Texas College. A student who is transferring from one of these colleges with an associate degree, as listed below, shall have acceptance of academic credits earned at the junior college, with the condition that all requirements for graduation from Southeastern be met within his or her program of studies at the junior college and South-eastern Oklahoma State University.

Collin County Community College
Associate of Arts or
Associate of Science

Paris Junior College
Associate of Arts or
Associate of Science

Grayson County College
Associate of Science

North Central Texas College
Associate of Arts or
Associate of Science
(Plus two semesters of lab science and one semester of college-level mathematics.)

These agreements are subject to the following provisions:

1. The student shall have earned a minimum cumulative grade-point average of 2.0 on a 4.0 scale (an average grade of “C” or better) or the equivalent.
2. The core curriculum for the associate degrees listed above will be accepted as satisfying the general education requirements at Southeastern, with the exception of North Central Texas
College, where students must have also completed two semesters of lab science and one semester of college-level mathematics.

3. Courses that are academically equivalent to courses at Southeastern will be transferred, and they will receive credit at the lower-division level. A few selected courses may require validation to substitute for Southeastern courses.

4. The student shall earn a minimum of sixty (60) semester hours at Southeastern (excluding physical education activity courses) for a minimum of 124 semester hours for a baccalaureate degree. Some programs (i.e., teacher education and aerospace studies) may have more restrictive degree or admission criteria.

These articulation agreements may be modified or terminated by any institution involved at any time.

Acceptance of Transfer Credits
Southeastern Oklahoma State University accepts credits earned at junior and senior colleges that are accredited by the regional accrediting associations, such as the The Higher Learning Commission: A Commission of the North Central Association of Colleges and Schools. Students transferring from junior community colleges need to be aware that a minimum of 60 semester hours of course work (excluding physical education activity courses) applied toward the bachelor’s degree must be earned at a senior institution.

Work taken at junior or community colleges cannot be counted in meeting the upper-division requirements of Southeastern Oklahoma State University, even if the course is equated to a 3000/4000 level course at Southeastern. Upper-division requirements relate to junior and senior (3000/4000 level) courses of study. Transfer credits are accepted and applied to degree programs generally in accordance with the recommendations in the Transfer Credit Practices Guide published by AACRAO (American Association of Collegiate Registrars and Admissions Officers). Consequently, credits from some technical colleges and professional schools may not be applicable toward degree requirements at Southeastern Oklahoma State University due to the highly technical or specialized nature of the credits earned.

Once the student is currently enrolled in course work at Southeastern Oklahoma State University, transfer credits will be recorded from the official transcript of each accredited institution attended by the student. Transfer credit will not be recorded if the student is not currently enrolled at Southeastern.

3. **Has and enforces procedures to assure that all students meet all program requirements**

An advising checklist/clearance letter is stored on a shared drive for each student. With this document, academic advisors are able to monitor a student’s progress throughout the program. A copy of document has been included in the appendix to this section.

Per page 103 of the 2009-2011 academic catalogs, a minimum GPA of 2.5 is required in all Professional Pilot and Aviation Management Major-Minor degree requirements including specified general education requirements. In addition, no grade less than C in Professional Pilot ground courses is acceptable.

Additional and Graduation Information for all Southeastern students can be found on page 62 of the same catalog.

Graduation Information
Degrees are formally conferred during the fall and spring commencement exercises and awarded in absentia at the end of each summer session. Diplomas are mailed approximately six weeks following the official graduation date for summer and eight weeks for fall and spring. The degree and date of the diploma are entered on the student’s permanent transcript record. It is the student’s responsibility to make sure all degree requirements have been met. Students completing degree requirements at the end of a summer semester may participate in the following fall commencement.
Application for Graduation

Students seeking a bachelor’s degree should obtain an “Application for Graduation” from the Office of the Registrar and apply for graduation the semester in which they plan to complete all degree requirements. To begin the application process, an appointment for a final graduation check should be made in the Office of the Registrar for bachelor’s degrees and in the Graduate Office for master’s degrees by April 1 (Spring), July 1 (Summer), or November 1 (Fall). It is the responsibility of the student to initiate the process for graduation. Students should request a General Education evaluation by the Office of the Registrar upon completion of 60 semester hours.

A graduation fee of $25 must be paid in the Business Office upon completing the application process. Diplomas are mailed to the student’s permanent address on record in the Office of the Registrar.

Graduation Check List

The process to apply for graduation is a multi-step process. To ensure proper application for graduation, students should complete the following steps in sequential order:

1. Contact the Office of the Registrar to make an appointment for a final graduation check.
2. Obtain and complete an “Application for Graduation” from the Office of the Registrar.
3. Present your “Application for Graduation” when you appear for your appointment in the Office of the Registrar. The Office of the Registrar will review your file and perform a final graduation check to ensure that you have completed all general education and graduation requirements.
4. Make an appointment to meet with your advisor to complete a final degree check. Your advisor must verify that all major requirements will be met by the end of the semester and provide a final “Clearance Note”. Depending on your major and/or minor, approval from the department chair and/or second major/minor advisors may also be required.
5. Once approved for graduation by your advisor, return the Clearance Note to the Office of the Registrar.
6. To finalize the process, you will be given a “Graduation Clearance Note” (GCN). In addition, you will receive information on participation in the commencement ceremony.
7. Take the GCN to the Financial Aid Office.
8. When cleared by the Financial Aid Office, take the GCN to the Business Office where you will pay the $25 graduation fee.

Upon completion of these steps, you will be officially approved for graduation.

4. Publishes standards for the selection and admission of students which are related to the educational mission and purposes of the institution

Admission Requirements

There are no admission requirements specific to aviation majors. Although Professional Pilot majors are required to obtain an FAA first class medical certificate, our majors must meet the same requirements as those outlined for all Southeastern Oklahoma State University students. These requirements can vary from year to year. Undergraduate admission is based on the students’ previous educational background. An applicant is classified into one of the
following categories based on previous educational experience. These categories determine what requirements must
be met for admission to SOSU.

High School Curricular Requirements

Entering freshman students must have completed the high school curricular requirements listed below.

Units (Years) Course Areas

4 English (Grammar, Composition, Literature)
3 Lab Science (from Biology, Chemistry, Physics or any lab science certified by the school
district, with the exception of General Science, with or without a lab)
3 Mathematics (from Algebra I, Algebra II, Geometry, Trigonometry, Math Analysis, Calculus)
(These may NOT be counted: applied math, statistics, computer science, intermediate algebra or
math finance)
3 History and Citizenship Skills (including 1 unit of American History and 2 additional units
from the subjects of History, Economics, Geography, Government, Non-Western Culture)
2 Additional units* of subjects previously listed or selected from the following: Computer
Science, Foreign Language

15 Total Required Units

The fifteen high school units set forth above will be required for admission. In addition, the following subjects
are recommended for college preparation.

2 Additional units: Fine Arts – music, art, drama; Speech.
1 Additional unit: Lab Science (as described above)
1 Additional unit: Mathematics (as described above)
4 Total Recommended Units

The remaining units required by the State Board of Education for high school graduation may be selected from
courses to meet students’ individual needs and interests.

While these curricular requirements will normally be met by students in grades 9 through 12, advanced students
who complete these courses in earlier grades will not be required to take additional courses for purposes of
admission.

Students pursuing admission to baccalaureate degree programs may not count courses used to make up high
school curricular deficiencies toward satisfaction of degree program requirements.

* A student with a deficiency in this area may also be admitted as a regular student, but will be required to take an additional three-hour
college-level course in one of the subject areas listed.

Procedures for Post-High School Completion of the College Admission Curricular Requirements

Students who are admitted to Southeastern, but have not completed the curricular requirements cannot enroll in a
college-level course in the discipline area in which the deficiency exists; e.g., a student lacks a laboratory science,
enrollment in a college-level science course is prohibited until the deficiency is met and the grade is transcripted.
Curricular deficiencies may be met by the following options:

1. Successfully completing courses designated by 0-level numbers which satisfy high school equivalency
courses as approved by the Oklahoma State Regents for Higher Education. Students with a curricular
deficiency are admissible for the summer term only (see “Summer Provisional” section in this
chapter).**

Zero-Level Courses:
- ENG 0123 Pre-College English
- MATH 0114 Elementary Algebra
- MATH 0123 Intermediate Algebra
2. Curricular deficiencies may be cleared by performing at the 50th percentile* or higher on the appropriate College Placement Test (CPT) administered by Southeastern.**

3. Curricular deficiencies may be cleared by achieving a 19* or higher on the respective ACT subscore. Comparable Recentered SAT critical reading (460)* and math (460)* scores meet the curricular deficiencies in English and mathematics, respectively. The ACT reading subscore or the SAT critical reading will waive a history deficiency for admission purposes only. The additional history requirement must still be met before graduation.**

Entry-Level Assessment: Basic Skills Testing and Placement

All students admitted to Southeastern Oklahoma State University are required to participate in a variety of assessment activities.

Southeastern Oklahoma State University provides a program of basic skills testing and several developmental courses that are designed to help students enhance their proficiency in the basic skill areas of English, mathematics, reading, and science. Students required to enroll in these courses (ENG 0123, MATH 0114, MATH 0123, READ 0123, and SCIE 0124) will ultimately benefit by having stronger skills in these important academic abilities.

Participation in basic skills testing [ETS Computerized Placement Tests (CPT) or departmental test] is required if a first-time freshman has the following subscores on the ACT or SAT:

1. ACT in English below 19*; Recentered SAT Verbal 460 (CPT)
2. ACT in Math below 19*; Recentered SAT Quantitative 460 (CPT)
3. ACT in Reading below 19*; Recentered SAT Verbal 460 (CPT)
4. ACT in Science below 19*; no SAT equivalent exists (Institutional Science Test)

A score on the CPT or the Institutional Science Test of the 50th percentile or higher is required to demonstrate basic skills proficiency in English, mathematics, reading and science. If a score of 50th percentile or higher is not attained, the student must enroll in the appropriate developmental course to gain basic skills proficiency: ENG 0123 or equivalent course; MATH 0114, MATH 0123, or equivalent course; READ 0123 or equivalent course; and/or SCIE 0124 or equivalent course. These courses must be completed within the first twenty-four semester hours attempted; otherwise, future enrollments by the student may be limited to only the required zero-level courses until successful completion.

* These scores are reviewed annually by the Oklahoma State Regents for Higher Education and are subject to change without further notice. Contact the Office of Admissions for current admission/assessment standards.

5. Maintains recent examples of student work, to include examinations, homework problems, laboratory exercises, and reports. These items will include evidence of student competence in both subject matter areas and communications skills.

Random examples of student work, examinations, homework problems, laboratory exercises, and reports are stored on a shared network drive that is accessible to all members of the aviation faculty.

6. Assesses the effectiveness of its validation methods in granting credit for non-collegiate achievement
The American Council on Education (ACE) administers the Registry of Credit Recommendations for organizations participating in the College Credit Recommendation Service (CCRS) [formerly called Program on Noncollegiate Sponsored Instruction (PONSI)]. The registry offers the sponsor’s course participants a permanent, computerized record of all courses evaluated by the College Credit Recommendation Service.

Currently enrolled students may be granted credit in accordance with the American Council on Education (ACE) recommendations, after completion of 12 semester hours of course work at Southeastern Oklahoma State University. To obtain credit, the student must have a transcript provided by the American Council on Education (ACE).

Credit for previous flight experience may be granted via FAA certificates or flight and ground evaluations based upon 14 CFR Part 141 guidelines and requirements. Student who would like college credit for previous flight training must contact the Chief Flight Instructor to schedule an evaluation. Evaluation sessions will contain both a ground and flight component and must be completed before the student begins their flight training within the Aviation Sciences Institute.

Once a flight student is admitted to Southeastern Oklahoma State University’s Aviation Sciences Institute, all flight training credit must be completed in residence or, with prior approval of the Department Chair, through another university aviation program.

Every attempt will be made to minimize the need to repeat previous training. In all cases, the amount and type of credit granted is at the complete discretion of the Chief Flight Instructor.

In all cases, one-third of all Professional Pilot major courses must be accomplished in residence. Additionally, the final two, most advanced, flight courses must be accomplished in residence. This requirement, that of requiring the most advanced ratings to be accomplished in residence, assures integrity and effectiveness of our validation methods.

7. Produces records of graduates’ employment or continuing education over a period of at least three years.

Alumni tracking has been identified as an area of needed improvement. We will begin surveying recent graduates this fall with plans to have sufficient data collected within a few months.
II. B. **Supporting Information**

**Admission Data Table**

1. Indicate the number of new students for the past five years in the program to be accredited. Classify transfers from other units within the institution as internal transfers. Classify transfers from other campuses or other institutions as external transfers. Classify returning students who were formerly enrolled in other units within the institution as re-admissions. Returning students who were formerly enrolled in the aviation program are not to be counted.

<table>
<thead>
<tr>
<th>Year</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>First year students</td>
<td>25</td>
<td>21</td>
<td>26</td>
<td>35</td>
<td>31</td>
</tr>
<tr>
<td>Internal transfers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>External transfers</td>
<td>9</td>
<td>12</td>
<td>11</td>
<td>17</td>
<td>5</td>
</tr>
<tr>
<td>Re-admissions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>34</td>
<td>33</td>
<td>37</td>
<td>52</td>
<td>36</td>
</tr>
</tbody>
</table>

2. Indicate the geographic distribution of the new students admitted within the past year.

<table>
<thead>
<tr>
<th>Year 2010-2011</th>
<th>Number of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-state/province</td>
<td>27</td>
</tr>
<tr>
<td>Out-of-state/province</td>
<td>34</td>
</tr>
<tr>
<td>International</td>
<td>1</td>
</tr>
<tr>
<td>Totals</td>
<td>62</td>
</tr>
</tbody>
</table>
Quality of New Students Table

Indicate the quality of the new students for the most recent full year. Show the average values.

<table>
<thead>
<tr>
<th>Year</th>
<th>Scores</th>
<th>High School Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACT or international equivalent (specify)</td>
<td>21</td>
<td>22</td>
</tr>
<tr>
<td>SAT or international equivalent (specify)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Enrollment Data Table

1. Indicate the total number of undergraduate students enrolled in the aviation program being submitted for accreditation during the fall semester or quarter for the past five years.

<table>
<thead>
<tr>
<th>Year</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>First year students</td>
<td>25</td>
<td>21</td>
<td>26</td>
<td>35</td>
<td>31</td>
</tr>
<tr>
<td>Second year students</td>
<td>11</td>
<td>8</td>
<td>13</td>
<td>13</td>
<td>16</td>
</tr>
<tr>
<td>Third year students</td>
<td>13</td>
<td>10</td>
<td>2</td>
<td>21</td>
<td>10</td>
</tr>
<tr>
<td>Fourth year students</td>
<td>16</td>
<td>25</td>
<td>14</td>
<td>8</td>
<td>19</td>
</tr>
<tr>
<td>Totals</td>
<td>65</td>
<td>64</td>
<td>55</td>
<td>77</td>
<td>76</td>
</tr>
</tbody>
</table>

2. Provide tabular data that indicate the approximate number of full-time and part-time undergraduate students for the fall semester or quarter for the past five years.

<table>
<thead>
<tr>
<th>Year</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full Time</td>
<td>57</td>
<td>54</td>
<td>47</td>
<td>67</td>
<td>69</td>
</tr>
<tr>
<td>Part Time</td>
<td>8</td>
<td>10</td>
<td>8</td>
<td>10</td>
<td>7</td>
</tr>
</tbody>
</table>

Define the institution's method of accounting for part-time students.

Academic Load (Taken from the university's Undergraduate Catalog)

A regular undergraduate student is classified as full-time if he/she is enrolled in twelve (12) or more hours. A summer term undergraduate student is classified as full-time if he/she is enrolled in six (6) or more hours.
The maximum load that an undergraduate student will normally be permitted to carry is 18 hours per semester. Students attaining a retention/graduation grade-point average of at least 3.0 and having completed a minimum of 15 semester hours will be permitted to carry up to a maximum of 21 hours during the next semester. Verification that the above criteria have been satisfied will be provided by the Office of the Registrar.

During the summer session, nine hours of work is the normal maximum load. Ten hours may be taken provided the student has attained an overall grade-point average of 3.0 and has completed a minimum of 15 semester hours. Verification that the above criteria have been satisfied will be provided by the Office of the Registrar.

Permission of the Dean of the School within which the student is majoring will be required for all other overload situations.

In the event of dual enrollment by a student at more than one institution, the preceding load limits apply to all college courses in which the student is enrolled.

**Grading System**

1. Briefly describe the institution's grading system.

   **Grade Calculation Table**

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
<th>Grade Points per Semester Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Excellent</td>
<td>4</td>
</tr>
<tr>
<td>B</td>
<td>Good</td>
<td>3</td>
</tr>
<tr>
<td>C</td>
<td>Average</td>
<td>2</td>
</tr>
<tr>
<td>D</td>
<td>Below Average</td>
<td>1</td>
</tr>
<tr>
<td>F</td>
<td>Failure</td>
<td>0</td>
</tr>
<tr>
<td>P</td>
<td>Passed</td>
<td>* (GPA Neutral)</td>
</tr>
<tr>
<td>NP</td>
<td>No Pass</td>
<td>* (GPA Neutral)</td>
</tr>
<tr>
<td>S</td>
<td>Satisfactory</td>
<td>** (GPA Neutral - Zero-Level)</td>
</tr>
<tr>
<td>U</td>
<td>Unsatisfactory</td>
<td>** (GPA Neutral - Zero-Level)</td>
</tr>
</tbody>
</table>

**Other Grade Symbols & Meanings**

- **I**
  - An incomplete may be used at the instructor’s discretion to indicate that additional work is necessary to complete a course. To receive an “I”, the student should have satisfactorily completed a substantial portion of the course work for the semester but may unable to complete the remaining work due to extenuating circumstances. The “I” will become permanent within one year of the date of its posting. An “I” is GPA neutral.
  
- **AU**
  - Audit status is used for the student not interested in obtaining a course grade, but who is enrolled simply to gain course information. Enrollment in a course under audit status requires permission of the academic department offering the course. The allowable time to change an enrollment status from audit to credit or from credit to audit is within the first five class days of a regular semester and within the first three class days of the summer term. An “AU” is GPA neutral.

- **N**
  - Used to indicate that the semester grade was not submitted by the instructor by the appropriate deadline. The “N” must be replaced by the appropriate letter grade prior to the end of the subsequent semester. An “N” is GPA neutral.

- **W**
  - Withdrawals transacted during the first five days of a regular semester or during the first three days of a summer term will not be recorded on the student transcript. A “W” will be recorded on the transcript for
### Other Grade Symbols & Meanings

<table>
<thead>
<tr>
<th>Grade Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>all withdrawals occurring during the sixth day through the eighth week in a regular semester or during the fourth day through fourth week in a summer session. Following these deadlines for automatic “W’s”, the student will receive a “W” or an “F” depending upon whether the student is passing or failing the course at the time of withdrawal. No course withdrawals, including complete withdrawals, are permitted during the last two weeks of the term. These deadlines are for regularly scheduled, full-term courses. All other courses will have proportional withdrawal timelines. A “W” is GPA neutral.</td>
</tr>
<tr>
<td>AW</td>
<td>An administrative withdrawal may be assigned by the Office of Academic Affairs to indicate that a student has been “involuntarily” withdrawn for disciplinary or financial reasons or for inadequate attendance. An “AW” is GPA neutral.</td>
</tr>
<tr>
<td>X</td>
<td>Indicates that graduate thesis or dissertation is in progress; will be subsequently replaced by appropriate grade. An “X” is GPA neutral.</td>
</tr>
</tbody>
</table>

### 2. Describe the institution's procedure for recognizing academic excellence.

#### Honor Graduates

The ten percent of each graduating class representing the highest grade-point averages are recognized as honor graduates at the commencement exercises. The honor graduates are recognized in three groups: summa cum laude (top 2%), magna cum laude (top 3% to 5%), and cum laude (top 6% to 10%). For consideration as an honor graduate, a student must fulfill the following requirements:

- Complete the requirements for his/her first bachelor’s degree.
- Complete a minimum of 40 semester hours in residence at Southeastern Oklahoma State University exclusive of the final semester of enrollment.
- Complete all courses required for the degree. (A student with an incomplete grade [I] in any course required for graduation will not be considered.)

In computing the grade-point average, all courses attempted, including those at other institutions attended, will be considered.

### 3. Describe the institution's procedure related to probation, suspension and re-admission.

#### Retention, Probation, & Readmission Policies

Southeastern Oklahoma State University, in cooperation with the Oklahoma State Regents for Higher Education, has adopted the following policy relating to retention of students pursuing undergraduate course work. The three-phase policy combines an early notification of students experiencing academic difficulties with a gradual increase in the overall standards required for
retention/continued enrollment at the University. All courses in which a student has a recorded grade will be counted in the calculation of the Retention/Graduation Grade-point Average (GPA) with the exception of those courses excluded as detailed in the preceding section, “Academic Forgiveness Policy”.

All students at Southeastern Oklahoma State University will be classified in one of the following categories for retention purposes:

**Good Academic Standing**

Any student who meets the Retention Requirements listed in Table A

<table>
<thead>
<tr>
<th>Credit Hours Attempted</th>
<th>Retention/Graduation GPA*</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 through 30</td>
<td>1.7</td>
</tr>
<tr>
<td>Greater than 30</td>
<td>2.0</td>
</tr>
</tbody>
</table>

**Academic Notice**

Any student with 30 or fewer credit hours, with a cumulative Retention/Graduation GPA of 1.70 to 1.99.

**Academic Probation**

Any student whose cumulative retention/graduation GPA falls below the stated Retention Requirements listed in table A below. Students placed on Academic Probation must maintain a minimum GPA of 2.00 (excluding activity/performance courses) for each term of enrollment until they achieve the cumulative Retention/Graduation GPA necessary to regain Good Academic Standing status.

**Academic Suspension**

Any student who is on Academic Probation and does not achieve a term GPA of 2.00 (excluding activity/performance courses) will be immediately suspended and will not be eligible for reinstatement until one regular semester (fall or spring) has elapsed.

<table>
<thead>
<tr>
<th>Credit Hours Attempted</th>
<th>Retention/Graduation GPA*</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 through 30</td>
<td>1.7</td>
</tr>
<tr>
<td>Greater than 30</td>
<td>2.0</td>
</tr>
</tbody>
</table>

*NOTE: All courses in which a student has a recorded grade will be counted in the calculation of the Retention/Graduation GPA excluding any courses academically forgiven as detailed in this chapter under the Academic Forgiveness Policy and excluding remedial/development (pre-college) courses. Beginning in Fall 1994, the Retention/Graduation GPA will also exclude physical education activity courses.
Continued Enrollment of Suspended Seniors

A senior student (90 or more semester credit hours) in a specified degree program who has failed to meet the Retention/Graduation GPA of 2.0 or the semester GPA of 2.0, which would allow him/her to continue, may enroll in an additional 15 semester hours in a further attempt to achieve the requirements for graduation. Such students will be afforded this extension one time only.
Record Keeping

1. Describe the academic record keeping procedures of the aviation unit, including the final graduation audit. In the appendix include a copy of the principle forms used.

We maintain an academic file for each aviation student. These files are located in a secure room in the operations side of the Aviation Sciences Institute. Academic files contain updated transcripts, records of academic advisement, and other information pertinent to each student’s particular degree plan.

Graduation audits, or clearance letters, are completed using a standardized excel worksheet. These clearance letters list each required course for the student’s degree plan, the semester in which the course was taken, final course grades, and calculated GPA in major. Furthermore, it allows the advisor to document course substitutions when applicable. Academic advisors update this clearance letter with each advising session then save the updated record on the university’s network. The letter is subsequently forwarded to the Registrar as evidence of degree plan completion.

2. Describe the interface with the institutional record keeping system.

Faculty members have access to CampusConnect. This system allows each advisor to view student transcripts, academic advising history, course rosters, as well as several additional advising tools. Additionally, CampusConnect permits advisors to add/drop students from courses and submit final grades at the end of each semester.
### Academic Performance Table

1. Indicate the number and percentage of the students that were on the honor roll during the past year. (1st year, 2nd year in the tables refers to student standing, not calendar years.)

<table>
<thead>
<tr>
<th>Year 2015</th>
<th>Fall No.</th>
<th>Fall %</th>
<th>Winter No.</th>
<th>Winter %</th>
<th>Spring No.</th>
<th>Spring %</th>
<th>Summer No.</th>
<th>Summer %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st year</td>
<td>2</td>
<td>1%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>2nd year</td>
<td>6</td>
<td>5%</td>
<td>0</td>
<td>0%</td>
<td>1</td>
<td>.7%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>3rd year</td>
<td>2</td>
<td>1%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>4th year</td>
<td>4</td>
<td>1%</td>
<td>0</td>
<td>0%</td>
<td>1</td>
<td>1.5%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Totals</td>
<td>14</td>
<td>2%</td>
<td>0</td>
<td>0%</td>
<td>4</td>
<td>.6%</td>
<td>2</td>
<td>.6%</td>
</tr>
</tbody>
</table>

2. Indicate the number and percentage of students that were on academic probation during the past year.

<table>
<thead>
<tr>
<th>Year 2015</th>
<th>Fall No.</th>
<th>Fall %</th>
<th>Winter No.</th>
<th>Winter %</th>
<th>Spring No.</th>
<th>Spring %</th>
<th>Summer No.</th>
<th>Summer %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st year</td>
<td>6</td>
<td>5%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>2nd year</td>
<td>2</td>
<td>11%</td>
<td>0</td>
<td>0%</td>
<td>1</td>
<td>4%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>3rd year</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>4th year</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Totals</td>
<td>8</td>
<td>5%</td>
<td>0</td>
<td>0%</td>
<td>1</td>
<td>.9%</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>

3. Indicate the number and percentage of students who were dismissed, withdrew from the institution, or transferred to another program during the past year. Do not include graduates.

<table>
<thead>
<tr>
<th>Year 2015</th>
<th>Fall No.</th>
<th>Fall %</th>
<th>Winter No.</th>
<th>Winter %</th>
<th>Spring No.</th>
<th>Spring %</th>
<th>Summer No.</th>
<th>Summer %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st year</td>
<td>1</td>
<td>3%</td>
<td>0</td>
<td>0%</td>
<td>2</td>
<td>8%</td>
<td>2</td>
<td>66%</td>
</tr>
<tr>
<td>2nd year</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>3rd year</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>4th year</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Totals</td>
<td>1</td>
<td>2%</td>
<td>0</td>
<td>0%</td>
<td>2</td>
<td>4%</td>
<td>2</td>
<td>40%</td>
</tr>
</tbody>
</table>
Academic Advisement

1. Describe the academic advisement procedures used by the aviation program.

Southeastern faculty and staff believe that the advising process is one of the most important steps in enrolling for classes at Southeastern. Because of this belief, a mandatory advisement policy was implemented in the Spring 2003 semester requiring all new and returning students to visit an academic advisor prior to enrollment each semester. An academic advising session consists of a student meeting with an advisor (usually a faculty member or specially-trained staff person) to plan the student’s academic future.

Most aviation classes are offered in a specific sequence and have prerequisite and sometimes co-requisites requirements. Additionally, many aviation classes are tagged as permission required. Each aviation student is given a document detailing the suggested sequence in which they should take required course in their degree plan. This makes it possible for each student to know exactly what course they should take even before their required visit with an aviation advisor.

New Freshmen

New first-time entering freshmen are required to attend an advisement and enrollment preview day which is designed to make the transition to college life as easy as possible. This preview day is for everyone - resident, commuter, and non-traditional student. Students will meet one-on-one with an academic advisor, enroll in classes, connect with faculty and other students, learn about student services and campus life, and make Southeastern feel more like home before classes begin. Several preview day dates are available for new freshmen students beginning in a fall semester but only one preview day is available for a spring semester. Preview day dates and contact information will be listed in the Schedule of Classes for each semester.

Returning Students (Students returning after their freshman year)

After admission to the University, Academic Advising Center directs students to the Aviation Sciences Institute where they will meet with an aviation advisor. The Aviation Sciences will then assume the major responsibility for student advisement. At the beginning of each semester, the student and his/her faculty advisor work closely together in not only preparing a program of study but also in selecting an appropriate Schedule of Classes. Faculty members maintain office hours to provide a time when students may discuss scholastic matters with their instructors.

2. List the faculty/staff members who are serving as academic advisors, and indicate the number of students assigned to each.

Kyle Thomas 29
George Jacox 33
Student Activities

1. List the student organizations sponsored by the aviation unit and that are primarily for aviation students. Include the organization name, the approximate number of members or participants, and a brief statement of purposes and/or activities.

SOSU Flight Team
The SOSU flight team competes at both regional and if successful, national SAFECONs. At these competitions, collegiate flight teams from all over the country compete in both flight and ground events, with the underlying premise being that of aviation safety. These events are held in conjunction with the National Intercollegiate Flying Associating.

The SOSU flight team generally consists of 12 to 15 members, both male and female. All aviation students are encouraged to try out for the team. However, preference is given to those students who possess at least a private pilot certificate.

Alpha Eta Rho
The Omicron chapter of Alpha Eta Rho was originally chartered in 1968. The organization's purpose is to bring together those students who share an interest in aviation. Its membership is open to all aviation students, both male and female. We typically have around 20 students in the organization.

2. Describe the extent to which aviation students participate in course and faculty evaluation, curriculum development and revision, and other student/faculty activities.

Student Course Critiques are given each semester for every aviation course. With these course/faculty critiques, students are afforded the opportunity to elaborate on the perceived strengths and weaknesses of both the course and instructor. They are also asked for suggestions for improving the course. Student responses are considered during the faculty promotion and tenure process as well as departmental assessment.

Additionally, several Aviation students, typically upperclassmen, serve on the John Massey School of Business Student Advisory Board. The purpose of this organization is to give students a voice concerning course and faculty evaluation, curriculum development and revision, and other student-faculty activities.

3. Describe the extent to which aviation students participate in campus-wide activities.
Aviation students, both pilot and management, are some of the most active students on campus. In addition to the previously mentioned aviation specific organizations, several of our majors represent the entire SOSU student population by serving on the Student Senate. Other campus-wide activities include the university band, athletics, intramural sports, and several social fraternities and sororities.
Graduates and Placement Data Table

1. Indicate the number of degrees awarded during the past five years in the program being submitted for accreditation.

<table>
<thead>
<tr>
<th>Year</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Associate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baccalaureate</td>
<td>5</td>
<td>2</td>
<td>5</td>
<td>8</td>
<td>4</td>
</tr>
</tbody>
</table>

Indicate the first career step of the graduates of the past year. Show the number of graduates in each category.

<table>
<thead>
<tr>
<th>Type of Employer/Advanced Degree</th>
<th>No. of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aviation-related employment or degrees:</td>
<td></td>
</tr>
<tr>
<td>Aviation Management</td>
<td>N/A</td>
</tr>
<tr>
<td>Flight</td>
<td>12</td>
</tr>
<tr>
<td>Aviation Electronics</td>
<td>N/A</td>
</tr>
<tr>
<td>Air Traffic Control</td>
<td>N/A</td>
</tr>
<tr>
<td>Aviation Maintenance</td>
<td>N/A</td>
</tr>
<tr>
<td>Safety</td>
<td>N/A</td>
</tr>
<tr>
<td>Material or Equipment Supplier</td>
<td>N/A</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>N/A</td>
</tr>
<tr>
<td>Other employment</td>
<td>N/A</td>
</tr>
<tr>
<td>Aviation-related degree</td>
<td>N/A</td>
</tr>
<tr>
<td>Other, non-aviation-related employment or degrees</td>
<td>N/A</td>
</tr>
<tr>
<td>Non-Aviation Employment</td>
<td>N/A</td>
</tr>
<tr>
<td>Non-Aviation Degree</td>
<td>N/A</td>
</tr>
<tr>
<td>Seeking Employment</td>
<td>N/A</td>
</tr>
<tr>
<td>No Information</td>
<td>N/A</td>
</tr>
</tbody>
</table>

3. The average annual salary for the graduates listed is $45,000$

4. Describe the system of alumni tracking including objectives and procedures (include copies of forms used in Appendix).

Alumni tracking has been identified as an area of needed improvement. We will begin surveying recent graduates this fall with plans to have sufficient data collected with a few months.

Currently, all tracking is accomplished informally through yearly alumni reunions and social networking sites. The Aviation Alumni page on Facebook is a mechanism from which our alumni can not only communicate with us, but also with each other. Alumni are able to give us employment and updated contact information. Additionally, they often share job opportunities and career advice with each other and our aviation students.
Additional Comments

The Aviation Sciences Institute is fortunate in that we have a very active and supportive aviation alumni association. In addition to providing scholarship and mentoring opportunities for our students, the Aviation Alumni Association is often consulted for program and curriculum development issues. Additionally, our aviation alumni serve on both the John Massey School of Business and Aviation Sciences Institute’s advisory boards.
SECTION II

STUDENTS - Aviation Management
(AABl 201, Criteria 2.1, 3.1)

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B. Supporting Information 41

   Admission Data 41
   Quality of New Students 42
   Enrollment Data 43
   Grading System 44
   Record Keeping 46
   Academic Performance 47
   Academic Advisement 48
   Student Activities 49
   Graduates and Placement Data 51
(For each program submitted for accreditation, please complete a separate SECTION II.)
Data in this section is to be reported by program if available. If not, complete one section and state which programs, by name, are included.

II. A. **Student Criterion**

Describe the process by which your institution meets the following criteria. Cite appropriate evidence and describe where it may be found/evaluated by the visiting team:

1. **Evaluates, advises, and monitors students to determine its success in meeting program objectives**

* Taken from the University’s web page: http://www.se.edu/academics/graduation-information/senior-assessment/

**Senior Assessment**

All students at Southeastern are required to participate in a variety of assessment activities. Exit-level assessment is conducted during the senior year in the major field. Assessments within the major may also be required at other times. In addition to the above activities, students are required to respond to surveys and submit samples of their work for portfolios.

Students are advised of the following:

(Taken from the University’s web page: http://www.se.edu/academics/graduation-information/four-year-plan/)

- Southeastern Oklahoma State University helps students plan for graduation by providing clear information about requirements that you and your advisor can use to plan your course work and by providing sufficient places in the classes you will need. You also will use the *Schedule of Classes*, departmental materials, and other sources of information to develop and monitor your plan for graduation.
- To graduate in four years you need to complete 30-32 semester hours each year. Some students do this by taking 15 semester hours one semester and 16 in the other; others will take fewer hours each semester but schedule summer classes to make up the difference.
- In order to graduate in four years, you will need to be somewhat flexible sometimes you will have to take a class at a time that may not be completely convenient, or you may need to substitute an alternative class for one that is unavailable during a specific semester or at a specific time.
- Attending class is only part of earning a degree. To do well, you will need to maintain a ratio of class time to study time of at least two hours of study for every one hour of class credit. This ratio means that enrolling in 15-16 semester hours assumes a 30-hour-per-week study commitment, or a total of 45-48 hours each week devoted to your degree. Over the course of a week, even a 45-hour commitment can allow for a part-time job, a social life, and other activities. But good time management skills are very important. This may be a subject you will want to discuss with your advisor.
- Every semester you should review your plan with your advisor to be sure that you are still on track and to incorporate any changes that are appropriate.

**How the Plan Works**

- If you are interested in a four-year degree, you should meet with your advisor early in your freshman year to develop your graduation plan and request a four-year Graduation Plan Agreement.
- Once your plan is complete, you should sign the four-year Graduation Plan Agreement and file a copy with your advisor and the Dean of the School of your major program.
- Every semester, you and your advisor will check your plan to help you see the overall picture. The plan will serve as your map to your graduation goal.
2. Has and enforces policies for the acceptance of transfer students and for the validation of courses taken for credit elsewhere

Information concerning acceptance of transfer students to the university and validation of courses taken for credit elsewhere can be found on pages 24-26 of the 2013-2015 Undergraduate & Graduate Catalog.

Admission By Transfer
A transfer student is any undergraduate student with greater than six attempted credit hours, excluding remedial (zero-level courses) or pre-college work and excluding credit hours accumulated by concurrently enrolled high school students.

Transfer Students From Within the Oklahoma State System
An undergraduate student who wishes to transfer to Southeastern Oklahoma State University from another State institution may do so under the following conditions:

1. All students must meet the curricular requirements as outlined for new freshman admission before transferring to Southeastern Oklahoma State University.
2. Students transferring to Southeastern before achieving 24 attempted semester credit hours, must meet the academic performance standards as required for new freshman admission and must have a grade-point average high enough to meet Southeastern’s retention requirements.
3. Students who do not meet Southeastern’s performance requirements for new freshman admission and are transferring after achieving 24 or more attempted semester credit hours must have a grade-point average high enough to meet Southeastern’s retention requirements, based on regularly graded (A, B, C, D, F) college work.

Transfer students may be subject to College Placement testing.

Transfer Students from Out-of-State Institutions
Undergraduate students wishing to transfer from an out-of-state college or university to Southeastern Oklahoma State University must meet Southeastern’s entrance requirements as outlined above and fulfill the appropriate criteria listed below:

1. Submit official transcripts of record from all colleges or universities accredited by The Higher Learning Commission: A Commission of the North Central Association of Colleges and Schools or other regional associations and meet the following criteria:
   a. Be in good standing with the institution from which s/he plans to transfer.
   b. Have made satisfactory progress (an average grade of “C” or better; 2.0 on 4.0 scale) in the institution from which s/he plans to transfer.
2. Official transcripts of record from institutions not accredited by a regional association may be accepted in transfer when appropriate to the student’s degree program and when the University has had an opportunity to validate the courses or programs.
   a. Each nonresident undergraduate applicant must meet both conditions listed in Criteria 1 above.
   b. Each nonresident undergraduate applicant who meets Criteria 1 will also be required to validate the transferred credit by making satisfactory progress (an average of “C” or better; 2.0 on 4.0 scale) for at least one semester.

Transfer Probation
Students who do not meet the academic criteria for transfer students, including curricular/skills requirements set for new freshman admission, and have not been formally suspended may be admitted as “transfer probation” students.

Students seeking admission in this category must fulfill the following criteria:
1. Apply in writing to the Office of Admissions.
2. Be interviewed by the Director of Admissions.
3. Have participated or participate in the ACT or similar battery of tests.
4. Be screened for skills deficiencies.

A student admitted with a deficiency (either curricular or skills), will be referred to the Advising Center for supervision in removing the deficiency within the first 12 hours of enrollment.

Students in this category are admitted on probation and must maintain a 2.0 GPA each semester, excluding activity/performance courses, while on probation to raise their cumulative retention/graduation GPA to the designated level, as detailed in the retention requirements. In addition, a student will not be able to pre-enroll while on probation so retention standards can be monitored.

Articulation Policy

In accordance with the Oklahoma State Regents for Higher Education, Southeastern Oklahoma State University fully participates in the articulation policy for the transfer of students among Oklahoma public institutions. A student transferring to Southeastern Oklahoma State University with an Associate of Arts or an Associate of Science degree from any State System institution will be considered to have completed the general education requirements of the baccalaureate degree. There may be some exceptions to this policy, where some students may have to take additional courses in general education to meet minimum professional certification requirements as defined by the State.

Articulation Agreements

Southeastern Oklahoma State University has articulation agreements with four junior colleges in North Texas: Collin County Community College, Grayson County College, Paris Junior College, and North Central Texas College. A student who is transferring from one of these colleges with an associate degree, as listed below, shall have acceptance of academic credits earned at the junior college, with the condition that all requirements for graduation from Southeastern be met within his or her program of studies at the junior college and South-eastern Oklahoma State University.

Collin County Community College
Associate of Arts or
Associate of Science

Paris Junior College
Associate of Arts or
Associate of Science

Grayson County College
Associate of Science

North Central Texas College
Associate of Arts or
Associate of Science
(Plus two semesters of lab science and one semester of college-level mathematics.)

These agreements are subject to the following provisions:

1. The student shall have earned a minimum cumulative grade-point average of 2.0 on a 4.0 scale (an average grade of “C” or better) or the equivalent.
2. The core curriculum for the associate degrees listed above will be accepted as satisfying the general education requirements at Southeastern, with the exception of North Central Texas College, where students must have also completed two semesters of lab science and one semester of college-level mathematics.
3. Courses that are academically equivalent to courses at Southeastern will be transferred, and they will receive credit at the lower-division level. A few selected courses may require validation to substitute for Southeastern courses.
4. The student shall earn a minimum of sixty (60) semester hours at Southeastern (excluding physical education activity courses) for a minimum of 124 semester hours for a baccalaureate degree. Some programs (i.e., teacher education and aerospace studies) may have more restrictive degree or admission criteria.

Acceptance of Transfer Credits
Southeastern Oklahoma State University accepts credits earned at junior and senior colleges that are accredited by the regional accrediting associations, such as the The Higher Learning Commission: A Commission of the North Central Association of Colleges and Schools. Students transferring from junior community colleges need to be aware that a minimum of 60 semester hours of course work (excluding physical education activity courses) applied toward the bachelor’s degree must be earned at a senior institution.

Work taken at junior or community colleges cannot be counted in meeting the upper-division requirements of Southeastern Oklahoma State University, even if the course is equated to a 3000/4000 level course at Southeastern. Upper-division requirements relate to junior and senior (3000/4000 level) courses of study.

Transfer credits are accepted and applied to degree programs generally in accordance with the recommendations in the Transfer Credit Practices Guide published by AACRAO (American Association of Collegiate Registrars and Admissions Officers). Consequently, credits from some technical colleges and professional schools may not be applicable toward degree requirements at Southeastern Oklahoma State University due to the highly technical or specialized nature of the credits earned.

Once the student is currently enrolled in course work at Southeastern Oklahoma State University, transfer credits will be recorded from the official transcript of each accredited institution attended by the student. Transfer credit will not be recorded if the student is not currently enrolled at Southeastern.

Course Equivalency
Course equivalencies and acceptance in a degree plan are determined by the appropriate Academic Department. Most general education-type courses and courses from various other disciplines have been evaluated by Oklahoma colleges and universities to determine statewide equivalency as part of the Oklahoma State Regents for Higher Education Course Equivalency Project. To look up an equivalency for a course taken at an Oklahoma college/university, you may go to the Oklahoma Higher Education website: http://www.okhighered.org/transfer-students/course-transfer.shtml

For courses not found on the equivalency chart or not taken from an Oklahoma college/university, the student may supply copies of the course descriptions and/or syllabi for review by the Academic Department. If the Academic Department approves the course as equivalent, notification should be sent to the Registrar’s Office.

3. Has and enforces procedures to assure that all students meet all program requirements

An advising checklist/clearance letter is stored on a shared drive for each student. With this document, academic advisors are able to monitor a student’s progress throughout the program. A copy of document has been included in the appendix to this section.

Per page 102 of the 2013-2015 Undergraduate & Graduate Catalog, a minimum GPA of 2.5 is required in all Professional Pilot and Aviation Management Major-Minor degree requirements including specified general education requirements. In addition, no grade less than C in Professional Pilot ground courses is acceptable.

Additional and Graduation Information for all Southeastern students can be found on page 57 of the same catalog.
Graduation Information

Degrees are formally conferred during the fall and spring commencement exercises and awarded in absentia at the end of each summer session. Diplomas are mailed approximately six weeks following the official graduation date for summer and eight weeks for fall and spring. The degree and date of the diploma are entered on the student’s permanent transcript record. It is the student’s responsibility to make sure all degree requirements have been met. Students completing degree requirements at the end of a summer semester may participate in the following fall commencement.

Application for Graduation

Students seeking a bachelor’s degree should obtain an “Application for Graduation” from the Office of the Registrar and apply for graduation the semester in which they plan to complete all degree requirements. To begin the application process, an appointment for a final graduation check should be made in the Office of the Registrar for bachelor’s degrees and in the Graduate Office for master’s degrees by April 1 (Spring), July 1 (Summer), or November 1 (Fall). It is the responsibility of the student to initiate the process for graduation. Students should request a General Education evaluation by the Office of the Registrar upon completion of 60 semester hours.

A graduation fee of $25 must be paid in the Business Office upon completing the application process. Diplomas are mailed to the student’s permanent address on record in the Office of the Registrar.

Graduation Check List

The process to apply for graduation is a multi-step process. To ensure proper application for graduation, students should complete the following steps in sequential order:

1. Contact the Office of the Registrar to make an appointment for a final graduation check.
2. Obtain and complete an “Application for Graduation” from the Office of the Registrar.
3. Present your “Application for Graduation” when you appear for your appointment in the Office of the Registrar. The Office of the Registrar will review your file and perform a final graduation check to ensure that you have completed all general education and graduation requirements.
4. Make an appointment to meet with your advisor to complete a final degree check. Your advisor must verify that all major requirements will be met by the end of the semester and provide a final “Clearance Note”. Depending on your major and/or minor, approval from the department chair and/or second major/minor advisors may also be required.
5. Once approved for graduation by your advisor, return the Clearance Note to the Office of the Registrar.
6. To finalize the process, you will be given a “Graduation Clearance Note” (GCN). In addition, you will receive information on participation in the commencement ceremony.
7. Take the GCN to the Financial Aid Office.
8. When cleared by the Financial Aid Office, take the GCN to the Business Office where you will pay the $25 graduation fee.

Upon completion of these steps, you will be officially approved for graduation.

4. Publishes standards for the selection and admission of students which are related to the educational mission and purposes of the institution
Undergraduate Admission Policies

The Undergraduate Admission Policies of Southeastern Oklahoma State University are those established by the Oklahoma State Regents for Higher Education and are consistent with the mission of the University. These policies are based on prospective students’ residence status and previous educational background. The policies stated below provide a reasonable level of entry for the majority of Southeastern’s clientele. In addition, viable options are provided through special admission for those individuals desiring to continue their education but not meeting the formal requirements for admission.

Students pursuing an area of study leading to a bachelor’s degree must demonstrate academic standards in two areas: Performance Standards and Curricular Standards. Performance Standards refer to a student’s rank in the high school graduating class, the high school grade-point average, and admission test scores (ACT or SAT). Curricular Standards refer to a student’s formal educational background in the subject areas of English, history, mathematics, and science.

For first-time entering freshmen, curricular standards require that a student must have successfully completed four years of English, three years of laboratory science, three years of mathematics (Algebra I or above), three history and citizenship skills (including one unit of American History and three additional units from the subjects of History, Economics, Geography, Government, Non-Western Culture), and two additional units of subjects previously listed or selected from Computer Science or Foreign Language at the high school level (see High School Curricular Requirements, page 22). Those who have not completed the above stated curricular requirements at the high school level can demonstrate that they have sufficient curricular background and knowledge for college study by successfully passing an approved placement examination in an area of a deficiency or by scoring high enough on the appropriate ACT subtest area. Students with a curricular deficiency in history who test high enough in reading must complete an additional college-level history course in addition to the general education requirements within the 124 hours required for graduation.

New Freshman Admissions

Southeastern Oklahoma State University’s academic admission standards are based on the applicant’s admission test scores and high school records (grade-point average and rank in graduating class). For study toward a degree, a student must have graduated from an accredited high school or meet certain academic performance and curricular requirements.

Oklahoma high schools may be accredited by either (1) the State Board of Education for Oklahoma, (2) the North Central Association of Colleges and Schools, or (3) the Independent Schools Association of the Southwest. Out-of-state high schools may be accredited by the appropriate regional association or by an appropriate state accrediting agency.

The performance and curricular requirements for admission to Southeastern Oklahoma State University are outlined below:

Performance Requirements

The following are the minimum high school performance requirements for admission. Prospective new freshmen students must satisfy one of these criteria in addition to the curricular requirements:

Option A: Score in the top 50% on the ACT or SAT
Option B: Have a cumulative high school GPA and rank in the top 50% of the graduating class
Option C: Have a 2.7 GPA in the 15-unit High School core curricular requirements.

The exact standardized test score will be specified annually by the Oklahoma State Regents for Higher Education based on preceding three years’ ACT scores of graduating seniors, utilizing Oklahoma norms. An equivalency table will be used to determine SAT scores.

For the 2013-2014 year, the minimum performance requirements are:
Option A: 20 ACT Composite or 940 SAT (Critical Reading + Math areas only)
Option B: 2.7 High School GPA (unweighted) and rank in the top 50% of the class
Option C: 2.7 GPA in the 15-unit High School core curricular

**High School Curricular Requirements**
Entering freshman students must have completed the high school curricular requirements listed below.

<table>
<thead>
<tr>
<th>Units (Years)</th>
<th>Course Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>English (Grammar, Composition, Literature)</td>
</tr>
<tr>
<td>3</td>
<td>Lab Science (from Biology, Chemistry, Physics or any lab science certified by the school district, with the exception of General Science, with or without a lab)</td>
</tr>
<tr>
<td>3</td>
<td>Mathematics (from Algebra I, Algebra II, Geometry, Trigonometry, Math Analysis, Calculus) (These may NOT be counted: applied math, statistics, computer science, intermediate algebra or math finance)</td>
</tr>
<tr>
<td>3</td>
<td>History and Citizenship Skills (including 1 unit of American History and 2 additional units from the subjects of History, Economics, Geography, Government, Non-Western Culture)</td>
</tr>
<tr>
<td>2</td>
<td>Additional units* of subjects previously listed or selected from the following: Computer Science, Foreign Language</td>
</tr>
<tr>
<td>15</td>
<td><strong>Total Required Units</strong></td>
</tr>
</tbody>
</table>

The fifteen high school units set forth above will be required for admission. In addition, the following subjects are recommended for college preparation.

| 2             | Additional units: Fine Arts – music, art, drama; Speech. |
| 1             | Additional unit: Lab Science (as described above) |
| 1             | Additional unit: Mathematics (as described above) |
| 4             | **Total Recommended Units** |

The remaining units required by the State Board of Education for high school graduation may be selected from courses to meet students’ individual needs and interests.

While these curricular requirements will normally be met by students in grades 9 through 12, advanced students who complete these courses in earlier grades will not be required to take additional courses for purposes of admission.

Students pursuing admission to baccalaureate degree programs may not count courses used to make up high school curricular deficiencies toward satisfaction of degree program requirements.

* A student with a deficiency in this area may also be admitted as a regular student, but will be required to take an additional three-hour college-level course in one of the subject areas listed.

**Procedures for Post-High School Completion of the College Admission Curricular Requirements**
Students who are admitted to Southeastern, but have not completed the curricular requirements cannot enroll in a college-level course in the discipline area in which the deficiency exists; e.g., a student lacks a laboratory science, enrollment in a college-level science course is prohibited until the deficiency is met and the grade is transcripted. Curricular deficiencies may be met by the following options:

1. Successfully completing courses designated by 0-level numbers which satisfy high school equivalency courses as approved by the Oklahoma State Regents for Higher Education. Students with a curricular deficiency are admissible for the summer term only (see “Summer Provisional” section in this chapter).**
Zero-Level Courses:

- ENG 0123  Pre-College English
- MATH 0114  Elementary Algebra
- MATH 0123  Intermediate Algebra
- READ 0123  Developmental Reading
- SCIE 0124  Concepts in Science

2. Curricular deficiencies may be cleared by performing at the 50th percentile* or higher on the appropriate College Placement Test (CPT) administered by Southeastern.**

3. Curricular deficiencies may be cleared by achieving a 19* or higher on the respective ACT subscore. Comparable Recentered SAT critical reading (460)* and math (460)* scores meet the curricular deficiencies in English and mathematics, respectively. The ACT reading subscore or the SAT critical reading will waive a history deficiency for admission purposes only. The additional history requirement must still be met before graduation.**

* These scores are reviewed annually by the Oklahoma State Regents for Higher Education and are subject to change without further notice. Contact the Office of Admission & Recruitment for current admission/assessment standards.

** Students who have a curricular deficiency in History will be required to complete an additional three-hour history course within their baccalaureate degree programs.

Entry-Level Assessment: Basic Skills Testing and Placement

All students admitted to Southeastern Oklahoma State University are required to participate in a variety of assessment activities.

Southeastern Oklahoma State University provides a program of basic skills testing and several developmental courses that are designed to help students enhance their proficiency in the basic skill areas of English, mathematics, reading, and science. Students required to enroll in these courses (ENG 0123, MATH 0114, MATH 0123, READ 0123, and SCIE 0124) will ultimately benefit by having stronger skills in these important academic abilities.

Participation in basic skills testing [ACT Compass Tests or departmental test] is required if a first-time freshman has the following subscores on the ACT or SAT:

1. ACT in English below 19*; SAT Critical Reading below 460 (CPT)
2. ACT in Math below 19*; SAT Math below 460 (CPT)
3. ACT in Reading below 19*; SAT Critical Reading below 460 (CPT)
4. ACT in Science below 19*; Combined SAT Critical Reading and Math below 1150 (Institutional Science Test)

A score on the CPT or the Institutional Science Test of the 50th percentile or higher is required to demonstrate basic skills proficiency in English, mathematics, reading and science. If a score of 50th percentile or higher is not attained, the student must enroll in the appropriate developmental course to gain basic skills proficiency: ENG 0123 or equivalent course; MATH 0114, MATH 0123, or equivalent course; READ 0123 or equivalent course; and/or SCIE 0124 or equivalent course. These courses must be completed within the first twenty-four semester hours attempted; otherwise, future enrollments by the student may be limited to only the required zero-level courses until successful completion.

* These scores are reviewed annually by the Oklahoma State Regents for Higher Education and are subject to change without further notice. Contact the Office of Admission & Recruitment for current admission/assessment standards.

5. Maintains recent examples of student work, to include examinations, homework problems, laboratory exercises, and reports. These items will include evidence of student competence in both subject matter areas and communications skills.
Random examples of student work, examination, homework problems, laboratory exercises, and reports are stored on a shared network drive that is accessible to all members of the aviation faculty.

6. **Assesses the effectiveness of its validation methods in granting credit for non-collegiate achievement**

**ACE College Credit Recommendation Service (CCRS)**
The American Council on Education (ACE) administers the Registry of Credit Recommendations for organizations participating in the College Credit Recommendation Service (CCRS) [formerly called Program on Noncollegiate Sponsored Instruction (PONSI)]. The registry offers the sponsor’s course participants a permanent, computerized record of all courses evaluated by the College Credit Recommendation Service.

Currently enrolled students may be granted credit in accordance with the American Council on Education (ACE) recommendations, after completion of 12 semester hours of course work at Southeastern Oklahoma State University. To obtain credit, the student must have a transcript provided by the American Council on Education (ACE).

For information on obtaining a transcript or obtaining additional information, call (202) 939-9433, e-mail (credit@ace.nche.edu), or write to College Credit Recommendation Service, American Council on Education, One Dupont Circle NW, Suite 250, Washington, DC 20036-1193.

7. **Produces records of graduates’ employment or continuing education over a period of at least three years.**

Alumni tracking has been identified as a continuing area of needed improvement. Alumni tracking by the university & Southeastern Foundation/Alumni Association have been problematic in the past and have begun to improve under the new president in the last year.
III. B  ASSESSMENT

Describe the specific process and timeline for ongoing evaluation of educational objectives:

1. Timeline (schedule) of assessments

   Assessment continues throughout each semester with a written Assessment Report each fall.

2. What, how and from whom data are collected

   Each instructor collects data for the classes they teach. This data is in the form of homework, tests, presentation and completed class work. Student knowledge and flight proficiency will be assessed during stage checks throughout the flight curriculum. FAA examiners give feedback on areas that are both deficient and successful.

3. How assessment results are used and by whom to document successes and shortcomings

   Faculty members identify the strengths and weaknesses of each class. Through collaboration with the aviation faculty, the results are evaluated and a plan is developed to improve the teaching areas in the classroom.

4. How plans are established to address shortcomings

   Each shortcoming is addressed with emphasis being placed on needed improvements to teaching methods as well and needed corrective actions.

5. How the assessment results are used to improve program effectiveness

   Faculty members are strongly encouraged to consider assessment results and share all ideas for improving program effectiveness. Faculty meetings, both formal and informal, are open to discussion and creative thinking. And although the final decision is that of the ASI director and respective department chairs, the departmental culture is such that everyone feels as if they have a say in all things related to program effectiveness.

Additional comments:

II. C  Supporting Information

Admission Data Table

1. Indicate the number of new students for the past five years in the program to be accredited. Classify transfers from other units within the institution as internal transfers. Classify transfers from other campuses or other institutions as external transfers. Classify returning students who were formerly enrolled in other units within the institution as re-admissions. Returning students who were formerly enrolled in the aviation program are not to be counted.
## Yearly Admissions

<table>
<thead>
<tr>
<th>Year</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
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<tbody>
<tr>
<td>First year students</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Internal transfers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>External transfers</td>
<td>24</td>
<td>16</td>
<td>20</td>
<td>19</td>
<td>19</td>
</tr>
<tr>
<td>Re-admissions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>28</td>
<td>18</td>
<td>21</td>
<td>21</td>
<td>22</td>
</tr>
</tbody>
</table>

2. Indicate the geographic distribution of the new students admitted within the past year.

<table>
<thead>
<tr>
<th>Year 2010-2011</th>
<th>Number of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-state/province</td>
<td>45</td>
</tr>
<tr>
<td>Out-of-state/province</td>
<td>0</td>
</tr>
<tr>
<td>International</td>
<td>1</td>
</tr>
<tr>
<td>Totals</td>
<td>46</td>
</tr>
</tbody>
</table>
**Quality of New Students Table**

Indicate the quality of the new students for the most recent full year. Show the average values.

<table>
<thead>
<tr>
<th>Year</th>
<th>Scores Verbal</th>
<th>Scores Math</th>
<th>Scores Composite</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACT or international equivalent (specify)</td>
<td>17</td>
<td>22</td>
<td>21</td>
</tr>
<tr>
<td>SAT or international equivalent (specify)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Enrollment Data Table**

1. Indicate the total number of undergraduate students enrolled in the aviation program being submitted for accreditation during the fall semester or quarter for the past five years.

<table>
<thead>
<tr>
<th>Year</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>First year students</td>
<td>13</td>
<td>9</td>
<td>13</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>Second year students</td>
<td>12</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>Third year students</td>
<td>22</td>
<td>7</td>
<td>10</td>
<td>18</td>
<td>14</td>
</tr>
<tr>
<td>Fourth year students</td>
<td>43</td>
<td>52</td>
<td>42</td>
<td>47</td>
<td>45</td>
</tr>
<tr>
<td>Totals</td>
<td>90</td>
<td>75</td>
<td>73</td>
<td>82</td>
<td>76</td>
</tr>
</tbody>
</table>

2. Provide tabular data that indicate the approximate number of full-time and part-time undergraduate students for the fall semester or quarter for the past five years.

<table>
<thead>
<tr>
<th>Year</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full Time</td>
<td>34</td>
<td>24</td>
<td>32</td>
<td>28</td>
<td>33</td>
</tr>
<tr>
<td>Part Time</td>
<td>56</td>
<td>51</td>
<td>41</td>
<td>54</td>
<td>43</td>
</tr>
</tbody>
</table>

Define the institution's method of accounting for part-time students.
Academic Load (Taken from the university's Undergraduate Catalog)

A regular undergraduate student is classified as full-time if he/she is enrolled in twelve (12) or more hours. A summer term undergraduate student is classified as full-time if he/she is enrolled in six (6) or more hours.

The maximum load that an undergraduate student will normally be permitted to carry is 18 hours per semester. Students attaining a retention/graduation grade-point average of at least 3.0 and having completed a minimum of 15 semester hours will be permitted to carry up to a maximum of 21 hours during the next semester. Verification that the above criteria have been satisfied will be provided by the Office of the Registrar.

During the summer session, nine hours of work is the normal maximum load. Ten hours may be taken provided the student has attained an overall grade-point average of 3.0 and has completed a minimum of 15 semester hours. Verification that the above criteria have been satisfied will be provided by the Office of the Registrar.

Permission of the Dean of the School within which the student is majoring will be required for all other overload situations.

In the event of dual enrollment by a student at more than one institution, the preceding load limits apply to all college courses in which the student is enrolled.

Grading System

1. Briefly describe the institution's grading system.

Grade Calculation Table

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
<th>Grade Points per Semester Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Excellent</td>
<td>4</td>
</tr>
<tr>
<td>B</td>
<td>Good</td>
<td>3</td>
</tr>
<tr>
<td>C</td>
<td>Average</td>
<td>2</td>
</tr>
<tr>
<td>D</td>
<td>Below Average</td>
<td>1</td>
</tr>
<tr>
<td>F</td>
<td>Failure</td>
<td>0</td>
</tr>
<tr>
<td>P</td>
<td>Passed</td>
<td>* (GPA Neutral)</td>
</tr>
<tr>
<td>NP</td>
<td>No Pass</td>
<td>* (GPA Neutral)</td>
</tr>
<tr>
<td>S</td>
<td>Satisfactory</td>
<td>** (GPA Neutral - Zero-Level)</td>
</tr>
<tr>
<td>U</td>
<td>Unsatisfactory</td>
<td>** (GPA Neutral - Zero-Level)</td>
</tr>
</tbody>
</table>

Other Grade Symbols & Meanings

An incomplete may be used at the instructor’s discretion to indicate that additional work is necessary to complete a course. To receive an “I”, the student should have satisfactorily completed a substantial portion of the course work for the semester but may unable to complete the remaining work due to extenuating circumstances. The “I” will become permanent within one year of the date of its posting. An “I” is GPA neutral.

Audit status is used for the student not interested in obtaining a course grade, but who is enrolled simply to gain course information. Enrollment in a course under audit status requires permission of the academic department offering the course. The allowable time to change an enrollment status from audit to credit or...
### Other Grade Symbols & Meanings

<table>
<thead>
<tr>
<th>Grade Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>Used to indicate that the semester grade was not submitted by the instructor by the appropriate deadline. The “N” must be replaced by the appropriate letter grade prior to the end of the subsequent semester. An “N” is GPA neutral.</td>
</tr>
<tr>
<td>W</td>
<td>Withdrawals transacted during the first five days of a regular semester or during the first three days of a summer term will not be recorded on the student transcript. A “W” will be recorded on the transcript for all withdrawals occurring during the sixth day through the eighth week in a regular semester or during the fourth day through fourth week in a summer session. Following these deadlines for automatic “W’s”, the student will receive a “W” or an “F” depending upon whether the student is passing or failing the course at the time of withdrawal. No course withdrawals, including complete withdrawals, are permitted during the last two weeks of the term. These deadlines are for regularly scheduled, full-term courses. All other courses will have proportional withdrawal timelines. A “W” is GPA neutral.</td>
</tr>
<tr>
<td>AW</td>
<td>An administrative withdrawal may be assigned by the Office of Academic Affairs to indicate that a student has been “involuntarily” withdrawn for disciplinary or financial reasons or for inadequate attendance. An “AW” is GPA neutral.</td>
</tr>
<tr>
<td>X</td>
<td>Indicates that graduate thesis or dissertation is in progress; will be subsequently replaced by appropriate grade. An “X” is GPA neutral.</td>
</tr>
</tbody>
</table>

2. Describe the institution's procedure for recognizing academic excellence.

**Honor Graduates**

The ten percent of each graduating class representing the highest grade-point averages are recognized as honor graduates at the commencement exercises. The honor graduates are recognized in three groups: summa cum laude (top 2%), magna cum laude (top 3% to 5%), and cum laude (top 6% to 10%). For consideration as an honor graduate, a student must fulfill the following requirements:

- Complete the requirements for his/her first bachelor’s degree.
- Complete a minimum of 40 semester hours in residence at Southeastern Oklahoma State University exclusive of the final semester of enrollment.
- Complete all courses required for the degree. (A student with an incomplete grade [I] in any course required for graduation will not be considered.)

In computing the grade-point average, all courses attempted, including those at other institutions attended, will be considered

3. Describe the institution's procedure related to probation, suspension and re-admission.
Retention, Probation, & Readmission Policies

Southeastern Oklahoma State University, in cooperation with the Oklahoma State Regents for Higher Education, has adopted the following policy relating to retention of students pursuing undergraduate course work. The three-phase policy combines an early notification of students experiencing academic difficulties with a gradual increase in the overall standards required for retention/continued enrollment at the University. All courses in which a student has a recorded grade will be counted in the calculation of the Retention/Graduation Grade-point Average (GPA) with the exception of those courses excluded as detailed in the preceding section, “Academic Forgiveness Policy”.

All students at Southeastern Oklahoma State University will be classified in one of the following categories for retention purposes:

Good Academic Standing

Any student who meets the Retention Requirements listed in Table A

Table A. Retention Requirements

<table>
<thead>
<tr>
<th>Credit Hours Attempted</th>
<th>Retention/Graduation GPA*</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 through 30</td>
<td>1.7</td>
</tr>
<tr>
<td>Greater than 30</td>
<td>2.0</td>
</tr>
</tbody>
</table>

Academic Notice

Any student with 30 or fewer credit hours, with a cumulative Retention/Graduation GPA of 1.70 to 1.99.

Academic Probation

Any student whose cumulative retention/graduation GPA falls below the stated Retention Requirements listed in table A below. Students placed on Academic Probation must maintain a minimum GPA of 2.00 (excluding activity/performance courses) for each term of enrollment until they achieve the cumulative Retention/Graduation GPA necessary to regain Good Academic Standing status.

Academic Suspension

Any student who is on Academic Probation and does not achieve a term GPA of 2.00 (excluding activity/performance courses) will be immediately suspended and will not be eligible for reinstatement until one regular semester (fall or spring) has elapsed.
Table A. Retention Requirements

Credit Hours Attempted  Retention/Graduation GPA*
Greater than 30 2.0

*NOTE: All courses in which a student has a recorded grade will be counted in the calculation of the Retention/Graduation GPA excluding any courses academically forgiven as detailed in this chapter under the Academic Forgiveness Policy and excluding remedial/development (pre-college) courses. Beginning in Fall 1994, the Retention/Graduation GPA will also exclude physical education activity courses.

Continued Enrollment of Suspended Seniors

A senior student (90 or more semester credit hours) in a specified degree program who has failed to meet the Retention/Graduation GPA of 2.0 or the semester GPA of 2.0, which would allow him/her to continue, may enroll in an additional 15 semester hours in a further attempt to achieve the requirements for graduation. Such students will be afforded this extension one time only.
Record Keeping

1. Describe the academic record keeping procedures of the aviation unit, including the final graduation audit. In the appendix include a copy of the principle forms used.

We maintain an academic file for each aviation student. These files are located in a secure room in the operations side of the Aviation Sciences Institute. Academic files contain updated transcripts, records of academic advisement, and other information pertinent to each student’s particular degree plan.

Graduation audits, or clearance letters, are completed using a standardized excel worksheet. These clearance letters list each required course for the student’s degree plan, the semester in which the course was taken, final course grades, and calculated GPA in major. Furthermore, it allows the advisor to document course substitutions when applicable. Academic advisors update this clearance letter with each advising session then save the updated record on the university’s network. The letter is subsequently forwarded to the Registrar as evidence of degree plan completion.

2. Describe the interface with the institutional record keeping system.

Faculty members have access to CampusConnect. This system allows each advisor to view student transcripts, academic advising history, course rosters, as well as several additional advising tools. Additionally, CampusConnect permits advisors to add/drop students from courses and submit final grades at the end of each semester.
## Academic Performance Table

1. Indicate the number and percentage of the students that were on the honor roll during the past year. (1st year, 2nd year in the tables refers to student standing, not calendar years.)

<table>
<thead>
<tr>
<th>Year 2015</th>
<th>Fall</th>
<th>Winter</th>
<th>Spring</th>
<th>Summer</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>1st year</td>
<td>3</td>
<td>30%</td>
<td>1</td>
<td>10%</td>
</tr>
<tr>
<td>2nd year</td>
<td>2</td>
<td>28%</td>
<td>2</td>
<td>28%</td>
</tr>
<tr>
<td>3rd year</td>
<td>3</td>
<td>21%</td>
<td>2</td>
<td>14%</td>
</tr>
<tr>
<td>4th year</td>
<td>8</td>
<td>18%</td>
<td>19</td>
<td>42%</td>
</tr>
<tr>
<td>Totals</td>
<td>16</td>
<td>48%</td>
<td>24</td>
<td>31%</td>
</tr>
</tbody>
</table>

2. Indicate the number and percentage of students that were on academic probation during the past year.

<table>
<thead>
<tr>
<th>Year 2015</th>
<th>Fall</th>
<th>Winter</th>
<th>Spring</th>
<th>Summer</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>1st year</td>
<td>1</td>
<td>10%</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>2nd year</td>
<td>1</td>
<td>14%</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>3rd year</td>
<td>0</td>
<td>-</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>4th year</td>
<td>0</td>
<td>-</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>Totals</td>
<td>2</td>
<td>6%</td>
<td>0</td>
<td>-</td>
</tr>
</tbody>
</table>

3. Indicate the number and percentage of students who were dismissed, withdrew from the institution, or transferred to another program during the past year. Do not include graduates.

<table>
<thead>
<tr>
<th>Year 2015</th>
<th>Fall</th>
<th>Winter</th>
<th>Spring</th>
<th>Summer</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>1st year</td>
<td>0</td>
<td>-</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>2nd year</td>
<td>0</td>
<td>-</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>3rd year</td>
<td>0</td>
<td>-</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>4th year</td>
<td>0</td>
<td>--</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>Totals</td>
<td>0</td>
<td>-</td>
<td>0</td>
<td>-</td>
</tr>
</tbody>
</table>
Academic Advisement

1. Describe the academic advisement procedures used by the aviation program.

Southeastern faculty and staff believe that the advising process is one of the most important steps in enrolling for classes at Southeastern. Because of this belief, a mandatory advisement policy was implemented in the Spring 2003 semester requiring all new and returning students to visit an academic advisor prior to enrollment each semester. An academic advising session consists of a student meeting with an advisor (usually a faculty member or specially-trained staff person) to plan the student’s academic future.

Most aviation classes are offered in a specific sequence and have prerequisite and sometimes co-requisites requirements. Additionally, many aviation classes are tagged as permission required. Each aviation student is given a document detailing the suggested sequence in which they should take required course in their degree plan. This makes it possible for each student to know exactly what course they should take even before their required visit with an aviation advisor.

New Freshmen

New first-time entering freshmen are required to attend an advisement and enrollment preview day which is designed to make the transition to college life as easy as possible. This preview day is for everyone - resident, commuter, and non-traditional student. Students will meet one-on-one with an academic advisor, enroll in classes, connect with faculty and other students, learn about student services and campus life, and make Southeastern feel more like home before classes begin. Several preview day dates are available for new freshmen students beginning in a fall semester but only one preview day is available for a spring semester. Preview day dates and contact information will be listed in the Schedule of Classes for each semester.

Returning Students (Students returning after their freshman year)

After admission to the University, Academic Advising Center directs students to the Aviation Sciences Institute where they will meet with an aviation advisor. The Aviation Sciences will then assume the major responsibility for student advisement. At the beginning of each semester, the student and his/her faculty advisor work closely together in not only preparing a program of study but also in selecting an appropriate Schedule of Classes. Faculty members maintain office hours to provide a time when students may discuss scholastic matters with their instructors.

2. List the faculty/staff members who are serving as academic advisors, and indicate the number of students assigned to each.

<table>
<thead>
<tr>
<th>Faculty/Staff Member</th>
<th>Number of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ms. Lori Rupert (Tinker AFB)</td>
<td>250</td>
</tr>
<tr>
<td>Mr. Rick Hedrick (OCCC &amp; RSC)</td>
<td>10*</td>
</tr>
<tr>
<td>Dr. Charles Marshall (All OKC)</td>
<td>20**</td>
</tr>
<tr>
<td>Dr. Stan Alluisi (Durant)</td>
<td>10</td>
</tr>
</tbody>
</table>

* The vast majority of the students taking classes from SOSU on the Rose State and OCCC campuses are in fact “Tinker AFB” students and as such are exclusively advised by Ms. Lori Rupert. The few who are NOT Tinker AFB students are advised by Mr. Rick Hedrick.

** Dr. Marshall often informally advises undergraduate and graduate students on all campuses. However, ALL Tinker AFB students are required to work through Ms. Lori Rupert to ensure uniform advisement as well as to coordinate the confusing array of paperwork for the myriad VA and DOD tuition assistance programs.
Student Activities

1. **List the student organizations sponsored by the aviation unit and that are primarily for aviation students. Include the organization name, the approximate number of members or participants, and a brief statement of purposes and/or activities.**

**SOSU Flight Team**
The SOSU flight team competes at both regional and if successful, national SAFECONs. At these competitions, collegiate flight teams from all over the country compete in both flight and ground events, with the underlying premise being that of aviation safety. These events are held in conjunction with the National Intercollegiate Flying Associating.

The SOSU flight team generally consists of 12 to 15 members, both male and female. All aviation students are encouraged to try out for the team. However, preference is given to those students who possess at least a private pilot certificate.

**Alpha Eta Rho**
The Omicron chapter of Alpha Eta Rho was originally chartered in 1968. The organization’s purpose is to bring together those students who share an interest in aviation. Its membership is open to all aviation students, both male and female. We typically have around 20 students in the organization.

2. **Describe the extent to which aviation students participate in course and faculty evaluation, curriculum development and revision, and other student/faculty activities.**

Student Course Critiques are given each semester for every aviation course. With these course/faculty critiques, students are afforded the opportunity to elaborate on the perceived strengths and weaknesses of both the course and instructor. They are also asked for suggestions for improving the course. Student responses are considered during the faculty promotion and tenure process as well as departmental assessment.

Additionally, several Aviation students, typically upperclassmen, serve on the John Massey School of Business Student Advisory Board. The purpose of this organization is to give students a voice concerning course and faculty evaluation, curriculum development and revision, and other student-faculty activities.

3. **Describe the extent to which aviation students participate in campus-wide activities.**

Aviation students, both pilot and management, are some of the most active students on campus. In addition to the previously mentioned aviation specific organizations, several of our majors represent the entire SOSU student population by serving on the Student Senate. Other campus-wide activities include the university band, athletics, intramural sports, and several social fraternities and sororities.
### Graduates and Placement Data Table

1. Indicate the number of degrees awarded during the past five years in the program being submitted for accreditation.

<table>
<thead>
<tr>
<th>Year</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Associate</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Baccalaureate</td>
<td>31</td>
<td>23</td>
<td>29</td>
<td>27</td>
<td>32</td>
</tr>
</tbody>
</table>

Indicate the first career step of the graduates of the past year. Show the number of graduates in each category.

<table>
<thead>
<tr>
<th>Type of Employer/Advanced Degree</th>
<th>No. of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aviation-related employment or degrees:</td>
<td></td>
</tr>
<tr>
<td>Aviation Management</td>
<td>N/A</td>
</tr>
<tr>
<td>Flight</td>
<td>N/A</td>
</tr>
<tr>
<td>Aviation Electronics</td>
<td>N/A</td>
</tr>
<tr>
<td>Air Traffic Control</td>
<td>N/A</td>
</tr>
<tr>
<td>Aviation Maintenance</td>
<td>N/A</td>
</tr>
<tr>
<td>Safety</td>
<td>N/A</td>
</tr>
<tr>
<td>Material or Equipment Supplier</td>
<td>N/A</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>N/A</td>
</tr>
<tr>
<td>Other employment</td>
<td>N/A</td>
</tr>
<tr>
<td>Aviation-related degree</td>
<td>N/A</td>
</tr>
<tr>
<td>Other, non-aviation-related employment or degrees</td>
<td>N/A</td>
</tr>
<tr>
<td>Non-Aviation Employment</td>
<td>N/A</td>
</tr>
<tr>
<td>Non-Aviation Degree</td>
<td>N/A</td>
</tr>
<tr>
<td>Seeking Employment</td>
<td>N/A</td>
</tr>
<tr>
<td>No Information</td>
<td>N/A</td>
</tr>
</tbody>
</table>

3. The average annual salary for the graduates listed is N/A.

Describe the system of alumni tracking including objectives and procedures (include copies of forms used in Appendix).

Alumni tracking has been identified as an area of needed improvement. We will begin surveying recent graduates this fall with plans to have sufficient data collected with a few months.

Currently, all tracking is accomplished informally through yearly alumni reunions and social networking sites. The Aviation Alumni page on Facebook is a mechanism from which our alumni can not only communicate with us, but
also with each other. Alumni are able to give us employment and updated contact information. Additionally, they often share job opportunities and career advice with each other and our aviation students.

Additional Comments

The Aviation Sciences Institute is fortunate in that we have a very active and supportive aviation alumni association. In addition to providing scholarship and mentoring opportunities for our students, the Aviation Alumni Association is often consulted for program and curriculum development issues. Additionally, our aviation alumni serve on both the John Massey School of Business and Aviation Sciences Institute’s advisory boards.
SECTION III

PROGRAM MISSION AND EDUCATIONAL GOALS
(AABI 201, Criteria 2.2, 3.2 and 4.2)

A. Program Mission and Educational Goals
III. A  Program Mission And Educational Goals

(“Educational Goals” are what a given curriculum is intended to prepare graduates to know and do and are measurable.)

1. Provide applicable mission statements of the institution and the aviation unit, indicate where they are published, and describe how the mission statement of the aviation unit clearly complements the institutional mission.

Current Institutional Mission
Southeastern Oklahoma State University provides an environment of academic excellence that enables students to reach their highest potential. By having personal access to excellent teaching, challenging academic programs and extracurricular experiences, students will develop skills and habits that promote values for career preparation, responsible citizenship, and lifelong learning.

Aviation
The primary mission of the Aviation Sciences Institute is to provide its students with the highest quality aviation education and flight training possible. The fundamental belief of the ASI is that the best trained students will be the safest and most successful aviation professionals. The Aviation Sciences Institute will strive to excel as a world leader in Aviation Education. To that end, the Aviation Sciences Institute will provide the students with the most current information, technology, and personalized training available in the aviation profession. Page 103 in the Academic Catalog.

The Aviation Department’s faculty is improving their teaching skills thru scholarly activities. These activate include published papers, attending national conferences, participating in professional seminars.

The students are being evaluated throughout their flight training. After each evaluation, the results are reviewed with each instructor and then are evaluated to see if any modification are needed to the course.

2. List published educational goals, explain the process by which they are established, state how they are measured, and describe how they are consistent with the institution’s and the aviation unit’s missions.

A. Communication:
   a. Prepare and deliver a persuasive, professional speech on an industry issue.
   b. Research, write, and include proper citations in a professional quality term paper of at lest 10 pages.
   c. Contribute to understanding of issues is a group setting through interpersonal communication.
   d. Use opportunities and experiences to develop communication skills through the use of the computer.

B. Problem solving:
   a. Determine problem to be solved.
   b. Distinguish fact from opinion.
   c. Synthesize information in a coherent solution.
   d. Apply knowledge to unfamiliar situation in problem solving.
   e. Assess solution for completeness, strength and weaknesses.

C. Ethics:
b. Learn from ethical mistakes of others.
c. Analyze and evaluate key ethical issues in disciplinary and professional contexts.

D. Technology:
  a. Access appropriate information systems for sources of data.
  b. Use spreadsheets, databases, in problem solving.
  c. Use PowerPoint to deliver a professional presentation.

E. Integration/synthesis:
  a. Integrate principles and methods of other disciplines in the aviation field.
  b. Appreciate the interrelations among aviation and non-aviation disciplines in real world contexts.
  c. Consider all relevant factors in decision making.
  d. Apply critical, analytical, creative, and systems thinking to problem recognition and solution.

F. Diversity:
  a. Analyze, evaluate and assess the impact of differences in ethnicity, gender, socioeconomic status, native language, sexual orientation and intellectual/disciplinary approaches.
  b. Demonstrate the ability to work effectively in groups of people from diverse background.

G. Career development:
  a. Demonstrate an appreciation of appropriate aviation culture.
  b. Develop an appreciation of networking opportunities.
  c. Use technology to present a professional image.

H. Mathematics and quantitative modeling:
  a. Reason quantitatively and use formal systems to solve problems.
  b. Use basic mathematical, statistical, quantitative, qualitative, or logical methods to formulate answer to problems.

Each class are tied to the Aviation Department Objectives. The exams in each class are evaluated and the weaknesses are identified. Faculty are actively involved in the assessment process as follows:
  a. Syllabi are reviewed in collaboration with the entire faculty to help ensure the goals for the degree are met or exceeded.
  b. Faculty helps develop and revise the student survey to create a single document that will review the pertinent aspects of the degree.
  c. Faculty meetings review the progress toward achieving the desired learning outcomes of the degree.
  d. Department faculty review FAA practical exam results, as well as, weakness identified in course work. Strengths and weaknesses are investigated leading to appropriate changes to curriculum and flight training methods. Outcomes are compared to local and/or national averages.

3. List and describe the program constituents and explain the process by which various constituencies assist in determining and evaluating the program goals.

An Aviation Advisory Committee is part of the Aviation Alumni Association. They meet yearly to review and make suggestions to the Aviation department (SE) Curriculum.

Faculty are involved in all aspects of assessing and analyzing students progress and meet to discuss any needed changes.

Students give feedback on what they see as need in the Aviation Department.
4. Explain how the curriculum and curriculum process are designed to achieve the program goals.

The faculty reviews the curriculum to ensure that our students meet the program objectives by how they perform through testing and evaluations throughout the program course work. If any substandard areas are found, a plan is developed and implemented to correct the substandard areas of the curriculum.
SECTION IV

STUDENT LEARNING OUTCOMES – Professional Pilot
(AABI 201, Criteria 2.3, 3.3 AND 4.3)

A. Outcomes Criterion 58
IV. A. **Outcomes Criterion – Professional Pilot**

(“Student Learning Outcomes” are what a given curriculum actually achieves in relation to educational goals.)

1. List the general outcomes (AABI 201, Criteria 2.3.1 [a-h] for associate, 3.3.1 [a-k] for baccalaureate, and 4.3.1 for graduate programs) and state how they are measured.

A. An ability to apply knowledge of mathematics, science, and applied sciences to aviation-related disciplines. Test in AVIA 1004 Primary Ground, AVIA 3123 Commercial Operations

B. An ability to analyze and interpret data. Test in AVIA 1004 Primary Ground, AVIA 3123 Commercial Operations

C. An ability to function on multi-disciplinary and diverse teams. Test/LOFT mission in AVIA 4674 Crew Resource Management

D. Make Professional and ethical decisions. Test in AVIA 3113 Aviation Law

E. An ability to communicate effectively, including both written and oral communication skills. Oral. Paper in AVIA 4643 Aviation Physiology, Speech in AVIA 3202 Flight Instructor Ground

F. A recognition of the need for, and an ability to engage in, life-long learning.

G. A knowledge of contemporary issues. Test in AVIA 4663 Contemporary Topics

H. An ability to use the techniques, skills, and modern technology necessary for professional practice. Test in AVIA 4663 Contemporary Topics

I. An understanding of the national and international aviation environment. Test in AVIA 3503 Integrat of Flight Mngt Tech and Commercial Operation.

J. An ability to apply pertinent knowledge in identifying and solving problems. Final Stage checks in AVIA 3401 CFI Flying

K. An ability to apply knowledge of business sustainability to aviation issues. Test in AVIA 4663 Contemporary Topics.

Feedback is given on final stage checks and practical test for flights classes.

2. List the aviation core outcomes (AABI 201, Criteria 2.3.2 [1-6] for associate, 3.3.2 [1-6] for baccalaureate, and 4.3.2 for graduate programs) and state how they are measured.

1. Describe the professional attributes, requirements or certifications, and planning applicable to aviation careers. Test in AVIA 4663 Contemporary Topics

2. Describe the principles of aircraft design, performance and operating characteristics; and the regulations related to the maintenance of aircraft and associated systems Test in AVIA 3233 Advanced Aircraft systems
3. Evaluate aviation safety and the impact of human factors on safety. Test in AVIA 3173 Aviation Safety and AVIA 4643 Physiology
4. Discuss the impact of national and international aviation law, regulations and labor issues on aviation operations. Test in AVIA 3113 Aviation Legal Problems
5. Explain the integration of airports, airspace, and air traffic control in managing the National Airspace System. Test in AVIA 3023 Air Traffic Control
6. Discuss the impact of meteorology and environmental issues on aviation operations. Test in AVIA 3003 Aviation Meteorology

3. List program-level outcomes and state how they are measured. As a minimum, program-specific criteria should be met (AABI 201, Criteria 5).
   • Commercial pilot with instrument and multiengine rating.
   • Flight instructor with instrument instructor rating
   • AVIA 4674 Crew Resource Management is the Capstone course.
   • Feedback is given on final stage checks and practical test, weather Satisfactory or Unsatisfactory

4. List any other outcomes developed as appropriate to satisfy additional program, institutional and/or other accrediting body requirements.

5. List of materials (i.e. student work; handbooks; etc.) available for review during the site visit to demonstrate achievement of the general and specific program outcomes.

   All evidence will be available for review.
SECTION IV

STUDENT LEARNING OUTCOMES – Aviation Management
(AABI 201, Criteria 2.3, 3.3 AND 4.3)

A. Outcomes Criterion

PAGE 20
IV. A. OUTCOMES CRITERION – AVIATION MANAGEMENT

(“Student Learning Outcomes” are what a given curriculum actually achieves in relation to educational goals.)

1. List the general outcomes (AABI 201, Criteria 2.3.1 [a-h] for associate, 3.3.1 [a-k] for baccalaureate, and 4.3.1 for graduate programs) and state how they are measured.

a. An ability to apply knowledge of mathematics, science, and applied sciences to aviation-related disciplines:
Tests in AVIA 1004 Primary Ground, AVIA 3173 Aviation Safety and AVIA 4643 Aviation Physiology.

b. An ability to analyze and interpret data:
Tests in AVIA 1004 Primary Ground, AVIA 3173 Aviation Safety and AVIA 4643 Aviation Physiology.

c. An ability to function on multi-disciplinary and diverse teams:
Group project in AVIA 4663 Contemporary Topics.

d. An understanding of professional and ethical responsibility:
Tests in AVIA 3113 Aviation Law and quizzes in AVIA 4663 Contemporary Topics.

e. An ability to communicate effectively, including both written and oral communication skills:
Written Communication: Papers in AVIA 2113 Aviation Management; AVIA 3113 Aviation Legal Problems; AVIA 3143 Aviation History; AVIA 4663 Contemporary Topics; and ENG 3903 Technical & Professional Writing
Oral Communications: Formal presentation in AVIA 4663 Contemporary Topics.

f. A recognition of the need for, and an ability to engage in, life-long learning:
AVIA 4663 Contemporary Topics.

g. A knowledge of contemporary issues:
Weekly quizzes and a formal presentation in AVIA 4663 Contemporary Topics.

h. An ability to use the techniques, skills, and modern technology necessary for professional practice:
All assignments are due in electronic format in AVIA 4663 Contemporary Topics. A formal presentation must also make use of at least one modern technological medium during the presentation.

i. An understanding of the national and international aviation environment:
Tests in AVIA 3113 Aviation Legal Problems and weekly quizzes in AVIA 4663 Contemporary Topics.

j. An ability to apply pertinent knowledge in identifying and solving problems:
Tests in AVIA 3173 Aviation Safety.

k. An ability to apply knowledge of business sustainability to aviation issues:
Weekly quizzes in AVIA 4663 Contemporary Topics.

1. List program-level outcomes and state how they are measured. As a minimum program specific criteria should be met (AABI 201, Criterion 4).

A long-term group project is required of all Aviation Management majors in AVIA 4663 Contemporary Topics. (Note: An approved internship may also be used to fulfill this requirement.) The project involves selection of a contemporary topic and then coordination within the group in order to coordinate the conduct of research, development of the written component and development of a formal presentation. All members must demonstrate that they participated in the project. Feedback is given on the written document and the formal presentation portions of the exercise.
2. List of materials (i.e. student work; handbooks; etc.) available for review during the site visit to demonstrate achievement of the general and specific program outcomes.

Evidence will be given electronically.
SECTION V

CURRICULUM – Professional Pilot
(AABI 201, Criteria 2.4, 3.4, and 4.4)

A. Curriculum Criterion 66
B. Aviation Course Sequencing 68
C. Course Offerings 70
D. Supporting Disciplines 72
(Please complete one **SECTION V, Curriculum**, for each program submitted for accreditation.)

Note: Include in the Appendices updated copies of applicable curriculum review forms from AABI 202 (Application).

V. A. **Curriculum Criterion.**

The requirements specify subject areas appropriate to aviation programs, but do not prescribe specific courses. The program’s faculty must ensure that the aviation curriculum devotes adequate attention and time to each component, consistent with the goals of the program and institution. Students must be prepared for careers in aviation and aerospace through the curriculum culminating in comprehensive projects or experiences based on the cumulative knowledge and skills acquired in earlier course work.

Describe the process by which the program curriculum meets the following criteria. Cite appropriate evidence and describe where it may be found/evaluated by the visiting team:

1. A combination of college level mathematics and basic sciences appropriate to the program. Students are required to take College Algebra, Brief Calculus with Applications, Physics and Biology. The university has an assessment plan for General Education. See Appendix ????

2. A general education component that complements the aviation contents of the curriculum and is consistent with the program and institution objectives. General Education is 46 of 124 credit hours for the degree. Two English class, Speech class, Brief Calculus with Application, General Physics, and a Aviation orientation class.

3. Specific program-level criteria (AABI 201, Criteria 5.0)
   - Attributes of an aviation professional, career planning and certification
     These topics are covered in CFI ground school and Contemporary topics.
   - Aircraft design, performance, operating characteristics, and maintenance
     These topics are covered in Primary Ground, Commercial Operations, CFI ground.
   - Aviation safety and human factors
     These topics are covered in Aviation Safety, Physiology
   - National and international aviation law and regulations
     These topics are covered in Integration of FMS and Commercial Operation
   - Airports, airspace and air traffic control
     These topics are covered in CFI ground and Air Traffic Control class.
   - Meteorology and environmental issues
     These topics are covered in Meteorology and Physiology
   - Commercial pilot with instrument and multiengine rating.
   - Flight instructor with instrument instructor rating
   - AVIA 4674 Crew Resource Management is the Capstone course
• Feedback is given on final stage checks and practical test with the local FAA Designated examiner. (Satisfactory or Unsatisfactory or Problem areas)
V. B. Aviation Course Sequencing

List the courses with their prerequisites or co-requisites or provide a precedence diagram showing the prerequisite and co-requisite interdependency of the courses. Courses without prerequisites need not be shown.

<table>
<thead>
<tr>
<th>Professional Pilot</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Name:</strong></td>
<td><strong>Date:</strong></td>
</tr>
<tr>
<td><strong>General Education:</strong> 41 - 46 Credit Hours</td>
<td><strong>Major/Minor:</strong> 64 Credit Hours</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Prerequisites (Semesters)</th>
<th>Course</th>
<th>Prerequisites (Semesters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>#ENG 1113</td>
<td>#ENG 1113 (Fall)</td>
<td>AVIA 1004 Primary Ground Instruction</td>
<td>N/A (Fall)</td>
</tr>
<tr>
<td>#ENG 1213</td>
<td># ENG 1113 (Fall)</td>
<td>AVIA 1041 Private Flying</td>
<td>N/A (Fall)</td>
</tr>
<tr>
<td>#COMM 2213</td>
<td></td>
<td>AVIA 2083 Commercial</td>
<td>AVIA 1004 (Spring)</td>
</tr>
<tr>
<td>#POSC 1513</td>
<td></td>
<td>Performance &amp; Regulations</td>
<td></td>
</tr>
<tr>
<td>#HIST 1513</td>
<td></td>
<td>AVIA 3003 Meteorology</td>
<td>AVIA 1004 (Spring)</td>
</tr>
<tr>
<td>OR #HIST 1523</td>
<td></td>
<td>AVIA 3023 Air Traffic Control</td>
<td>AVIA 3284 (Fall)</td>
</tr>
<tr>
<td>#ECON 2113</td>
<td></td>
<td>AVIA 3113 Avitation Legal Problems</td>
<td>N/A (Spring)</td>
</tr>
<tr>
<td>OR #GEO 2723</td>
<td></td>
<td>AVIA 3123 Commercial Operations</td>
<td>AVIA 2083 (Fall)</td>
</tr>
<tr>
<td>OR #HIST 3513</td>
<td></td>
<td>AVIA 3152 Fundamentals Of Instruction</td>
<td>AVIA 1041, 3284 (Fall)</td>
</tr>
<tr>
<td>OR #SOC 1113</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>#HPER 1113</td>
<td></td>
<td>AVIA 3163 Intermediate A/C Man./Nav.</td>
<td>AVIA 1041 (Spring)</td>
</tr>
<tr>
<td>OR #PSY 1113</td>
<td></td>
<td>AVIA 3173 Safety</td>
<td>N/A (Fall)</td>
</tr>
<tr>
<td>#BIOL 1114</td>
<td></td>
<td>AVIA 3202 Flight Instructor Ground</td>
<td>AVIA 1041, 3284 (Fall)</td>
</tr>
<tr>
<td>OR #BIOL 1404</td>
<td></td>
<td>AVIA 3233 Adv. Aircraft System</td>
<td>AVIA 1041,2083,3123 (Spring)</td>
</tr>
<tr>
<td>#PHYS 1114</td>
<td></td>
<td>AVIA 3241 Flight Instructor Flying</td>
<td>AVIA 3123, 3284</td>
</tr>
<tr>
<td>#MATH 2143</td>
<td>#MATH 1513</td>
<td>AVIA 3284 Instrument Ground</td>
<td>AVIA 2083, 3123 (Spring)</td>
</tr>
<tr>
<td>#HUM 2113/2223/2313/2453</td>
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<td>AVIA 3322 Adv. A/C and Instr.Flying</td>
<td>AVIA 3284</td>
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<tr>
<td>#ENG 2313/3893 or #PHIL 2113</td>
<td>(3 to 6 hours)</td>
<td>AVIA 3334 Advanced Aerodynamics</td>
<td>MATH 2143/PHTH 1114 (Fall)</td>
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<td></td>
<td></td>
<td>AVIA 3362 Instrument Flight Instructor G.</td>
<td>AVIA 3202, 3321 (Spring)</td>
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<td>#MUS 1113/1123</td>
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<td>AVIA 3401 Instrument Flight Instructor F</td>
<td>AVIA 3241, 3321</td>
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<tr>
<td>#ART 1003/1103/2103/3013/3083</td>
<td>(3 to 6 hours)</td>
<td>AVIA 3451 Intro Adv. Tech. Aircraft</td>
<td>N/A (Spring)</td>
</tr>
<tr>
<td>#THTR 1143/1183/2183/3183</td>
<td>(3 to 6 hours)</td>
<td>AVIA 3503 Integration of FMS/Comm. Ops</td>
<td>N/A (Fall)</td>
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<tr>
<td></td>
<td></td>
<td>AVIA 4562 Multiengine Ground Instruction</td>
<td>AVIA 3123, 3284 (Fall)</td>
</tr>
<tr>
<td>#Foreign Language</td>
<td></td>
<td>AVIA 4601 Multiengine Flying</td>
<td>AVIA 3164</td>
</tr>
<tr>
<td>(0 TO 3 hours)</td>
<td></td>
<td>AVIA 4643 Physiology</td>
<td>N/A (Fall)</td>
</tr>
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</table>
| #BIM 1553 OR #CIS 1003 | Can test out of class | AVIA 4663 Contemporary Topics | Senior Standing | Spring 
<table>
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<th></th>
<th></th>
</tr>
</thead>
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<tr>
<td>#ORIE 1002</td>
<td>N/R</td>
<td>AVIA 4674 Crew Resource Management</td>
<td>AVIA 3322, 4562</td>
<td>Spring</td>
<td></td>
</tr>
</tbody>
</table>
V. C. Course Offerings

1. List the required courses taught by the aviation unit. Indicate course number, title, number of sections per semester or quarter, and average enrollment per section for the most recent academic year. Asterisk (*) those included in the program being submitted for accreditation in this section.

<table>
<thead>
<tr>
<th>No.</th>
<th>Required Courses</th>
<th>Number of Sections</th>
<th>Average Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Fall</td>
<td>Winter</td>
</tr>
<tr>
<td>1004*</td>
<td>Primary Ground</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>1041*</td>
<td>Private Flying</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>2083*</td>
<td>Comm/Perfor/Regulations</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>3003*</td>
<td>Meteorology</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>3023*</td>
<td>ATC</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>3113*</td>
<td>Aviation Legal Problems</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>3123*</td>
<td>Commercial Operations</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>3152*</td>
<td>Fundamentals of Instruction</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>3163*</td>
<td>Intermediate A/CMan/Nav</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>3173*</td>
<td>Safety</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>3202*</td>
<td>Flight Instructor Ground</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>3233*</td>
<td>Advanced Aircraft System</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>3241*</td>
<td>Flight Instructor Flying</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>3284*</td>
<td>Instrument Ground</td>
<td>0</td>
<td>0</td>
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<td>3322*</td>
<td>Adv A/C and InstruFlying</td>
<td>1</td>
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<tr>
<td>3334*</td>
<td>Advanced Aerodynamics</td>
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<td>3362*</td>
<td>Instrument Flight Instructor Ground</td>
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<td>3401*</td>
<td>Instrument Flight Instructor Flying</td>
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<td>3451*</td>
<td>Intro to Advanced Tech Aircraft</td>
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<td>3503*</td>
<td>Integration of FMS/Comm Ops</td>
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<td>4562*</td>
<td>Multiengine Ground</td>
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<td>4601*</td>
<td>Multiengine Flying</td>
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<td>4643</td>
<td>Physiology</td>
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<td>4663</td>
<td>Contemporary Topics</td>
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<tr>
<td>4674</td>
<td>Crew Resource Manage</td>
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V. C. Course Offerings (continued)

1. List the elective courses taught by the aviation unit during the past two academic years. Indicate course number, title, number of sections per semester or quarter, and average enrollment per section.

<table>
<thead>
<tr>
<th>No.</th>
<th>Title</th>
<th>F</th>
<th>W</th>
<th>SP</th>
<th>SU</th>
<th>F</th>
<th>W</th>
<th>SP</th>
<th>SU</th>
<th>Average Enrollment</th>
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<tbody>
<tr>
<td>3143</td>
<td>History of Avia</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>2113</td>
<td>Avia management</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
</tbody>
</table>


V. D. **Supporting Disciplines**

1. List the required courses in the aviation program being submitted in this section taught by other academic units. Indicate other disciplines that utilize the same course. (If widely used, indicate "all campus.")

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Other disciplines using Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comm 2213</td>
<td>Business &amp; Professional Speaking</td>
<td>All Campus</td>
</tr>
<tr>
<td>Math 2143</td>
<td>Brief Calculus with applications</td>
<td>All Campus</td>
</tr>
<tr>
<td>Phys 1114</td>
<td>General Physics I</td>
<td>All Campus</td>
</tr>
</tbody>
</table>

2. (Optional) Discuss the adequacy of the courses. (This allows the institution to state a case for needing courses other than those available currently or for dropping an existing course.)
SECTION V

CURRICULUM – Aviation Management
(AABI 201, Criteria 2.4, 3.4, and 4.4)

A. Curriculum Criterion 74
B. Aviation Course Sequencing 76
C. Course Offerings 77
D. Supporting Disciplines 79
(Please complete one SECTION V, Curriculum, for each program submitted for accreditation.)

Note: Include in the Appendices updated copies of applicable curriculum review forms from AABI 202 (Application).

V. A. Curriculum Criterion.

The requirements specify subject areas appropriate to aviation programs, but do not prescribe specific courses. The program’s faculty must ensure that the aviation curriculum devotes adequate attention and time to each component, consistent with the objectives of the program and institution. Students must be prepared for careers in aviation and aerospace through the curriculum culminating in comprehensive projects or experiences based on the cumulative knowledge and skills acquired in earlier course work.

Describe the process by which the program curriculum meets the following criteria. Cite appropriate evidence and describe where it may be found/evaluated by the visiting team:

1. A combination of college level mathematics and basic sciences appropriate to the program.
   
   Students are required to take College Algebra, Brief Calculus with Applications, Physics and Biology. The university has an assessment plan for General Education. See Appendix XXXX1

2. A general education component that complements the aviation contents of the curriculum and is consistent with the program and institution objectives.

   General Education is 46 of 124 credit hours for the degree. Two English class, Speech class, Brief Calculus with Application, General Physics, and an Aviation-specific orientation class (ORIE-1002).

3. The following aviation topics:

   a. Attributes of an aviation professional, career planning and certification

      These topics are covered in Primary Ground school (AVIA 1004) and Contemporary Topics (AVIA 4663).

   b. Aircraft design, performance, operating characteristics, and maintenance

      These topics are covered in Primary Ground school (AVIA 1004).

   c. Aviation safety and human factors

      These topics are covered in Aviation Safety (AVIA 3173) and Aviation Physiology (AVIA 4643).

   d. National and international aviation law and regulations

      These topics are covered in Aviation Legal Problems (AVIA 3113), Legal Environment of Business (BLAW 3123), Air Transportation (AVIA 3293) and Primary Ground (AVIA 1004).

   e. Airports, airspace and air traffic control

      These topics are covered in Aviation Administration (AVIA 3133), Aviation Management (AVIA 2113), Air Transportation (AVIA 3293) and Primary Ground (AVIA 1004).
f. Meteorology and environmental issues

These topics are covered Primary Ground (AVIA 1004) and Air Transportation (AVIA 3293).

1. Specific program-level criteria (AABI 201, Criterion 4.0)
V. B. Aviation Course Sequencing

List the courses with their prerequisites or co-requisites or provide a precedence diagram showing the prerequisite and co-requisite interdependency of the courses. Courses without prerequisites need not be shown.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Prerequisite</th>
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<td>Private Ground</td>
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<td>Aviation Management</td>
<td>N/A</td>
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<td>Aviation Legal Problems</td>
<td>N/A</td>
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<tr>
<td>AVIA 3133</td>
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<td>N/A</td>
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<tr>
<td>AVIA 3143</td>
<td>Aviation History</td>
<td>N/A</td>
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<tr>
<td>AVIA 3173</td>
<td>Aviation Safety</td>
<td>N/A</td>
</tr>
<tr>
<td>AVIA 3293</td>
<td>Air Transportation</td>
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<td>AVIA 4663</td>
<td>Contemporary Topics</td>
<td>Senior Stand.</td>
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<td>ACCT 2203</td>
<td>Fund. Managerial Accounting</td>
<td>ACCT 2103</td>
</tr>
<tr>
<td>ENG 3903</td>
<td>Technical &amp; Professional Writing</td>
<td>ENG 1113 &amp; ENG 1213</td>
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<tr>
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<td>Principles of Microeconomics</td>
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<td>Business Statistics</td>
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</tr>
<tr>
<td>FIN 3113</td>
<td>Business Finance</td>
<td>ACCT 2103, ECON 2113, BUS 2633</td>
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<td>Principles of Marketing</td>
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<td>Legal Environment of Business</td>
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<td>MNGT 3533</td>
<td>Human Resource Management</td>
<td>MNGT 3113</td>
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</table>
V. C. **Course Offerings**

1. List the required courses taught by the aviation unit. Indicate course number, title, number of sections per semester or quarter, and average enrollment per section for the most recent academic year. *Asterisk (*) those included in the program being submitted for accreditation in this section.*

<table>
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<th>Required Courses</th>
<th>Number of Sections</th>
<th>Average Enrollment</th>
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<td>Aviation Safety</td>
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<td><strong>AVIA 3293</strong></td>
<td>Air Transportation</td>
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<td>Aviation Administration</td>
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<td><strong>AVIA 3143</strong></td>
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<td>Aviation Safety</td>
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<td><strong>AVIA 3293</strong></td>
<td>Air Transportation</td>
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<td><strong>AVIA 4663</strong></td>
<td>Contemporary Topics</td>
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<td><strong>AVIA 1004</strong></td>
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<td>Management &amp; Org. Behavior</td>
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<td>Human Resource Management</td>
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<tr>
<td><strong>ENG 3903</strong></td>
<td>Business &amp; Professional Writing</td>
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</table>
V. C. **Course Offerings** (continued)

1. List the elective courses taught by the aviation unit during the past two academic years. Indicate course number, title, number of sections per semester or quarter, and average enrollment per section.

<table>
<thead>
<tr>
<th>Elective Courses No.</th>
<th>Title</th>
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<th>W</th>
<th>SP</th>
<th>SU</th>
<th>Number of Sections F</th>
<th>W</th>
<th>SP</th>
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</table>
V. D. **Supporting Disciplines**

1. List the required courses in the aviation program being submitted in this section taught by other academic units. Indicate other disciplines that utilize the same course. (If widely used, indicate "all campus.")

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Other disciplines using Course</th>
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<tr>
<td>ACCT 2103</td>
<td>Fund. of Financial Accounting</td>
<td>Business</td>
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<td>ACCT 2203</td>
<td>Fund Managerial Accounting</td>
<td>Business</td>
</tr>
<tr>
<td>ENG 3903</td>
<td>Technical and Professional Writing</td>
<td>All Campus</td>
</tr>
<tr>
<td>ECON 2213</td>
<td>Principles of Microeconomics</td>
<td>All Campus</td>
</tr>
<tr>
<td>BUS 2633</td>
<td>Business Statistics</td>
<td>Business</td>
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<td>FIN 3113</td>
<td>Business Finance</td>
<td>Business</td>
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<td>MKT 3233</td>
<td>Principles of Marketing</td>
<td>Business</td>
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<td>BLAW 3123</td>
<td>Legal Environment of Business</td>
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<td>MNGT 3113</td>
<td>Management and Organizational Behavior</td>
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</tr>
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<td>MNGT 3533</td>
<td>Human Resource Management</td>
<td>Business</td>
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</tbody>
</table>

2. (Optional) Discuss the adequacy of the courses. (This allows the institution to state a case for needing courses other than those available currently or for dropping an existing course.)
## SECTION VI

**FACULTY AND STAFF**  
(AABI 201, Criteria 2.5, 3.5 and 4.5)

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>A.</td>
<td>Current Faculty</td>
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</tr>
<tr>
<td>B.</td>
<td>Current Staff</td>
<td>84</td>
</tr>
<tr>
<td>C.</td>
<td>Faculty Assignment Definitions</td>
<td>85</td>
</tr>
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<td>D.</td>
<td>Current Faculty Assignments</td>
<td>87</td>
</tr>
<tr>
<td>E.</td>
<td>Compensation and Benefits</td>
<td>89</td>
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<td>F.</td>
<td>Evaluation and Promotion Policies</td>
<td>91</td>
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<tr>
<td>G.</td>
<td>Professional Development</td>
<td>101</td>
</tr>
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</table>
VI. A. Current Faculty

List the current faculty of the aviation unit, including part-time, adjunct instructors, and teaching graduate assistants. List the full-time faculty first, grouped alphabetically within rank. Indicate the rank at the head of each group. Show the full-time equivalence (FTE) for each part-time faculty member (i.e., .25 for quarter time). Indicate years on faculty as of the end of the current academic year. Indicate tenure status and whether an academic year (9 mo.) or fiscal year (12 mo.) appointment. See Appendix A for faculty résumés. **For faculty, a faculty member whose workload is the equivalent of teaching 12 hours a week.

<table>
<thead>
<tr>
<th>Group by Name/Rank</th>
<th>FTE</th>
<th>Highest Degree</th>
<th>Years on Faculty</th>
<th>Tenured</th>
<th>Tenure Status (Check One)</th>
<th>Non-Tenure Track</th>
<th>9 Months</th>
<th>12 Months</th>
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<td>18</td>
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<td>Non-Tenure Track</td>
<td>9 Months</td>
<td>12 Months</td>
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<td>Van Bebber, John Assistant Professor</td>
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<td>Group by Name/Rank</td>
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<td>Years on Faculty</td>
<td>Tenure Status</td>
<td>Non-Tenure Track</td>
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<td>Adjunct</td>
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</table>
VI. B. Current Staff

List the current support staff of the aviation unit and their assignments. Include flight instructors, lab instructors, simulator instructors, clerical staff, aircraft maintenance technicians, aircraft dispatch, and non-teaching graduate assistants. Indicate the percentage of full-time equivalence.

* For staff, a staff member who works 40 hours a week.

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<thead>
<tr>
<th>Name</th>
<th>FTE</th>
<th>Assignment</th>
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</thead>
<tbody>
<tr>
<td>Dilbeck, Susan</td>
<td>0.00</td>
<td>Financial Assistant – Durant, OK</td>
</tr>
<tr>
<td>Rupert, Lori</td>
<td>0.00</td>
<td>Program Coordinator – Tinker AFB, OK</td>
</tr>
<tr>
<td>Elmore, Rhonda</td>
<td>0.00</td>
<td>Office Assistant – Tinker AFB, OK</td>
</tr>
<tr>
<td>Hedrick, Richard</td>
<td>0.00</td>
<td>Coordinator of Academic Services – Rose/OCCC</td>
</tr>
<tr>
<td>Davis, Alan</td>
<td>0.00</td>
<td>Flight Maintenance Technician Supervisor</td>
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<tr>
<td>Pruitt, Michael</td>
<td>0.00</td>
<td>Lead Mechanic</td>
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<tr>
<td>Blackburn, Jordan</td>
<td>0.00</td>
<td>Maintenance Technician</td>
</tr>
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<td>Brummett, Jordan</td>
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<td>Flight Instructor</td>
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<td>Crawford, Blake</td>
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<td>Martin, Blake</td>
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<td>Sandmann, Ross</td>
<td>0.00</td>
<td>Flight Instructor</td>
</tr>
<tr>
<td>Wright, Ben</td>
<td>0.00</td>
<td>Flight Instructor</td>
</tr>
</tbody>
</table>
VI. C. Faculty Assignment Definitions

Define what constitutes a full-time faculty assignment in the aviation unit. Discuss institutional regulations that influence this definition. Include formulas and load factors for various courses and other activities. Define positions of instructors, lecturers, adjuncts, etc.

Note: Due to the recent restructuring of the universities and the eliminate of the Executive Dean of Instruction position the faculty and administration are in the process of editing the Academic Policies & Procedures manual to deal with the structural changed. This is an ongoing process.

The pertinent portions of the SOSU Academic Policies & Procedures manual states:

In the Regional University System of Oklahoma Board of Regents Policy and Procedures Manual, Chapter 3 – Academic Affairs, page 3–5, the following guidelines are set forth:

3.2.2 Principal Academic Ranks of the University
The principal academic ranks of the University shall be Professor, Associate Professor, Assistant Professor, and Instructor. Educational qualifications for the rank of Professor and Associate Professor shall be an earned doctorate degree awarded by a regionally accredited or internationally recognized institution. For the rank of assistant professor it shall be an earned doctorate degree awarded by a regionally accredited or internationally recognized institution and/or individuals who have completed all requirements in a doctoral program except the dissertation from a regionally accredited or internationally recognized institution. An instructor must also have a degree from a regionally accredited or internationally recognized institution.

4.7 Faculty Load
University faculty have responsibilities in four areas: (1) instruction, (2) research/scholarship, (3) service to the institution, profession, and public, and (4) various non–teaching or administrative duties. While instruction and research/scholarship are expected of all faculty, the scope and variety of service and non–teaching or administrative assignments will depend upon the needs of the departments, schools, and University at large. Faculty load assignments will be monitored each semester by the department chair, reviewed by the dean of the school, and approved by the Vice President for Academic Affairs.

4.7.1 Teaching
Instructional assignments are based upon the expertise of the faculty member and needs of the academic department. They are made by the department chair in collaboration with the faculty member. In the fall and spring semesters a full–time teaching load is twelve (12) semester hour units per semester. In the summer term a full–time teaching load is eight (8) semester hour units per term.

4.7.2 Research/Scholarship
Individual faculty research and scholarly activities are defined by the professional interests of the faculty member. While the scope and nature of faculty scholarship will vary among departments, University faculty shall be involved in scholarly activities, individually or collaboratively, which advance the state of knowledge or performance levels of their respective fields. Both the pursuit of new knowledge or techniques and the application of knowledge in creative ways are valued.

4.7.3 Service to the Institution, Profession, and Public

4.7.3.1 Student Advisement
Academic advisement is a very important service responsibility for faculty. Advisors are expected to assist students with enrollment, to counsel them about career options, to provide them information about deadlines and checkpoints, and to monitor their progress through programs. The department chair selects faculty to serve as advisors. A recommended maximum advisement load is thirty (30) students.
4.7.3.2 Committees and Advisory Service
Institutional service activities include sponsorship of student organizations, membership on ad-hoc and standing committees, consultation to other areas of the University, and participation in activities which advance the academic programs of the University.

4.7.3.3 Professional Activities
Membership in selected professional organizations appropriate to a faculty member’s assignment is a basic responsibility. Involvement in professional organizations at local, state, regional, and national levels consists of attendance of meetings, holding offices, and serving on committees.

4.7.3.4 Public
Service to the community at large occurs when a faculty member contributes professional expertise to the activities of governmental, public schools, or other public and service agencies. The contribution may be in, but is not limited to the following roles: consultant, program participant, member of a board or task force, or advisor.

4.7.4 Non–teaching or Administrative Duties
These assignments are based upon the needs of the department, school, and University. Such assignments will be developed cooperatively between the faculty member and department chair or appropriate administrative officer.
VI. D. Current Faculty Assignments

1. Provide data on faculty assignments for the most recent fall semester or quarter. List all faculty, full-time and part-time, by name. For each faculty member indicate the courses taught, enrollment, and credit hours (CR) per course and which courses are graduate credit. For each faculty member indicate the percent of time assigned to other activities and specify (i.e., administration, counseling, research, other service).

| Name               | Course   | Enrollment | CR | Activity                                    | % Time  |
|--------------------|----------|------------|    |                                            |         |
| Alluisi, Stanley J.| Orie 1002| 29         | 2  | Co-Director, ASI                           | 75% §   |
|                    | AVIA 3023| 14         | 3  | Chair, Dept. of Av. Mgmt., Chair of Grad Prm. |         |
|                    | AVIA 3133| 2          | 3  |                                            |         |
|                    | AVIA 4643| 27         | 3  |                                            |         |
| Jacox, George C.   | AVIA 3123| 16         | 3  | Co-Director, ASI                           | 75% §   |
|                    | AVIA 3152| 20         | 2  | Chair, Dept of Flight                      |         |
|                    | AVIA 3202| 20         | 2  |                                            |         |
|                    | AVIA 4970| 1          | 3  |                                            |         |
| Thomas, Kyle V.    | AVIA 1004| 35         | 4  | Chief Pilot                                | 50%     |
| Van Bebber, John*  | AVIA 3173| 22         | 3  | Safety Officer                             | 10%*    |
|                    | AVIA 3334| 15         | 4  |                                            |         |
|                    | AVIA 3503| 7          | 3  |                                            |         |
|                    | AVIA 4562| 16         | 2  |                                            |         |
| Marshall, Charles* | AVIA 4183| 10         | 3  | Senior Faculty at Oklahoma City            | 10%*    |
|                    | AVIA 4970| 2          | 3  |                                            |         |
|                    | AVIA 5103| 10         | 3  |                                            |         |
|                    | AVIA 5223| 24         | 3  |                                            |         |
|                    | AVIA 5980| 8          | 3  |                                            |         |
| Abernathy, C       | SFTY 4163| 6          | 3  | Adjunct - None                             |         |
| Davis, D           | AVIA 5533| 14         | 3  | Adjunct - None                             |         |
| Elmore, K          | AVIA 3173| 15         | 3  | Adjunct - None                             |         |
| Gatlin, J          | AVIA 5203| 22         | 3  | Adjunct - None                             |         |
|                    | BLAW 3123| 12         | 3  |                                            |         |
| Hall, E            | MNGT 3113| 6          | 3  | Adjunct - None                             |         |
| Marshall, Jamie    | AVIA 4003| 9          | 3  | Adjunct - None                             |         |
|                    | AVIA 4353| 9          | 3  |                                            |         |
|                    | AVIA 4361| 9          | 1  |                                            |         |
| Mass, Susan        | AVIA 5543| 13         | 3  | Adjunct - None                             |         |
| Melton, William    | AVIA 3143| 19         | 3  | Adjunct - None                             |         |
|                    | AVIA 5523| 10         | 3  |                                            |         |
| Pettigrew, W       | AVIA 3113| 12         | 3  | Adjunct - None                             |         |
|                    | AVIA 5203| 18         | 3  |                                            |         |
| Spears, Bryan      | AVIA 1004| 10         | 4  | Adjunct - None                             |         |
|                    | AVIA 2113| 21         | 3  |                                            |         |
| Spears, Drew       | AVIA 3133| 11         | 3  | Adjunct - None                             |         |
|                    | AVIA 4673| 9          | 3  |                                            |         |
|                    | AVIA 5153| 22         | 3  |                                            |         |
|                    | AVIA 5423| 10         | 3  |                                            |         |
| Sperry, Ken        | AVIA 5153| 17         | 3  | Adjunct - None                             |         |
|                    | AVIA 5613| 8          | 3  |                                            |         |
| Welch, Patricia    | AVIA 5233| 25         | 3  | Adjunct - None                             |         |
|                    | AVIA 5333| 15         | 3  |                                            |         |
| Weselek, J         | AVIA 5213| 26         | 3  | Adjunct - None                             |         |
|                    | MNGT 3533| 13         | 3  |                                            |         |
§ Note: Dr. Alluisi & Mr. Jacox are supposed to receive 75% “release time” in order to perform Chair and other administrative functions. Theoretically, this should result in them each teaching only one class per semester. In fact this is not the case and both of them routinely teach three to five classes per semester in addition to their administrative duties.

*Note: Dr. Marshall and Capt. Van Bebber are both shown as 1.00 FTE in the first chart under section VI. A. Current faculty. However, they still perform additional functions (senior faculty member in Oklahoma City and Safety officer, respectively) for which they do not receive release time nor additional compensation.
VI. E. Compensation and Benefits

1. Provide data indicating the aviation faculty salaries for the current year. Data that would reveal individual salaries may be omitted and provided directly to the visiting team. Indicate the average 9-month salaries by rank.

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
<th>Avg. Salary</th>
<th>Salary Basis (i.e. 9 mos., 12 mos., etc.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flight Instructor</td>
<td>6</td>
<td>$20.00 / Flight Hour</td>
<td>Per flight hour - No benefits</td>
</tr>
<tr>
<td>Simulator Instructor</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Laboratory Instructor</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aircraft Maintenance</td>
<td>3</td>
<td>$48,185.00</td>
<td>12 months with benefits</td>
</tr>
<tr>
<td>Technicians</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aircraft Dispatchers</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
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<tbody>
<tr>
<td>Professor</td>
<td>1</td>
<td>$100,028.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assoc. Professor</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asst. Professor</td>
<td>5</td>
<td>$64,764.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instructor</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lecturer</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjunct</td>
<td></td>
<td></td>
<td>21</td>
<td>$3,500/class</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grad. Teach. Asst.</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Describe how the salaries of aviation faculty relate to those of comparable academic units within the institution.

SOSU determines faculty salary based upon a standard “salary card” with some exceptions for particular faculty positions. Pay is determined based upon academic degree status, academic rank, teaching experience, and any additional duties or qualifications. A copy of the current salary card is included in the appendices.

3. Briefly describe the benefits programs for faculty and staff.
SOSU offers employees healthcare, dental care, vision care, various health, life and medical insurance plans. Faculty and some staff are also required to participate in the state of Oklahoma’s Oklahoma Teacher Retirement System (OTRS). Faculty and staff may also contribute to a 401K plan.

Flight instructors and most adjunct faculty do not receive health or other benefits. Some adjuncts, if they teach enough courses throughout the year, may reach the three-quarter-time employment threshold and will be offered benefits.

For a complete description of the various benefits available to faculty & staff please see the 2016 BENEFIT PROGRAMS FOR EMPLOYEES document in the appendix.
VI. F. Evaluation and Promotion Policies

1. Faculty Evaluation
   Describe the procedures for evaluating the faculty of the aviation unit and explain how aviation faculty evaluation process relates to those of comparable academic units. (The results of the most recent evaluation of each faculty member should be available for review by the visiting team during the on-site visit.)

All members of the faculty at SOSU are evaluated using the following procedures found in the SOSU Academic Policies and Procedures Manual:

4.4 Faculty Development and Evaluation Policies

4.4.1 Introduction

Teaching, research, and service are the triad of professional responsibilities at the University. While this is primarily a teaching University, it is a basic principle of higher education that scholarly research informs effective teaching. At the same time, the University faculty contributes richness to the culture of the community at large through their unique skills and talents. Evaluation of faculty performance considers these three areas and provides a critical process for continuous improvement of the University and faculty.

Both the importance and the imperfection of a faculty development and evaluation system are duly considered in the Southeastern Oklahoma State University scheme. It is designed within the following guidelines:

- The Faculty Development and Evaluation System is designed to improve faculty performance.
- The Faculty Development and Evaluation System will provide important information for promotion and tenure decisions.
- The System utilizes several sources of data, and these sources are clearly communicated.
- Evaluation procedures are individualized and flexible.
- Individualization considers the institution’s nature, directions, and priorities, the administrative unit’s needs, and the individual’s interests.

An annual academic performance review (Faculty Development and Evaluation Summary) is submitted for each full–time faculty member. A formal evaluation is conducted for each non–tenured faculty member each year and for each tenured faculty member at least each third year.

4.4.2 Faculty Evaluation System

The Regional University System of Oklahoma Board of Regents has specified five basic categories upon which academic rank and promotion in rank are based: (1) education and experience, (2) effective classroom teaching, (3) research/scholarship, (4) contributions to the institution and profession, and (5) performance of non–teaching or administrative duties.

The Faculty Development and Evaluation System of Southeastern Oklahoma State University is designed to promote faculty development and to assess faculty performance on those prescribed criteria. Instrumentation of the system consists of four documents:

- Faculty Development and Evaluation Criteria (see Appendix D)
The document entitled “Faculty Development and Evaluation Criteria” lists criteria for evaluating faculty performance in the four categories. The document “Catalog of Faculty Development and Evaluation Criteria” presents exemplars for each criterion. The exemplars are not all-inclusive, but do provide examples and extend the definitions of the criteria.

The document “Faculty Development Agreement” is an agreement for areas of emphasis for the forthcoming year. It is not an implicit evaluation of criteria not listed, however. Refer to Point 1 in the section entitled “Procedural Principles and Guidelines.”

“The Faculty Development and Evaluation Summary” provides for listing the education and experience of the faculty and then a rating of the faculty member’s performance in the categories of (1) effective classroom teaching, (2) scholarship, (3) service to institution, profession, and public, and (4) performance of non-teaching/administrative duties/assignments. It also provides for a rating of overall performance. Provision is made for commentary and signatures on the back.

Category 4, performance of non-teaching/administrative duties/assignments, is interpreted to include those duties or assignments which result in a reduced teaching load such as serving as department chair, project director, coach, and band director.

4.4.2.1 Procedures

The “Catalog of Faculty Development and Evaluation Criteria” is utilized for establishing individual faculty development plans and for guiding individual faculty evaluations. Performance in each category is weighted by negotiation between the faculty member and the department chair within limits set by the institution and the administrative unit.

Institutional emphases define the weights of each category as follows:

- Category 1 (Teaching) +
- Category 4 (Non-Teaching)
- 50–70% of Overall Performance
- Category 2 (Scholarship)
- 15–25% of Overall Performance
- Category 3 (Service)
- 15–25% of Overall Performance

All faculty are rated on Categories 1, 2, and 3. All also are rated on all criteria in Category 1 and on negotiated criteria in Categories 2 and 3. Only those with duties or assignments which result in a reduced teaching load are rated in Category 4. Weighting in Category 4 is calculated on an individual basis and combined with the weight of Category 1 so that the combined total is within the 50–70% range.

The rating on overall performance is a composite of the ratings in the categories. Administrative units may also set limits for each category within the institutional parameters. Completion of the “Faculty Development and Evaluation
Summary is based upon a conference of the department chair and the individual faculty member during which the relevant criteria for each category are rated. Not all criteria for each category apply to every faculty member. Relevancy of individual criteria is negotiated by the department chair and the individual faculty member.

Commentary is provided on the backside of the “Faculty Development and Evaluation Summary” instrument as indicated. The “Faculty Development and Evaluation Summary” is signed by both the department chair and the individual faculty member. The faculty member’s signature denotes that the evaluation has been conducted according to approved procedures. It does not necessarily mean agreement with the ratings.

A completed “Faculty Development and Evaluation Summary” for each full–time faculty member is submitted by the department chair to the respective dean of the school for review.

The dean of the school reviews the evaluation, provides comments, and signs the instrument. The dean of the school keeps a copy in the dean’s office and sends a copy to the department chair and a copy to the faculty member.

4.4.3 Procedural Principles and Guidelines

The Faculty Development and Evaluation System of Southeastern Oklahoma State University will be administered within the following procedural principles and guidelines.

1. Each faculty member will be evaluated on all Category 1 criteria and on criteria from other categories as determined in negotiation with the department chair. However, the development plan to be composed at the beginning of the development–evaluation cycle will specify only areas the faculty and chair identify for development. These areas may be ones from Category 1 in which the faculty needs improvement as well as special tasks in other categories. It is assumed that performance on required criteria not listed in the development plan will remain stable over the evaluation cycle. Cycle–end evaluation will address both the areas listed in the development plan and the other required criteria.

2. The department chair assumes that the faculty member is functioning at a level of “proficient” unless there is evidence to the contrary. For a rating lower than proficient, the chair has the responsibility of presenting evidence; and for a rating higher than proficient, the faculty member has the responsibility of presenting evidence.

3. Faculty development and evaluation criteria are generally stated in minimum terms. Ratings on criteria vary according to the fruitfulness of efforts.

4. The ratings on the evaluation scale are as follows:

   Outstanding

   Performance is among the best of colleagues in similar appointments in similar institutions in the respective field nationwide. On applicable criteria faculty member has recognition beyond the state.

   Commendable

   Performance is among the best of colleagues in similar appointments in similar institutions in the respective field statewide. On applicable criteria faculty member has statewide recognition.

   Proficient

   Performance is productive, effective, and consistent with the achievement of the emphases, objectives, and interests of the institution, the administrative unit, and/or the individual.

   Needs Improvement
Performance is less than adequate for achieving the emphases, objectives, and interests of the institution, the administrative unit, and/or the individual.

Critical

Performance fails to contribute to the achievement of the emphases, objectives, and interests of the institution, the administrative unit, and/or the individual.

5. The “Faculty Development and Evaluation Summary” covers a year of performance except in certain instances; i.e., new faculty, faculty on leave, etc.

6. Only activities, contributions, and involvements directly related to the University or to the faculty member’s educational field are considered in the evaluation.

7. While formal evaluations of tenured faculty are required at least each third year, formal evaluations may occur more frequently at the request of either the faculty member of the department chair. In years when a complete evaluation is not done, a continuation form will be submitted (Appendix G–Part II).

4.4.4 Faculty Development and Evaluation Process

The faculty development and evaluation process for the year includes the following three steps:

1. By September 15, the faculty revises and updates the previous year’s “Faculty Development Plan” as outlined in the following section entitled “Faculty Evaluation Guide.” It should list any activities completed the preceding year and not previously included in the “Faculty Development Plan”. The faculty forwards the revised plan to the department chair.

2. By October 1, the faculty and the department chair meet for a year-end evaluation. The chair should send the completed “Faculty Evaluation Form,” “Faculty Development Plan,” and documentation (if applicable) to the dean of the school.

3. By November 1, the faculty and the chair complete the current year’s “Faculty Development Plan.”

4.4.5 Faculty Evaluation Guide

1. The following documents should be used: Faculty Development and Evaluation System (see department chair)

Faculty Development Plan

Faculty Evaluation Form (see department chair)

2. The evaluation for the preceding year should be made during September of the current year on the basis of the “Faculty Development Plan” completed in the fall of the preceding year and revised in August/September of the current year.

a. Before the conference with the department chair, the faculty should conduct a year end self-evaluation and succinctly describe progress for each exemplar listed in the preceding year’s “Professional Development Plan.” A brief statement indicating whether the exemplar was fully accomplished, partially accomplished, or not addressed is appropriate.

b. As the faculty formulates an overall self-rating in the area of teaching, s/he should analyze progress on several exemplars and accurately combine these to give an overall rating. Overall self-evaluation with only one exemplar is not acceptable. Citing marks from a student evaluation, for example, is not adequate evidence for a rating in the area of teaching. The results from the student evaluations represent only one dimension of teaching effectiveness. Multiple methods need to be used to formulate an overall self-rating. For example, results from peer-evaluations,
student evaluations, ETC Major Field Achievement Tests, and other exemplars should be combined to support the rating for teaching effectiveness.

c. In the areas of research/scholarship and service, again evidence from several exemplars needs to be combined to formulate the rating in each area. d. The faculty should write a summary paragraph that combines various activities to give an overall rating for performance. If the standard evaluation form is used, the faculty should mark it to show her/his self–evaluation.

3. Both the faculty member and the chair should have copies of each of the basic documents.

4. When the self–evaluation is complete, the chair and the faculty member should schedule a conference.

5. In the conference, the chair should review the faculty member’s self–evaluation and make his/her own evaluation of the faculty member and mark it on the evaluation form. Documentation is required for ratings above or below proficient and should be attached to the evaluation forwarded to the dean.

6. By October 1, the chair should send a copy of the completed “Faculty Evaluation Form,” the “Faculty Development Plan,” and documentation (if any) to the dean of the school.

7. By October 31, the dean should write comments about the evaluation and return the copy to the chair.

2. Tenure and Promotion
Describe the criteria and procedures for promotion and tenure of aviation faculty.

4.6 Tenure
Source: See Policy Manual of the Regional University System of Oklahoma Board of Regents (Academic Affairs, 3.3)

4.6.1 Academic Tenure

Tenure is a privilege and a distinctive honor. Tenure is defined as continuous reappointment which may be granted to a faculty member in a tenure–track position, subject to the terms and conditions of appointment. The tenure decision shall be based on a thorough evaluation of the candidate’s total contribution to the mission of the University. While specific responsibilities of faculty members may vary because of special assignments or because of the particular mission of an academic unit, all evaluations for tenure shall address at a minimum whether each candidate has achieved excellence in (1) teaching, (2) research or creative achievement, (3) professional service, and (4) University service. Each University may formulate standards for this review and determine the appropriate weight to be accorded each criteria consistent with the mission of the academic unit.

Tenure is granted by the Regional University System of Oklahoma Board of Regents upon recommendation of the University president. Determination of merit and recommendation for granting tenure shall comport with the minimum criteria and policies and procedures contained in this chapter.

The terms and conditions of every appointment or reappointment shall be stated in writing and copies in the possession of both the institution and faculty member before the appointment is approved. Tenure shall be granted only by written notification after approval by the Board. Only full–time faculty members holding academic rank of assistant professor, associate professor, or professor may be granted tenure. Qualified professional librarians shall be considered faculty members if they are given academic rank.

Tenure does not apply to administrative positions, but a tenured faculty member appointed to an administrative position retains tenured status as a member of the faculty.
The Board intends to reappoint tenured personnel to the faculties of the institutions under its control within existing positions that are continued the next year. The Board reserves the right to terminate tenured faculty at the end of any fiscal year if the Legislature fails to allocate sufficient funds to meet obligations for salaries or compensation.

4.6.2 Periods of Appointment and Tenure

Faculty members holding academic rank above the level of instructor (assistant professor, associate professor, professor) may receive tenure at any time. Normally, faculty members shall be on probation for five (5) years after date of first being employed by the University in a tenure–track position. (Years of experience in a non–tenure–track position may be used for probation only if approved by the University). Seven (7) years shall be the maximum probationary period for the eligible faculty member to be granted tenure. If, at the end of seven (7) years any faculty member has not attained tenure, there will be no renewal of appointment for the faculty member unless a specific recommendation for waiver of policy from the President to the contrary is approved by the Regional University System of Oklahoma Board of Regents. This procedure applies every year thereafter.

For the purpose of determining probationary employment of faculty members for tenure consideration, sabbatical leave counts as a part of the period of probationary employment, but a leave of absence is not included as part of the probationary period.

4.6.3 Procedure for Granting Promotion and Tenure (Rev. 7/13)

The normal procedure for granting tenure is initiated by the faculty member during the fifth, sixth, or seventh year of service to the University in a tenure–track position. The normal procedure for granting promotion is initiated by the eligible faculty member. Failure to complete any of steps 3-7 by the specified due date will constitute de facto approval at that step in the tenure and/or promotion process.

The following steps outline the normal process:

Step 1–

All of the following must be completed no later than September 15: The faculty member files a written request for promotion and/or tenure with the department chair. The request must be accompanied by a portfolio exhibiting documentation of effective teaching, research/scholarship, contributions to the institution and profession, and performance of non–teaching or administrative duties, if appropriate. Once the portfolio is submitted, the applicant cannot add to it but he/she can change the status of items (e.g. If a paper was submitted for publication in September and in November he/she is notified it was accepted for publication, the portfolio can be amended to indicate the paper was accepted.)

Step 2–

All of the following must be completed no later than October 1: A Promotion and Tenure Review Committee shall be formed. The Committee shall include all faculty in the department with the appropriate tenure/rank. For Tenure applications, all tenured faculty members within the department shall serve as the Promotion and Tenure Review Committee. In Promotion cases, only tenured faculty at or above the rank sought shall serve on the committee. As they review applications in a later stage of the process, department chairs, the Dean of Instruction, and the VPAA do not serve on either Tenure or Promotion committees in their academic department even if they are otherwise qualified. In the event that the number of faculty at the appropriate rank or tenured faculty members in the department is fewer than five (5), the tenured and appropriately ranked faculty within the department will serve on the committee and additional tenured and appropriately ranked faculty members will be appointed by the following process. The applicant will submit a list of qualified prospective faculty to the department chair and dean. The list may include up to twice the number of needed faculty for the vacancies. The Dean of Instruction and the department chair will then choose from the list to fill the vacancies. If no agreement can be reached to fill the vacancies, then the vacancies will be filled by a random selection process--with an equal probability of selection--from the qualified
faculty within the applicant’s school. Faculty chosen by either of these methods would be asked if they are willing to serve. If there is a committee member(s) that is tenured but not of sufficient rank, that member shall only vote on the tenure recommendation. If this creates a shortage of committee members for the promotion recommendation (i.e., fewer than five), then a qualified member of sufficient rank will be chosen to fill that vacancy by the selection process described in this policy, and that committee member shall only vote on the promotion recommendation.

**Step 3--**

All of the following must be completed no later than October 15: The department chair or dean shall call a meeting of the Promotion and Tenure Review Committee to initiate discussion of the request. After each member of the Promotion and Tenure Review Committee critiques the portfolio and each performance criterion, the faculty member’s performance shall be reviewed, discussed, and evaluated by the Promotion and Tenure Review Committee. This review shall be conducted in a manner that allows for input from non-tenured colleagues, students, alumni, and administrative information from the department chair. After completion of the review, a poll by secret ballot of the Promotion and Tenure Review Committee will be taken to determine whether a recommendation for the granting of tenure and/or promotion will be made. Committee members shall not be permitted to abstain. A simple majority vote shall prevail. The committee will continue deliberations until a majority decision has been reached. The chair of the Promotion and Tenure Committee will write a narrative evaluation of the applicant’s performance on each performance criterion in the form of a letter. The narrative evaluation letter must be approved by a majority vote of the whole Promotion and Tenure Review Committee. The Promotion and Tenure Review Committee shall then send the portfolio with the committee’s vote (numerical count), the narrative evaluation letter, and their recommendation to grant or to deny to the department chair. The committee chair also writes a letter to the applicant informing him/her of the committee’s recommendation to grant or deny tenure/promotion. The recommendation letter is separate from the narrative evaluation letter. The narrative evaluation letter will be inserted into the portfolio but will not be made available for review by the candidate until the optional withdrawal period following the VPAA’s recommendation. All ballots are to be retained by the chair of the Promotion and Tenure Review Committee until a final decision is reached concerning the request. The ballots shall then be destroyed.

**Step 4--**

All of the following must be completed no longer than November 1: The department chair shall review the Promotion and Tenure Review Committee’s vote, critique the portfolio, evaluate each performance criterion, and decide whether to recommend the granting of tenure and/or promotion. The department chair will then write a narrative evaluation of the applicant’s performance on each performance criterion in the form of a letter. The narrative evaluation letter will be inserted into the portfolio but will not be made available for review by the candidate until the optional withdrawal period following the VPAA’s recommendation. The chair will then forward a recommendation concerning the request and all documentation to the Dean of Instruction. The chair will provide the applicant with a written statement of his/her recommendation and a written statement of his/her recommendation shall also be forwarded to the members of the Promotion and Tenure Review Committee.

**Step 5--**

All of the following must be completed no later than December 1: The Dean of Instruction shall review the department chair’s recommendation, the Promotion and Tenure Review Committee’s vote, critique the portfolio, evaluate each performance criterion, and decide whether to recommend the granting of tenure and/or promotion. The dean will then write a narrative evaluation of the applicant’s performance on each performance criterion in the form of a letter. The narrative evaluation letter will be inserted into the portfolio but will not be made available for review by the candidate until the optional withdrawal period following the VPAA’s recommendation. The dean will then forward a recommendation concerning the request and all documentation to the Vice President for Academic Affairs. The dean will provide the applicant with a written statement of his/her recommendation and a written statement of his/her recommendation shall also be forwarded to the department chair and to the members of the Promotion and Tenure Review Committee.
**Step 6—**

All of the following must be completed no later than January 15: The Vice President for Academic Affairs (VPAA) shall review the dean’s recommendation, the Promotion and Tenure Review Committee’s vote, critique the portfolio, evaluate each performance criterion, and decide whether to recommend the granting of tenure and/or promotion. The VPAA will then write a narrative evaluation of the applicant’s performance on each performance criterion in the form of a letter. The narrative evaluation letter will be inserted into the portfolio and the VPAA will provide the applicant with a written statement of his/her recommendation. Upon receipt of the VPAA’s recommendation the candidate will have the option to withdraw the application (as described in “Withdrawal of the Application” below). Should the candidate elect not to withdraw, the VPAA will then forward a recommendation concerning the request and all documentation to the President. The VPAA will then forward a written statement of his/her recommendation to the dean, the department chair and to the members of the Promotion and Tenure Review Committee.

**Withdrawal of Application:** After receiving the VPAA’s recommendation the applicant will be given a summative list of the recommendation decisions and have the opportunity to review narrative evaluations from the Promotion and Tenure Review committee, department chair, dean, and VPAA. The applicant will then have the opportunity to withdraw the tenure/promotion application without prejudice toward future applications. The applicant must file the withdrawal with the VPAA by January 30. If the applicant chooses to file a procedural due process appeal, then s/he will have the opportunity of withdrawing the tenure/promotion application at the conclusion of the appeal process or following the VPAA’s decision, should the procedure be renewed as a result of the appeal. Due Process Appeal: If the Vice President for Academic Affairs recommends that promotion or tenure be denied and the faculty member believes that the request has not been accorded “procedural due process,” s/he may request of the Faculty Appellate Committee a hearing pertaining solely to due process. The definition of procedural due process is that all aspects of tenure and/or promotion will be conducted in a manner that adheres to the protocols, principles, and policies set forth in the Academic Policies and Procedures Manual at Southeastern and the Policy Manual of the Regional University System of Oklahoma. Areas considered as procedural due process may include but are not limited to: (1) process used to convene the tenure and/or promotion committee; (2) ineligible members appointed to the committee; (3) manner by which the committee conducts business; (4) adherence to the deadlines; (5) attempts to exert inappropriate influence/pressure by any party; or (6) failure to provide required evaluation/narrative at any level of the review. Such an appeal must be filed by January 30. The appeal hearing will be conducted by the full membership of the Faculty Appellate Committee, with at least seven members of the committee participating in the hearing (see APPM 3.6.1 for the committee’s composition and functions). All decisions by the committee shall be made by a simple majority vote. Pertinent testimony from all parties involved may be heard. If the Faculty Appellate Committee rules that due process was violated, the committee may then recommend that the procedure be renewed at the point where violation occurred. The VPAA shall be responsible for monitoring the subsequent procedures to assure that due process is accorded. The Faculty Appellate Committee must complete action on an appeal by February 15.

**Step 7—**

All of the following must be completed no later than March 1: Upon receiving a recommendation from the Vice President for Academic Affairs, the President decides either to approve or disapprove the request for tenure and/or promotion. The President then reports his decision to the VPAA, Dean of Instruction, the department chair, the Promotion and Tenure Review Committee, and the faculty member. If the President approves the request for tenure, s/he submits it to the Regional University System of Oklahoma Board of Regents, normally at the April meeting. The President then reports the Regents’ action to the VPAA, the Dean of Instruction, the department chair, the Promotion and Tenure Review Committee and the faculty member.

If the applicant withdraws the application by the January 30 deadline, the application does not proceed to the President. If, as a result of an appeal decision, the tenure/promotion procedure is renewed, the VPAA’s recommendation will be made by March 15. If the VPAA’s decision is to recommend denial of tenure/promotion,
the applicant will have the opportunity to withdraw the application. The withdrawal must be filed by March 30. If the application is withdrawn, it will not proceed to the President.

4.6.4 Concepts Regarding Tenure

The highest interests of the University will be served through a spirit of cooperation and a sense of mutual confidence among the faculty, the chairs, the academic deans, the Vice President for Academic Affairs, and the President of the University. The procedure for recommending tenure is designed to encourage such cooperation and confidence. The Regional University System of Oklahoma Board of Regents recommends that not more than sixty-five percent (65%) of the full–time faculty at a University receive tenure. Once the sixty-five percent limit is reached, there will be no additions to the tenured faculty at Southeastern. However, the tenure process on campus will continue. Faculty members recommended for tenure will be placed in a priority–hold status by year pending tenure vacancies.

Under exceptional circumstances, a new faculty member may be recommended for tenure by a department chair, an academic dean, the Vice President for Academic Affairs, or the President without going through the normal process.

In the event that one of the deadlines in the tenure process falls on a weekend or holiday, the deadline becomes the next working day at the University.

After the process is completed, the following action should be taken:

a. The results of all balloting and recommendations from the dean, department chair, and Vice President for Academic Affairs will be placed in the personnel file of the candidate.

b. The portfolio and a copy of all recommendations will be returned to the candidate.

c. Other confidential, relevant records leading to tenure shall then be destroyed.

Once the tenure process has been initiated, it must be completed.

Any exception to the policy on tenure is the domain of the president of the University in conjunction with the Regional University System of Oklahoma Board of Regents.

4.6.5 Guidelines for Achieving Tenure

The following guidelines apply in decisions regarding the awarding of tenure:

Five (5) years of service at Southeastern Oklahoma State University in a tenure–track appointment as an assistant professor, associate professor, and/or professor.

Demonstrated effective classroom teaching, research/scholarship, contributions to the institution and profession, and, in appropriate instances, successful performance of non–teaching or administrative duties.

Demonstrated ability to work cooperatively to strengthen the academic quality of the institution.

Noteworthy achievement in classroom teaching and on at least one other criterion: research/scholarship, contributions to the institution and profession, or, in appropriate instances, performance of non–teaching or administrative duties.
Indicate the number of current faculty members that have been promoted and/or achieved tenure during the past five years.

<table>
<thead>
<tr>
<th>Current Rank</th>
<th>Number Promoted</th>
<th>Number Tenured</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professor</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Associate Professor</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Assistant Professor</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Instructor</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

3. Explain how the distribution of aviation faculty by rank relates to those of comparable academic units.

The Aviation Sciences Institute has been a relatively small and stable organization on the main Durant campus. The ASI is currently lead by two Co-Directors, Dr. Stan Alluisi & Mr. George Jacox. Dr. Alluisi was promoted to full professor in 1 July, 2016 is the only full professor in the ASI. The remainder of the full-time faculty consists of three assistant professors with tenure in Durant and two assistant professors on the tenure track in the Oklahoma City area. Mr. Jacox has been with SOSU for over 25 years and Dr. Alluisi for 18 years. Of the two of the assistant professors in Durant one has been with the ASI for 20 years and the other for eight years.

On the Oklahoma City campuses one assistant professor has been with the ASI full and part time for fifteen years and the other for two years. Other than the fact that the ASI only has six full-time faculty and experience low turnover, we are comparable to most of the other departments at Southeastern.

4. Does the institution/program have a post-tenure review policy? Describe.

All members of the faculty at Southeastern are periodically evaluated after being granted tenure. The basic post-tenure review process is contained in the SOSU Academic Policies and Procedures manual. Specific school-wide criteria are contained in the John Massey School of Business Post-Tenure Review Policy…

The basic policy is described briefly in the SOSU Academic Policies and Procedures Manual:

4.6.6 Evaluation of Tenured Faculty

The academic and professional performance of each tenured faculty member may be reviewed annually and must be reviewed at least every third year.

The results of the review will be placed in the personnel record of the tenured faculty member. The tenured faculty member should be given a copy of the review and an opportunity to respond before it is placed in the personnel folder. An unsatisfactory review will require another review within one year. An unsatisfactory review at that time may be grounds for dismissal as listed under Sections 4.6.7 and 4.6.8 below.
VI. G. Professional Development

Discuss institutional and departmental policies related to:

Except for faculty exchange program, the SOSU administration, the John Massey School of Business and the ASI all promote and encourage all of the activities noted below. The SOSU Academic policies and Procedures Manual explicitly describes a number of these issues when discussing the role of the faculty.

1. Advanced degrees and advanced certification

The ASI has encouraged the Chief Pilot to earn his Master CFI certification and maintain it.

The following are applicable sections of the Academic Policies and Procedure Manual:

2. Consulting

Consulting, especially as it keeps faculty current in their field and informs their teaching is encouraged by the ASI. One member of the faculty (Dr. Marshall) is currently actively engaged in consulting in his area of expertise, occupational health and safety.

The following are applicable sections of the Academic Policies and Procedure Manual:

1.7 Operational Function

The University is organized with a lineage of delegated authority from the president to three vice presidents who are assigned the functions of academic affairs, business affairs and student affairs. The lineage in academic affairs continues through four deans and schools to the various departments and their department chairs and then to instructional personnel. This organizational structure provides for the coordination of all operations that support the mission of the University. The structure facilitates the communication of information needed for the functions of planning, implementation, evaluation, and feedback. The flow of information and communication is encouraged, not only through this organizational line but across the University and through any and every level.
Communication occurs individually and through participation in academic committees. Faculty are free to engage in research, to publish results, to serve as consultants, and to assume advocacy positions; insofar as such activity does not impede the performance of assigned academic duties nor violate legal and ethical principles and practices of the state and the University.

3. Professional Associations

The ASI encourages membership and participation in professional associations which are pertinent to each faculty member’s field or specialty. All members of the ASI faculty are members of the University Aviation Association and regularly attend UAA and/or AABI conferences.

The following are applicable sections of the Academic Policies and Procedure Manual:

4.5.2.4 Contributions to the Institution and Profession

Contributions occur when a faculty member applies his/her professional expertise beyond the classroom and research/scholarship responsibilities to advance the institution and profession. These contributions should be correlated with the educational needs of the student body and the objectives of the University.

Institutional contributions may consist of, but are not limited to academic advisement of students, sponsorship of student organizations, membership on ad hoc and standing committees, consultation to other areas of the University, participation in institutional or program self-study activities, and special assignments or responsible participation in activities which advance the academic programs of the University.

Professional contributions include involvement in various professional organizations in a manner that accrues favorable notice to the individual and the University. Evidence of such contributions may consist of, but are not limited to, memberships in professional organizations appropriate to a faculty member’s teaching field or area of responsibility, attendance at meetings, holding of offices, and serving on committees at local, state, regional, and national levels of said professional organizations.

4.7.3.3 Professional Activities

Membership in selected professional organizations appropriate to a faculty member’s assignment is a basic responsibility. Involvement in professional organizations at local, state, regional, and national levels consists of attendance of meetings, holding offices, and serving on committees.

4. Participation in community, regional and national aviation functions

The following are applicable sections of the Academic Policies and Procedure Manual:

4.5.2.4 Contributions to the Institution and Profession

Contributions occur when a faculty member applies his/her professional expertise beyond the classroom and research/scholarship responsibilities to advance the institution and profession. These contributions should be correlated with the educational needs of the student body and the objectives of the University.

Institutional contributions may consist of, but are not limited to academic advisement of students, sponsorship of student organizations, membership on ad hoc and standing committees, consultation to other areas of the University, participation in institutional or program self-study activities, and special assignments or responsible participation in activities which advance the academic programs of the University.

Professional contributions include involvement in various professional organizations in a manner that accrues favorable notice to the individual and the University. Evidence of such contributions may consist of, but are not limited to, memberships in professional organizations appropriate to a faculty member’s teaching field or area of responsibility, attendance at meetings, holding of offices, and serving on committees at local, state, regional, and national levels of said professional organizations.

4.7.3.3 Professional Activities
Membership in selected professional organizations appropriate to a faculty member’s assignment is a basic responsibility. Involvement in professional organizations at local, state, regional, and national levels consists of attendance of meetings, holding offices, and serving on committees.

5. Recruitment efforts with area schools and other public relations

The ASI faculty regularly participate in visits to local high schools and host tours by visiting individuals and groups. Faculty and staff in Oklahoma City regularly attend education fairs and other events on Tinker AFB to recruit students and generally make our educational programs known to the Military and DOD civilians on the base.

Faculty members also participate in Gear Up, Head Start and Camp SE programs which bring secondary school students and incoming freshmen to the Southeastern campus.

The following are applicable sections of the Academic Policies and Procedure Manual:

4.8.4.4 Department and Program Development

- Coordinates the establishment of faculty and departmental goals.
- Coordinates department planning for developing quality instruction, research/scholarship, facilities, equipment, personnel, and general progress.
- Develops and recommends curricula for majors and minors in disciplines represented in the department.
- Fosters good teaching by providing feedback from instructional evaluations.
- Recruits students by collaborating with High School Relations, by corresponding with prospective students, by hosting visiting students, and by preparing recruitment materials.
- Coordinates regular program review and assessment activities in the department.
- Supervises periodic follow-up studies of students.

6. Faculty exchange programs

SOSU currently does not have a faculty exchange program.

7. Publications

1.7 Operational Function

The University is organized with a lineage of delegated authority from the president to three vice presidents who are assigned the functions of academic affairs, business affairs and student affairs. The lineage in academic affairs continues through four deans and schools to the various departments and their department chairs and then to instructional personnel. This organizational structure provides for the coordination of all operations that support the mission of the University. The structure facilitates the communication of information needed for the functions of planning, implementation, evaluation, and feedback. The flow of information and communication is encouraged, not only through this organizational line but across the University and through any and every level.

Communication occurs individually and through participation in academic committees. Faculty are free to engage in research, to publish results, to serve as consultants, and to assume advocacy positions;

4.4.2 Faculty Evaluation System

The Regional University System of Oklahoma Board of Regents has specified five basic categories upon which academic rank and promotion in rank are based: (1) education and experience, (2) effective classroom teaching, (3) research/scholarship, (4) contributions to the institution and profession, and (5) performance of non–teaching or administrative duties.

The Faculty Development and Evaluation System of Southeastern Oklahoma State University is designed to promote faculty development and to assess faculty performance on those prescribed criteria. Instrumentation of the system consists of four documents:
*Faculty Development and Evaluation Criteria (see Appendix D)
*Catalog of Faculty Development and Evaluation Criteria (Appendix E)
*Faculty Development Agreement (Appendix F)
*Faculty Development and Evaluation Summary (Appendix G - includes G1 and G2)

The document entitled "Faculty Development and Evaluation Criteria" lists criteria for evaluating faculty performance in the four categories. The document "Catalog of Faculty Development and Evaluation Criteria" presents exemplars for each criterion. The exemplars are not all-inclusive, but do provide examples and extend the definitions of the criteria.

The document "Faculty Development Agreement" is an agreement for areas of emphasis for the forthcoming year. It is not an implicit evaluation of criteria not listed, however. Refer to Point 1 in the section entitled "Procedural Principles and Guidelines."

"The Faculty Development and Evaluation Summary" provides for listing the education and experience of the faculty and then a rating of the faculty member's performance in the categories of (1) effective classroom teaching, (2) scholarship, (3) service to institution, profession, and public, and (4) performance of non-teaching/administrative duties/assignments. It also provides for a rating of overall performance. Provision is made for commentary and signatures on the back.

Category 4, performance of non-teaching/administrative duties/assignments, is interpreted to include those duties or assignments which result in a reduced teaching load such as serving as department chair, project director, coach, and band director.

4.7.2 Research/Scholarship

Individual faculty research and scholarly activities are defined by the professional interests of the faculty member. While the scope and nature of faculty scholarship will vary among departments, University faculty shall be involved in scholarly activities, individually or collaboratively, which advance the state of knowledge or performance levels of their respective fields. Both the pursuit of new knowledge or techniques and the application of knowledge in creative ways are valued, so far as such activity does not impede the performance of assigned academic duties nor violate legal and ethical principles and practices of the state and the University.

The mechanics of fulfilling both the mission of the University and legal vestment of responsibility assigned by the state require such an operational support organization. Even more importantly, there must be a whole-hearted dedication of staff and faculty to those democratic principles of freedoms in balance with personal and societal responsibilities.

The ultimate purpose of the University is realized in the interaction of teaching by a faculty member and learning by a student. The entire structure of the University is designed to support and facilitate this purpose. Academic freedom, research, extended study, academic achievement, assessment, integrity, accountability, and dedication to teaching are inherent components as well as products of an academic enterprise with this focus.

In brief, the structure of the University is designed to support the functions of teaching and learning. Faculty members are accorded all the rights and privileges of their offices with the recognition and esteem imbued from the responsible exercise of productive scholarship, excellence in teaching, service to student welfare, and contribution to the community.

8. Research

SOSU and the ASI encourage all members of the faculty to conduct research and publish their results. Both functions are integral to faculty promotion and the granting of tenure.

The SOSU Academic Policies and Procedures manual states:

1.7 Operational Function
The University is organized with a lineage of delegated authority from the president to three vice presidents who are assigned the functions of academic affairs, business affairs and student affairs. The lineage in academic affairs continues through four deans and schools to the various departments and their department chairs and then to instructional personnel. This organizational structure provides for the coordination of all operations that support the mission of the University. The structure facilitates the communication of information needed for the functions of planning, implementation, evaluation, and feedback. The flow of information and communication is encouraged, not only through this organizational line but across the University and through any and every level.

Communication occurs individually and through participation in academic committees. Faculty are free to engage in research, to publish results, to serve as consultants, and to assume advocacy positions;

**4.5.2.3 Research/Scholarship**

Scholarship is a state of mind that is demonstrated by the active involvement of a faculty member in the pursuit of new knowledge in his/her academic field or discipline. While the scope and nature of faculty scholarship will vary among departments, University faculty shall be involved in scholarly activities, individually or collaboratively, which advance the knowledge base and performance levels of their respective fields. Both the pursuit of new knowledge or techniques and the application of knowledge or techniques in creative ways are valued. Both the quality and the quantity of productivity are considered in assessing the contributions and performances.

Examples of research/scholarship are adaptations of knowledge to the learning environment, development of marketable instructional materials, creative artistic works evaluated by juries or panels, invitation for professional presentations or performances, articles in refereed or editor–evaluated publications, successful grantsmanship, selected unpublished research, books, monographs, inventions, patented or copyrighted products, etc.

**4.7.2 Research/Scholarship**

Individual faculty research and scholarly activities are defined by the professional interests of the faculty member. While the scope and nature of faculty scholarship will vary among departments, University faculty shall be involved in scholarly activities, individually or collaboratively, which advance the state of knowledge or performance levels of their respective fields. Both the pursuit of new knowledge or techniques and the application of knowledge in creative ways are valued.

9. Continuing Education/Professional Development/Sabbatical Leave

**5.3.9 Educational Assistance and Enrollment of Employees In University Courses (Revised 7/2012; 12/2012)**

Training programs for the benefit of personnel will be provided when feasible at reduced or no tuition cost to the employee. Such programs are to assist personnel in the performance of assigned duties and to aid personnel in acquiring new skills to qualify for advancement. Employees desiring to enroll in a University course at a reduced tuition rate must follow the recognized guidelines. Any deviation from 5.8.1 and 5.8.2 may result in the employee becoming ineligible to use this benefit.

**5.3.9.1 Guidelines and Limitations**

The University places no limitations on the number of hours of course work in which an employee may enroll outside of the employee’s normal working hours. However, such course work cannot interfere with the employee’s duties as determined by the supervisor. A regular full-time employee may adjust his/her work schedule with approval from the supervisor to accommodate no more than four (4) credit hours of course work during the employee’s normal work shift. Time lost taking courses during the normal work shift shall be made up, and at a time mutually acceptable to both the employee and the supervisor. Make-up of lost time must be completed during each forty-hour work week. Make up times are to be consistent and equal to the time away from work, thereby providing a routine work pattern. Any use of annual leave or compensatory time for make-up time must be approved by the immediate supervisor. Employees should understand that online classes may only be taken after the regular work day. A class scheduled during the lunch hour will not count as the one authorized course offering during the employee’s normal work shift. It is important to note that any such arrangements must be approved by the supervisor, who is not obligated to give such approval. Review and approval by the appropriate Vice President in the administrative channel and the Vice President of Business Affairs is required prior to enrollment for any course work that proposes more than this policy allows during the normal work shift.
5.3.9.2 Tuition Waiver
As a benefit to regular full-time employees, the tuition waiver program is designed to assist employees and their dependents to expand their education through courses at Southeastern Oklahoma State University.

Eligibility: An employee who is a resident of the State of Oklahoma and is granted full-time status with benefits by August 1 for the Fall semester, January 1 for the Spring semester and May 1 for the Summer semester is eligible for the employee tuition waiver effective that semester. The waiver can be transferred to eligible dependents (includes spouses that are not full-time employees of the University). Eligibility of a dependent is based on the IRS-approved guidelines to determine dependent status. For general purposes “dependent” means an individual over half of whose support, for the calendar year in which the taxable year of the taxpayer begins, was received from the taxpayer. You must be allowed by the IRS to legally claim the “dependent” in the taxable year.

Benefits: The tuition waiver covers only tuition (in accordance with OSRHE policy), not fees, books or any taxes. In compliance with current IRS tax law, the University paid portion of IRS-defined graduate level courses/fees may be considered taxable income. The waiver is based on a maximum dollar amount instead of credit hours. Every eligible employee is allocated $1,500 per year, with a limit of $750 per semester. If an employee has not depleted the waiver allocation for the fall and the spring semesters, then up to $750 of the balance can be applied to summer courses (for example: $500 Fall semester, $500 Spring semester, $500 Summer semester). No recipient of this benefit can exceed $1,500/year. The Benefit Committee will recommend to the President by July 1 any change to the maximum dollar amount limit due to changes in the tuition rate. The Benefit Committee is comprised of VP Business Affairs (Chair), Human Resource Director, Faculty Senate Representative and Staff Association Representative.

Procedure: In order to receive the tuition waiver, the eligible employee must complete and submit the “SE Benefits Eligible/Oklahoma Resident Employee Tuition Waiver Form” with the supervisor’s signature to the Financial Aid Office for final approval by August 1 for the Fall semester, January 1 for the Spring semester and May 1 for the Summer semester. Employees interested in enrolling in courses at Southeastern are subject to the same admission requirements, course availability, and registration processes as other students.

Financial Aid Coordination: The waiver program will be integrated with any other financial aid received from or through SE. Multiple awards may be granted, but in no case shall waivers generate a cash refund or credit to be applied to other charges or fees. Total aid cannot exceed estimated cost of attendance. The Financial Aid Office may require further documentation.

Tuition assistance is not waived for workshops and correspondence courses or institutes. An employee allowing classes to conflict with job performance may be barred from this benefit. If an individual terminates employment, the tuition waiver benefit will cease at the end of the semester in which employment ended.

10. Special projects or other professional development activities

Additional comments:
SECTION VII

FACILITIES, EQUIPMENT AND SERVICES
(AABI 201, Criteria 2.6, 3.6 and 4.6)

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<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>A.</td>
<td>Classrooms</td>
</tr>
<tr>
<td>B.</td>
<td>Laboratories</td>
</tr>
<tr>
<td>C.</td>
<td>Staff Offices</td>
</tr>
<tr>
<td>D.</td>
<td>Airport Facilities</td>
</tr>
<tr>
<td>E.</td>
<td>Library</td>
</tr>
<tr>
<td>F.</td>
<td>Instructional Media Services</td>
</tr>
<tr>
<td>G.</td>
<td>Computer Facilities</td>
</tr>
<tr>
<td>H.</td>
<td>Placement Services</td>
</tr>
<tr>
<td>I.</td>
<td>Instructional Equipment</td>
</tr>
</tbody>
</table>
(Information in this section refers to the entire aviation unit, not just the program being submitted for accreditation.)

VII. A. Classrooms

1. List the classrooms, on and off-campus, used for courses taught by the aviation unit. Indicate the seating capacity, furnishings (i.e., fixed seats, tablet-arm chairs), and environmental problems (i.e., lighting, cooling, noise, sun control).

<table>
<thead>
<tr>
<th>Bldg.</th>
<th>Room#</th>
<th>Area</th>
<th>Capacity</th>
<th>Furnishings/Environmental Problems</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Durant Main Campus</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Russell Building</td>
<td>218</td>
<td>826</td>
<td>50</td>
<td>50 Tablet-Arm Chairs, One PC &amp; Video Projector, Speakers, Overhead Projector</td>
</tr>
<tr>
<td>Russell Building</td>
<td>219</td>
<td>834</td>
<td>50</td>
<td>50 Tablet-Arm Chairs, Overhead Projector</td>
</tr>
<tr>
<td>Russell Building</td>
<td>220</td>
<td>428</td>
<td>24</td>
<td>24 Tablet-Arm Chairs, Overhead Projector</td>
</tr>
<tr>
<td>Russell Building</td>
<td>221</td>
<td>778</td>
<td>50</td>
<td>50 Tablet-Arm Chairs, Overhead Projector</td>
</tr>
<tr>
<td>Russell Building</td>
<td>223</td>
<td>1023</td>
<td>50</td>
<td>50 Tablet-Arm Chairs, One PC &amp; Video Projector, Speakers, Overhead Projector</td>
</tr>
<tr>
<td>Russell Building</td>
<td>224</td>
<td>1023</td>
<td>50</td>
<td>50 Tablet-Arm Chairs, One PC &amp; Video Projector, Speakers, Overhead Projector</td>
</tr>
<tr>
<td>Eaker Field</td>
<td>114</td>
<td>332</td>
<td>15</td>
<td>14 student PC stations, 1 Instructor PC, Video Projector &amp; Smart Board</td>
</tr>
<tr>
<td><strong>OCCC</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leftwich Library</td>
<td>402</td>
<td>720</td>
<td>38</td>
<td>Tables &amp; chairs, PC &amp; Overhead Video Projector, 38 PC’s</td>
</tr>
<tr>
<td>Leftwich Library</td>
<td>403</td>
<td>1020</td>
<td>24</td>
<td>Tables &amp; chairs, PC &amp; Overhead Video Projector, 24 PC’s</td>
</tr>
<tr>
<td><strong>Rose State College</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tom Steed Center</td>
<td>UL 203</td>
<td>701</td>
<td>30</td>
<td>Tables &amp; chairs, PC &amp; Video Projector, Overhead</td>
</tr>
<tr>
<td>Tom Steed Center</td>
<td>UL 214</td>
<td>680</td>
<td>30</td>
<td>Tables &amp; chairs, PC &amp; Video Projector, Overhead</td>
</tr>
<tr>
<td><strong>Tinker AFB</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Base Education</td>
<td>1</td>
<td>406</td>
<td>20</td>
<td>Tables &amp; chairs, PC &amp; Video Projector</td>
</tr>
<tr>
<td>Base Education</td>
<td>2</td>
<td>405</td>
<td>20</td>
<td>Tables &amp; chairs, PC &amp; Video Projector</td>
</tr>
<tr>
<td>Base Education</td>
<td>3</td>
<td>432</td>
<td>26</td>
<td>Tables &amp; chairs, PC &amp; Video Projector</td>
</tr>
<tr>
<td>Base Education</td>
<td>4</td>
<td>409</td>
<td>26</td>
<td>Tables &amp; chairs, PC &amp; Video Projector</td>
</tr>
<tr>
<td>Base Education</td>
<td>12</td>
<td>779</td>
<td>35</td>
<td>Tables &amp; chairs, PC &amp; Video Projector</td>
</tr>
<tr>
<td>Base Education</td>
<td>16</td>
<td>526</td>
<td>20</td>
<td>Tables &amp; chairs, 20PC’s &amp; Video Projector</td>
</tr>
<tr>
<td>Base Education</td>
<td>17</td>
<td>659</td>
<td>35</td>
<td>Tables &amp; chairs, PC &amp; Video Projector</td>
</tr>
</tbody>
</table>
2. Discuss whether the space is shared with other academic units and who controls the assignment of the space.

The ASI faculty teach on four distinct campuses: The SOSU main campus in Durant; the Oklahoma City Community College (OCCC) campus in Oklahoma City; the Rose State College (RSC) campus in Midwest City; and on Tinker AFB.

**Durant**
On the Durant Main Campus all classrooms are coordinated and allocated via the President’s office. Almost all aviation academic classes are taught in one of six classrooms in the Russell Building (R-218, 219, 220, 221m 223 and 224). In addition, a computer classroom/lab (Room 114) is located in the ASI building on Durant Eaker Field. Room 114 is under the exclusive control of the SOSU Aviation Sciences Institute and access limited to students with access to the ASI building.

**OCCC**
On the Oklahoma City Community College campus SOSU has the exclusive use of four classrooms during the evening hours which our staff schedules solely for our use.

**RSC**
On the Rose State campus SOSU has the exclusive use of two classrooms during the evenings we teach and SOSU has exclusive control over those rooms during that period.

**Tinker AFB**
On Tinker AFB the classrooms are centrally coordinated and allocated by the Base Education Office.

3. If airport facilities are leased, describe the nature and term of the lease(s).

NA
VII. B. Laboratories

1. List the laboratories used for courses taught by the aviation unit. Briefly describe the space, including furnishings and equipment. List the aviation courses that use the space on a scheduled basis.

<table>
<thead>
<tr>
<th>Bldg.</th>
<th>Room #</th>
<th>Area</th>
<th>Lab Name</th>
<th>Description</th>
<th>Course(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eaker Field</td>
<td>114</td>
<td>332</td>
<td>Computer Lab</td>
<td>14 students &amp; 1 Inst. PC</td>
<td>AVIA 3451 AVIA 3503</td>
</tr>
<tr>
<td>Eaker Field</td>
<td>213</td>
<td>326</td>
<td>Simulator Room</td>
<td>PFC AATD</td>
<td>AVIA 1041 AVIA 3322 AVIA 3401</td>
</tr>
</tbody>
</table>

2. Discuss whether the space is shared with other academic units and who controls the assignment of space.

The SOSU ASI has exclusive control over the Computer Lab and the Simulator Room.

Additional comments:
VII. C. Staff Offices

1. List all staff offices for the aviation unit. List sequentially by building and room number.

<table>
<thead>
<tr>
<th>Bldg.</th>
<th>Room #</th>
<th>Area</th>
<th>Occupant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eaker Field</td>
<td>101</td>
<td>173</td>
<td>Kyle Thomas, Chief Flight Instructor</td>
</tr>
<tr>
<td>Eaker Field</td>
<td>102</td>
<td>242</td>
<td>Dr. Stan Alluisi, Chair, Aviation Management</td>
</tr>
<tr>
<td>Eaker Field</td>
<td>103</td>
<td>182</td>
<td>Vacant/Storage</td>
</tr>
<tr>
<td>Eaker Field</td>
<td>104</td>
<td>208</td>
<td>George Jacox, Chair, Department of Flight</td>
</tr>
<tr>
<td>Eaker Field</td>
<td>105</td>
<td>144</td>
<td>John Van Bebber</td>
</tr>
<tr>
<td>Eaker Field</td>
<td>106</td>
<td>144</td>
<td>Copy and Storage</td>
</tr>
<tr>
<td>Eaker Field</td>
<td>107</td>
<td>209</td>
<td>Conference Room</td>
</tr>
<tr>
<td>Eaker Field</td>
<td>111</td>
<td>144</td>
<td>Susan Dilbeck, ASI Secretary</td>
</tr>
<tr>
<td>Eaker Field</td>
<td>115</td>
<td>173</td>
<td>CFI Office</td>
</tr>
<tr>
<td>Eaker Field</td>
<td>116</td>
<td>270</td>
<td>CFI Office</td>
</tr>
<tr>
<td>Eaker Field</td>
<td>117</td>
<td>210</td>
<td>CFI Office</td>
</tr>
<tr>
<td>Eaker Field</td>
<td>118</td>
<td>182</td>
<td>CFI Office</td>
</tr>
<tr>
<td>Eaker Field</td>
<td>119</td>
<td>168</td>
<td>Jepp and Planning room</td>
</tr>
<tr>
<td>Eaker Field</td>
<td>120</td>
<td>141</td>
<td>CFI Office</td>
</tr>
<tr>
<td>Eaker Field</td>
<td>206</td>
<td>344</td>
<td>Alan Davis, Mike Pruitt, Jordan Blackburn, Mechanics</td>
</tr>
<tr>
<td><strong>OCCC</strong></td>
<td></td>
<td></td>
<td><strong>Oklahoma City Community College Campus</strong></td>
</tr>
<tr>
<td>Leftwich Library</td>
<td>408</td>
<td>160</td>
<td>Coordinator’s Office</td>
</tr>
<tr>
<td>Leftwich Library</td>
<td>410</td>
<td>160</td>
<td>Faculty and Adjunct Office</td>
</tr>
<tr>
<td><strong>Rose State</strong></td>
<td></td>
<td></td>
<td><strong>Rose State College Campus</strong></td>
</tr>
<tr>
<td>Tom Steed Center</td>
<td>200</td>
<td>223</td>
<td>Foyer/Waiting area w/ Desk, chair, 2 PC’s</td>
</tr>
<tr>
<td>Tom Steed Center</td>
<td>200A</td>
<td>160</td>
<td>Rick Hedrick, Program Coordinator</td>
</tr>
<tr>
<td>Tom Steed Center</td>
<td>200B</td>
<td>80</td>
<td>Dr. Steven McNeely</td>
</tr>
<tr>
<td>Tom Steed Center</td>
<td>200C</td>
<td>80</td>
<td>Dr. Charles Marshall</td>
</tr>
<tr>
<td>Tom Steed Center</td>
<td>200H</td>
<td>80</td>
<td>Adjunct Office</td>
</tr>
<tr>
<td>Tom Steed Center</td>
<td>200J</td>
<td>80</td>
<td>Storage Room</td>
</tr>
</tbody>
</table>
2. Discuss the location of staff offices on campus, including proximity to secretarial services, classrooms, laboratories, library and computer.

The ASI main offices are located at the airport, Durant Eaker Field. The ASI also has offices and some faculty and staff on the SOSU main campus, on the Oklahoma City Community College (OCCC) campus, on Tinker Air Force Base, and on the Rose State College (RSC) campus.

**Durant**
All Durant-based ASI faculty have their offices at the ASI facility on Durant Eaker Field (KDUA). In addition, all flight instructors as well as the ASI secretary and all three ASI maintenance personnel are located in the ASI building on Eaker Field. On the main SOSU campus the ASI faculty share one office (R-217) in the Massey Building. Since all academic classes are taught in the Massey building this office is convenient for class preparation and meeting students. Room R-217 has two PC’s and one printer. A copy machine and other office supplies are available nearby and one of the John Massey School of Business secretaries is also available on the first floor.

**Oklahoma City Area**
Both full-time ASI faculty in Oklahoma City area have offices on the Rose State College campus in the Tom Steed Center. They also share office space on Tinker AFB. The Coordinator of Academic Services also has an office on the OCCC and RSC campuses.

**Tinker AFB**
On Tinker AFB the SOSU Aviation Sciences Institute is the lead school in the Oklahoma City Aviation Education Alliance. As such, all of the degrees earned through Alliance schools are actually granted by SOSU. The two full-time SOSU employees represent the Alliance as well as SOSU. They coordinate enrollment, scheduling and interface with the Base Education Office.

Additional comments:
VII. D. **Airport Facilities**

1. List the airport facilities used for courses taught by the aviation unit not already included in Sections A and B. Briefly describe the space, including furnishings and equipment. List the aviation courses that use the space on a scheduled basis.

<table>
<thead>
<tr>
<th>Name of Airport</th>
<th>Durant Regional, Eaker Field (KDU)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Bldg.</th>
<th>Room #</th>
<th>Approx. Area</th>
<th>Function</th>
<th>Course(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eaker Field</td>
<td>213</td>
<td>326</td>
<td>AATD</td>
<td>AVIA 1041, AVIA 3322, AVIA 3401, AVIA 4674</td>
</tr>
<tr>
<td>Eaker Field</td>
<td>Dispatch</td>
<td>185</td>
<td>Flight Dispatchers</td>
<td>All Flight Courses</td>
</tr>
<tr>
<td>Eaker Field</td>
<td>208</td>
<td>196</td>
<td>Flight Planning</td>
<td>All Flight Courses</td>
</tr>
<tr>
<td>Eaker Field</td>
<td>207</td>
<td>288</td>
<td>Flight Planning/Conference Room</td>
<td></td>
</tr>
</tbody>
</table>

2. Discuss whether the space is shared with other academic units or airport users and who controls the assignment of the space.

The ASI has the exclusive use of the entire building on Durant Eaker Field.

Additional comments:

The ASI also owns and operates a 20,000 gallon fuel tank for dispensing 100LL aviation gasoline the exclusive use of ASI aircraft. The tank is a double-walled, above ground tank which meets all current state and federal rules. The tank was installed in 1998 and is immediately adjacent to the ASI flight line.
VII. E. Library

1. Indicate the approximate number of acquisitions of the past year and the present total number of books and periodicals.

<table>
<thead>
<tr>
<th></th>
<th>Acquisitions</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Books</td>
<td>Periodicals</td>
</tr>
<tr>
<td>Aviation</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Total Campus or Institutional Library</td>
<td>3,514</td>
<td>236</td>
</tr>
</tbody>
</table>

2. Describe where the books and periodicals related to aviation are located (i.e., central library, departmental library).

All books and periodicals are located in the main library on the SOSU campus.

3. Describe how the budget for the purchase of library materials for the aviation unit is established and how new acquisitions are selected.

The Henry G. Bennett Memorial Library uses the *Bowker Annual, Library and Book Trade Almanac* to ascertain the average price of an aviation book ($102.15) and the average price of an aviation journal / periodical ($287.64). The library also considers a rolling 5 year average of SCH’s (student credit hours). Aviation averages 3,876 SCH per year. Using those numbers, the Head Librarian allocates money to the Aviation program. Circulation records are also considered. The greater the usage of library resources, the greater the amount of money that is allocated to that a particular discipline.

The library uses a liaison model for current acquisitions. Each department is requested to select one person to coordinate the purchases. This is usually Dr. Alluisi who acts with input from the Durant faculty. Once the Library has establishes a dollar amount available to the Aviation Sciences Institute annually it is then up to the ASI faculty to request specific periodicals and book titles up to that dollar amount. The library also supports the aviation program through electronic databases and federal government documents.

4. Identify the courses taught by the aviation unit that make extensive use of library reference materials and discuss the utilization.

**ORIE-1002 College Success** is the university’s “orientation” class for incoming freshmen. The Aviation Sciences Institute has an aviation-specific section of ORIE-1002. This class spends four days in the library with one of the librarians instructing the new students how to search the library and how to find and use reference materials. Students also conduct several library exercises during the semester.

**AVIA 3143 Aviation History** is the only class that makes “extensive use” of library resources. One assignment requires students to look up complete newspapers for specific historic dates and complete a one page questionnaire. A research paper is also required in the class. The topic can either be “the aviator I admire most” or an historic event. Either topic makes use of library resources.
VII. F. Instructional Media Services

1. Describe the instructional media services of the campus or institution.

Most of the classrooms used by the ASI on the main campus have all necessary instructional media equipment installed. Those classroom have a networked recent vintage PC with capability to play DVD’s which are connected to a video projector and speakers. All PC’s are networked and have access to the faculty’s networked storage. The ASI also has two AV carts with a networked PC, DVD/VCR combo, video projector and speakers for the rooms which do not have installed equipment. All rooms have internet connectivity, a projector screen and ye olde fashioned overhead projector.

All of the classrooms used by the ASI on the OCCC, Rose and Tinker AFB campuses have a networked PC with DVD player, speakers and a video projector.

All of the computers, video projectors and smart boards on the SOSU main campus and airport are maintained by the campus IT department.

The Center for Instructional Development and Technology (CIDT) also support and helps implement several aspects of instructional media. The function of the CIDT is described in the Academic Policies and procedures manual:

6.3.5 Center for Instructional Development and Technology (CIDT)

* Function of CIDT - Our mission is to assist Southeastern faculty in achieving their instructional, research, and other professional objectives by providing support for commonly used and emerging technologies, including Blackboard. The CIDT works closely with faculty and support service providers to coordinate and promote campus wide, technology-related services. CIDT also provides certification training for faculty teaching online and blended courses.

* Notifying Faculty Students of Blackboard (Bb) Issues - The CIDT works closely with IT (Network Operations, Administrative Computing, and the Help Desk) regarding Bb hardware issues and is responsible for the following:

  o Notify the Director of Online Learning as soon as possible,
  o Post a system-wide announcement in Bb, when applicable ,along with follow-ups,
  o Send an email to the Faculty mailing list, when applicable, along with follow-ups.

While every attempt will be made to notify faculty students as soon as possible regarding long-term Bb issues, please remember that we do not provide 24/7 Bb support. In certain situations, it may not be possible to send notification of known issues if they occur on weekends, holidays, during inclement weather that disrupts connection service, etc.

* CIDT Policies and Procedures for Instructors of Blackboard Courses - see the Online Learning Website (http://www.se.edu/dept/cidt/).

The CIDT is located on the main campus of Southeastern on the third floor of the Russell Building, Room 317A.

2. Describe the instructional media resources of the aviation unit.

The primary instructional media resources directly available to the ASI are represented by the computer lab on Eaker Field. The fourteen PC’s, video projector and smartboard are used in a wide variety of ground school classes as well as AVIA 3451 Introduction to Advanced Technology Aircraft and AVIA 3503 Integration of FMS in Commercial Operations. Both courses use software which uses the projector/smartboard to demonstrate the operation of the Garmin G1000 system or the operation of
a Boeing 737 Flight Management System. ASA Test Prep software is also available on all of the PC’s. When not being used for a scheduled class ASI students may also use the lab for general uses.

As described above, the ASI also has two AV carts with a networked PC, DVD/VCR combo, video projector and speakers for the rooms in the Russell Building which do not have installed equipment.

3. Describe the use of instructional media in the courses taught by the aviation unit.

All of the pilot-related ground schools make use of Jeppesen video and Powerpoint training materials which are used in conjunction with the Jeppesen text books. Many classes also make use of Powerpoint slides and DVD and online video capabilities. YouTube is used extensively in many part 141 ground schools.

Recently, some aviation faculty have incorporated the use of a classroom response system (classroom clickers) by Turning Point.

4. Describe any courses listed in Section V Curriculum, that are taught via distance education formats.

NA
VII. G. **Computer Facilities**

1. Describe the computer facilities of the campus or institution and the procedure for students obtaining time on a computer. Describe the computer facilities of the campus or institution and the procedure for students obtaining time on a computer.

   Students have access to numerous computer labs across the campus. A listing is below. There is nothing special a student must do to obtain an account for use of these labs or to obtain an SOSU student email address. Email accounts and computer access is setup automatically just prior to any semester in which a student has enrolled. As far as physical access to these labs, the open labs have posted hours on the SE website. Students need only go to an open lab during posted hours to gain use of the computers. Note: While the ASI has a computer lab the ASI’s airport facility, the ASI has instituted a security badge program. Therefore, only those students, faculty and staff and approved visitors with badges have access to the ASI facilities at the airport and thus, access to the computer lab.

<table>
<thead>
<tr>
<th>Computer Lab</th>
<th>Location</th>
<th># Computer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology Computer Lab</td>
<td>BS202</td>
<td>30</td>
</tr>
<tr>
<td>GIS Computer Lab</td>
<td>BS106</td>
<td>21</td>
</tr>
<tr>
<td>General Classroom Lab1</td>
<td>Classroom Bldg.</td>
<td>33</td>
</tr>
<tr>
<td>General Classroom Lab2</td>
<td>Classroom Bldg.</td>
<td>33</td>
</tr>
<tr>
<td>General Classroom Lab3</td>
<td>Classroom Bldg.</td>
<td>33</td>
</tr>
<tr>
<td>Visual Arts Lab</td>
<td>VA132</td>
<td>30</td>
</tr>
<tr>
<td>Fine Arts Computer Lab</td>
<td>FA206</td>
<td>20</td>
</tr>
<tr>
<td>Fine Arts Midi Lab</td>
<td>Fine Arts</td>
<td>16</td>
</tr>
<tr>
<td>Library Computer Lab</td>
<td>Library</td>
<td>42</td>
</tr>
<tr>
<td>Library Teaching Lab</td>
<td>Library</td>
<td>24</td>
</tr>
<tr>
<td>Math Computer Lab</td>
<td>MA104</td>
<td>21</td>
</tr>
<tr>
<td>Morrison Computer Lab</td>
<td>M203</td>
<td>37</td>
</tr>
<tr>
<td>Science Computer Lab</td>
<td>S115</td>
<td>30</td>
</tr>
<tr>
<td>Science Lab (Eggleton)</td>
<td>S325</td>
<td>12</td>
</tr>
<tr>
<td>Russell Computer Lab</td>
<td>R115</td>
<td>36</td>
</tr>
<tr>
<td>Russell Computer Lab</td>
<td>R116</td>
<td>36</td>
</tr>
<tr>
<td>Russell Accounting Lab</td>
<td>Russell 3rd Floor</td>
<td>5</td>
</tr>
<tr>
<td>Shearer Hall Computer Lab</td>
<td>Shearer</td>
<td>4</td>
</tr>
<tr>
<td>Upward Bound Labs</td>
<td>Student Union</td>
<td>15</td>
</tr>
<tr>
<td>J.J. Keller Lab</td>
<td>Safety</td>
<td>16</td>
</tr>
<tr>
<td>OSBDC</td>
<td>OSBDC</td>
<td>10</td>
</tr>
<tr>
<td>Theater</td>
<td>Theater</td>
<td>11</td>
</tr>
<tr>
<td><strong>Aviation Computer Lab</strong></td>
<td><strong>Eaker Field 114</strong></td>
<td><strong>14</strong></td>
</tr>
</tbody>
</table>

2. Describe the computer facilities of the aviation unit.

   The SOSU Information Technology unit provides each faculty and staff member their own PC and printer in their office. All faculty and staff are provided with email accounts, access to the university network and networked storage space. A variety of software packages such as Microsoft Office are available for faculty and staff to install on their office PC as well as their home PC for work use.

   In addition, the ASI has a networked Canon IR 2022 multi-function printer/scanner/fax machine.

   Wi-Fi connectivity is available throughout the ASI’s facility on Eaker Field.
The ASI Flight Department operates a dedicated PC as a server for the GenAv flight scheduling and billing system. Faculty, flight instructors and students may log onto the scheduling system to view and change their flight schedule and account information.

Finally, the ASI maintains its own web presence (aviation.se.edu) via a shared network drive and also uses the BlackBoard system for class work, grading and to facilitate the ASI’s Safety Management System.

3. Describe the use of the computers by the aviation unit and the students.

Computers are used routinely by faculty, staff and students to complete the ASI mission. Uses include, email; scheduling; course development and preparation; posting of syllabi, assignments and grades; development and use of instructional media; and conducting research and writing class and scholarly papers.

4. List any aviation courses that require the use of computers for outside problems or lab work.

All FAA ground school classes require passing the associated FAA written exam. The ASI has computer labs available to students in order to practice for the FAA written exam. Several classes also use specific software packages. Those classes are:

AVIA 3451 Introduction to Advanced Technology Aircraft – Students use ASI computer lab PC’s to run Garmin’s G1000 simulator software.

AVIA 3503 Integration of FMS in Commercial Operations – Students use ASI computer lab PC’s to run PMDG’s FMS simulator add-on to Microsoft Flight Simulator.
VII. H. Placement Services

1. Describe the institution's placement services.

The ASI does not directly control placement services. The university had a Career Management Center whose mission was to perform this function. Unfortunately, the SE Career Management Center was closed as of June 30, 2016 as budget cuts were mandated by the state of Oklahoma. Fortunately, our Career Management Center is expected to reopen again shortly. Regardless, most perspective employers contact the ASI directly anyway. Examples of this would be our Pipeline agreement with Envoy Air.

Career Management Center Departmental Mission

The Career Management Center (CMC) assists SE students and alumni with effective career decision-making related to their college major and career path, while promoting occupational opportunities and vocational satisfaction. We collaborate with employers, organizations and programs to provide student and/or alumni access to on-campus student work, internships and professional employment after graduation.

2. List the companies that used the institution’s placement service during the past year and those that requested interviews with graduates of the aviation program.

Again, the SE Career Management Center was closed as of June 30, 2016 as budget cuts were mandated by the state of Oklahoma. However, companies such as Envoy, Piedmont Airlines, Endeavor Air, and Ameristar Jet, continue to work with us and contact the ASI directly.

Additional comments:

The Aviation Sciences Institute’s pipeline agreement with Envoy provides a streamlined career path to the airline as well as a guaranteed interview with American Airlines once completing requirements at Envoy. Also, we have hosted several well attended Aviation Career days for both our current students as well as our alumni. Most seminars were held in April and attended by both regional and major airlines, as well as cooperate and fractional aircraft operations.
VII. I. Instructional Equipment

1. List aircraft/flight training devices/air traffic simulators/engine test facilities (group by categories):

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Year/Model</th>
<th>#</th>
<th>Course(s) for which used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cessna 1975-77</td>
<td>C-150M</td>
<td>8</td>
<td>AVIA 1041 Private Flying AVIA 3241 Flight Instructor Flying</td>
</tr>
<tr>
<td>Cessna 1980</td>
<td>C-152</td>
<td>1</td>
<td>AVIA 1041 Private Flying AVIA 3241 Flight Instructor Flying</td>
</tr>
<tr>
<td>Cessna 2002</td>
<td>C-172R</td>
<td>6</td>
<td>AVIA 1041 Private Flying AVIA 3164 Commercial Flying</td>
</tr>
<tr>
<td>Cessna 2008</td>
<td>C-172R</td>
<td>1</td>
<td>AVIA 3451 Intro to Adv. Technology Aircraft</td>
</tr>
<tr>
<td>Cessna 1978</td>
<td>C182 RG</td>
<td>1</td>
<td>AVIA 3164 Commercial Flying AVIA 3241 Flight Instructor Flying</td>
</tr>
<tr>
<td>Cessna 1979</td>
<td>C182 RG</td>
<td>1</td>
<td>AVIA 3164 Commercial Flying AVIA 3241 Flight Instructor Flying</td>
</tr>
<tr>
<td>Cessna 1976</td>
<td>C-310R</td>
<td>1</td>
<td>AVIA 4601 Multi-engine Flying AVIA 4631 Multi-engine Flight Instructor</td>
</tr>
<tr>
<td>Precision Flight Controls</td>
<td>Modular Flight Deck AATD</td>
<td>1</td>
<td>AVIA 1041 Private Flying AVIA 3321 Instrument Flying</td>
</tr>
</tbody>
</table>

2. Other instructional equipment: Describe any special or unique types of instructional equipment; such as engine test cells, avionics test equipment, etc.; indicating type, number and courses for which used.

None.
**SECTION VIII**

**INSTITUTIONAL STRUCTURE AND SUPPORT**
(AABI 201, Criteria 2.7, 3.7 and 4.7)

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<tr>
<td>G. Aviation Unit Budget</td>
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</tbody>
</table>
VIII. A. **Organizational Charts**

1. Provide organizational charts for the institution that describe the place of the aviation unit within the institution's administrative structure starting with the governing board.

   [http://www.se.edu/about/governance/](http://www.se.edu/about/governance/)

2. Indicate the names of incumbents in positions directly related to the aviation unit.

   - Co Director/Aviation Management, Graduate Chair: Dr. Stan Alluisi
   - Co Director/Flight Department Chair: Mr. George Jacox
   - Assistant Professor/Chief Flight Instructor: Mr. Kyle Thomas
   - Assistant Professor: Mr. John Van Bebber
   - Financial Assistant: Ms. Susan Dilbeck
   - Director of A&P Maintenance: Mr. Alan Davis
   - Lead Maintenance Technician: Mr. Mike Pruitt
   - Maintenance Technician: Mr. Jordan Blackburn
VIII. B. Institutional Support

Describe how the administration of the institution enables the aviation program to develop and to carry out fully its unique responsibilities as defined by its stated mission.

Aviation is considered a premier program at Southeastern Oklahoma State University that brings students from all parts of the country as well as international students. The organization of the aviation department into the Aviation Sciences Institute was a clear indication of the dedication the University has toward the aviation program. The University has granted additional full time positions to the aviation program adding two full time faculty and one additional full time maintenance technician. Furthermore, the University has elevated the faulty that do not have a doctorate to Assistant Professor with tenure. The University has also provided the funding source for the purchase of four new Cessna trainers along with the purchase of a new flight training device (simulator).

The University administration constantly promotes aviation though various venues. Faculty and staff are encouraged to provide their expertise outside of the confines of the campus. Release time has been granted for those individuals that hold offices in state and professional organizations.

The University has provided exceptional support of our management degrees and graduate degrees in the Oklahoma City area that include Tinker AFB as well as the partnership with Oklahoma City Community College. The support has included additional full time faculty and staff along with the operational budget to support the offices in the Oklahoma City area.
VIII. C. Aviation Unit Administration

1. Administrator of aviation unit:

   Name of incumbent: Dr. Stan Alluisi and Mr. George Jacox
   Title: Co-Directors

2. Describe the administrative procedures of the aviation unit and, if pertinent, the next higher administrative unit with regard to the following:
   a. Curriculum - Development of curriculum objectives; development, implementation and revision of the curriculum; selection of courses to be offered

   Curriculum development is typically accomplished within the faculty with input from various sources including the Aviation Advisory Board. The Aviation Advisory Board is comprised of members with commercial, corporate and military expertise. Additionally, the aviation program, as are all other programs at Southeastern, is required to complete annual program assessments to determine if we are meeting the stated mission of the university along with the needs and expectations of the students. We also rely on the guidance from AABI in determining the appropriateness of our curriculum.

   Normally, a faculty meeting to review curriculum and flow of course offerings is held annually or more frequently if needed. After a determination that curriculum requires addition, deletion or modification then the university process normally begins; the first step in the process is completing the course medication or addition paperwork. The completed paperwork is submitted to the John Massey School of Business Curriculum Committee for review and approval followed by the Dean’s review and approval. Once those approvals are given the next step in the process is to submit the paperwork to the University Curriculum Committee for their approval. Once their approval is granted the final committee approval step is the Academic Council. If all approvals are given it then goes to the VP for Academic Affairs for approval and then submitted to the Regents for final approval.

   b. Faculty - Recruitment and hiring; assignment of teaching loads

   In the case of replacing or adding a new faculty line the same procedures are followed. The first step in the process is to identify the position and the requirements. A justification must accompany the request to staff form and is sent to the Dean of the John Massey School of Business (JMSOB) for review and approval. The signed documents are then sent to the VP for Academic Affairs for his review and approval. The approval is coordinated with the VP for Business to identify a funding source. Once a funding source is identified the request form goes to Human Resources and an advertisement is placed in numerous places. A screening committee is formed by the Dean of the JMSOB. Applications are aggregated and reviewed by the screening committee once the application deadline has arrived. The screening committee selects applicants to be interviewed and the invitation to interview given to prospective candidates. Once the candidates are interviewed a selection is made and the committee provides their recommendation to the Dean of the JMSOB. The Dean may or may not interview the individual selected by the screening committee. Upon approval by the Dean and the VP for Academics the candidate is informed of their selection and an offer of employment is made.

   Teaching loads are expected to be 12 credit hours per semester for a 1.0 FTE. Accommodations are made to those individuals that have professional commitments as a Board of Trustee Member in professional organizations or on State of Oklahoma Commissions. Most of the full time aviation faculty are on a 12 month contract with one exception. Teaching loads are reviewed each semester.

   c. Facilities - Assignment of rooms; class size limits; management of assigned space

   Assignment of rooms is determined by the central scheduling office on campus in academic affairs. Actual room assignments are based on class size unless a specific need is identified. Aviation classes have priority
in the Russell Building which houses the John Massey School of Business. Classrooms afford the instructor access to multimedia through the internet and projection capabilities. Additionally, a teaching computer lab is incorporated at the airport facility for two specific classes needing specialized software.

d. Budget - Allocation of funds; determination of salaries; control of expenditures

Allocation of funds and control of expenditures is one of the functions of the Co-Directors of Aviation Sciences Institute. The Directors has five different budgets under their control; four supply budgets allocated by the VP for Business Affairs that go to support the four locations of the aviation program and one aircraft budget. The Directors has a financial assistant that helps to coordinate the various budgets. Determination of faculty salaries utilizes the Southeastern Faculty Salary Card that is generally used to determine faculty salaries. Staff salaries are determined by the HR office at Southestern.

e. Evaluation - Evaluation of program effectiveness

Annual program assessments are required to be submitted to the Academic Affairs office using specific rubrics that help determine if we are meeting the mission of the university and departments. Additionally, students evaluate each class at the end of the course. The evaluations are confidential and are submitted to the Department Secretary for processing. Approximately two months after the end of the course the Department Chairs are provided copies of all evaluations for review.
VIII. D. Related Programs

1. Describe intra-campus and multi-campus relationships with allied disciplines.

Aviation programs are specifically designed to take advantage of the interests of the students outside of aviation. Students are highly encouraged to develop a plan of study that incorporates a minor that is not in aviation. A number of flight students select the Occupational Safety and Health minor which complements the Professional Pilot degree. Aviation Management students are required to take a significant number of business classes which provides a pathway into an MBA if they desire. Aviation students in general are held in high esteem by faculty and staff at SE.

The Aviation Sciences Institute has three offsite locations in Oklahoma City. The only degrees offered in OKC are the BS Aviation Management degree and the MS Aerospace Administration & Logistics graduate degree.

2. Describe provisions that have been established for interfacing with related programs and for the interaction of the faculty with those in other disciplines.

A close working relationship with Occupational Safety and Health along with the John Massey School of Business departments has been forged. Aviation students are encouraged to develop a minor outside of aviation. Aviation faculty serve on numerous campus wide committees and interface with faculty from all disciplines. Additionally, aviation faculty are often invited to be a member of various search committees and again interface with non-aviation faculty and staff.

The aviation faculty are members of the University Aviation Association with faculty serving on various committees within the UAA. This promotes interaction between faculty at other universities. The faculty at SE are partners with Oklahoma State University for the Oklahoma Aviation Education Symposium held annually.
VIII. E. Institutional Budget

1. Indicate the approximate amount and percentage of the institution’s major source of operating revenue for the preceding year. Specify period.

Institutional Operating Revenue for 2015-2016

<table>
<thead>
<tr>
<th>Source</th>
<th>Amount(s)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Fees and Tuition</td>
<td>26,201,862</td>
<td>55%</td>
</tr>
<tr>
<td>State Support</td>
<td>16,392,075</td>
<td>35%</td>
</tr>
<tr>
<td>Federal Support</td>
<td>4,877,814</td>
<td>10%</td>
</tr>
<tr>
<td>Other (specify)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Operating Revenue</td>
<td>47,471,751</td>
<td>100%</td>
</tr>
</tbody>
</table>

2. Indicate the approximate amount and percentage of the institution’s major expenditures for the preceding year.

Institutional Expenditures for 2015-2016

<table>
<thead>
<tr>
<th>Type of Expenditure</th>
<th>Amount(s)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instruction</td>
<td>18,956,140</td>
<td>44%</td>
</tr>
<tr>
<td>Research</td>
<td>49,378</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Extension or Continuing Education</td>
<td>323,341</td>
<td>1%</td>
</tr>
<tr>
<td>Administration</td>
<td>9,490,852</td>
<td>22%</td>
</tr>
<tr>
<td>Physical Plant</td>
<td>4,817,928</td>
<td>11%</td>
</tr>
<tr>
<td>Other (specify)</td>
<td>9,391,191</td>
<td>22%</td>
</tr>
<tr>
<td>Total Expenditures</td>
<td>43,028,830</td>
<td>100%</td>
</tr>
</tbody>
</table>
VIII. F. **Aviation Unit’s Next Higher Administrative Level Budget**

1. Indicate the approximate amount and percentage of the aviation unit's next higher administrative level major source of operating revenue for the preceding year. Specify period.

Next Higher Administrative Level Operating Revenue for 2015-2016

<table>
<thead>
<tr>
<th>Source</th>
<th>Amount(s)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institutional Funds</td>
<td>285,071</td>
<td>100</td>
</tr>
<tr>
<td>Other (specify)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Operating Revenue</td>
<td>285,071</td>
<td>100%</td>
</tr>
</tbody>
</table>

2. Indicate the approximate amount and percentage of aviation unit's next higher administrative level major expenditures for the preceding year.

Next Higher Administrative Level Expenditures for 2015-2016

<table>
<thead>
<tr>
<th>Type of Expenditure</th>
<th>Amount(s)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instruction</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Research</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Extension or Continuing Education</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Administration</td>
<td>285,071</td>
<td>100</td>
</tr>
<tr>
<td>Physical Plant</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Expenditures</td>
<td>285,071</td>
<td>100%</td>
</tr>
</tbody>
</table>
VIII. G. Aviation Unit Budget

1. Indicate the approximate amount and percentage of the sources of recurring operating revenue for the aviation unit for the preceding year. Specify period.

Aviation Unit Operating Revenue for 2015-2016

<table>
<thead>
<tr>
<th>Source</th>
<th>Amount(s)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institutional Funds</td>
<td>1,258,555</td>
<td>67</td>
</tr>
<tr>
<td>Other (specify)</td>
<td>606,185</td>
<td>33</td>
</tr>
<tr>
<td><strong>Total Operating Revenue</strong></td>
<td><strong>1,864,740</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

2. Indicate the approximate amount and percentage of the expenditures for the aviation unit for the preceding year.

Aviation Unit Expenditures for 2015-2016

<table>
<thead>
<tr>
<th>Type of Expenditure</th>
<th>Amount(s)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty Salaries</td>
<td>619,393</td>
<td>37</td>
</tr>
<tr>
<td>Other Salaries and Wages</td>
<td>646,362</td>
<td>38</td>
</tr>
<tr>
<td>Expenses (Specify)</td>
<td>373,252</td>
<td>22</td>
</tr>
<tr>
<td>Other (specify)</td>
<td>55,873</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Expenditures</strong></td>
<td><strong>1,694,880</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

3. Describe the nature of, the approximate amount, and the use of nonrecurring funds for the preceding year.

VIII.E.2. Other (Specify) Student Services, Academic Support, Scholarships, Debt Service, Aviation Operations
VIII.G.1. Other (Specify) Aviation Equipment Usage
VIII.G.2. Other (Specify) $443,272: Aviation Operations

Additional comments:
SECTION IX

AVIATION SAFETY CULTURE AND PROGRAM
(AABI 201, Criteria 2.8, 3.8 and 4.8)

A. Aviation Program Safety 132
IX. A. Aviation Program Safety

1. ACCIDENT/INCIDENT HISTORY
   Please list any accidents involving death or injury to students in the past five years.

   a. Date Type: N/A Flight N/A Ground N/A Brief
   b. Description:

       Southeastern Aviation Sciences Institute had no accidents involving death or injury to a student in the past five years.

   d. Number of fatalities: 0
      Number of persons injured: 0
   e. NTSB Report # N/A
      Other report on file: N/A
   f. Federal or State Violations Filed (specify agency and result).
      None to report

   h. Describe changes in operations or procedures as a result of accident(s).

      Southeastern had no changes in operations or procedures due to an accident.
2. Describe the aviation safety program including operational areas covered (e.g. Flight, Maintenance Labs, Airport Ramp and Fueling):

Southeastern Aviation has developed and implemented a Safety Management System for its entire organization. The SMS provides the highest reasonable level of safety by identifying and minimizing risks, which could contribute to accidents, incidents, or injury to persons. SASI provides both safety and quality management covering all systems and operational processes to include:

- Flight Training Operations;
- Operational Control (Dispatch / Flight Following);
- Maintenance and Inspection; including:
  - Parts / materials
  - Technical data
  - Quality control
  - Records management
  - Contract maintenance
- Security
  - Compliance with TSA regulations
- Aircraft ground handling and servicing;
- Training of all personnel.

For a complete description of SASI’s SMS, refer to the SASI Safety Management System Manual.

3. Does the Aviation Program have a designated Safety Officer/Committee?

X Yes □ No

If yes, describe:

Southeastern has a Safety Manager who is Assistant Professor John Van Bebber. Southeastern has an active Safety Committee, which is comprised of:

- Professor John Van Bebber – Safety Manager/Chair of the Safety Committee
  - Assistant Safety Manager—Taylor Nelson (Junior)
- Professor George Jacox – Flight Operations Manager
- Professor Kyle Thomas – Chief Pilot
- Dr. Stan Alluisi – Administration Manager
- Mr. Alan Davis – Maintenance Manager
- Mr. Mike Pruitt – mechanic
- Mr. Jordan Blackburn – mechanic
- Flight instructor representative
  - Blake Crawford
- Line Crew representatives
  - Adam Ludlow, Joe Hammer
4. Does the Aviation Program have a Safety Hazard Incident reporting system where students and instructors can routinely report incidents, occurrences or other safety hazards?

X Yes □ No to support the Safety Program.

Any individual involved directly or indirectly in the flight and maintenance activities of SASI (i.e., employees, part-time/contract personnel, and aviation students) must report any observed hazard. If a hazard is recognized and unable to be resolved via normal operating procedures, the observer shall complete a Hazard/Incident Report and submit it to the Safety Manager.

Upon receipt of a Hazard/Incident Report, the Safety Manager will conduct an investigation to determine the validity of the report as well as to gain additional information concerning the report's subject matter. Any significant hazardous situations or equipment shall be either placarded or removed from service until the hazardous situation is corrected. The submitter, if identified, will be advised of the result of the investigation.

Upon validation of a Hazard/Incident Report, the Safety Manager shall identify and notify the individual(s) assigned responsibility for the affected area of operation. The contents of the Hazard/Incident Report and the investigation results will be provided along with recommendations for corrective/preventive action to the Safety Committee. Appropriate action and a target date for elimination or reduction of the hazardous situation will then be determined. Final corrective action shall be documented on the Hazard/Incident Report form and the completed form returned to the Safety Manager. The Hazard/Incident Report originator will then be notified of the final disposition of the matter.
SECTION X

RELATIONS WITH INDUSTRY
(AABI 201, Criteria 2.9, 3.9 and 4.9)

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<th></th>
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<th>PAGE</th>
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<td>C</td>
<td>Seminars and Short Courses</td>
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<td>D</td>
<td>Research</td>
<td>139</td>
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<tr>
<td>E</td>
<td>Work Experience Programs</td>
<td>140</td>
</tr>
<tr>
<td>F</td>
<td>Placement Assistance</td>
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</tr>
<tr>
<td>G</td>
<td>Student/Industry Interaction</td>
<td>143</td>
</tr>
</tbody>
</table>
X. A. Advisory Committees

1. List the members of the industry alumni advisory committee, their corporate affiliations and the type of aviation activity they represent.

<table>
<thead>
<tr>
<th>Name</th>
<th>Affiliation</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chris Ferguson</td>
<td>American Airlines</td>
<td>Pilot</td>
</tr>
<tr>
<td>Lloyd Sauls</td>
<td>Delta Airlines</td>
<td>Pilot</td>
</tr>
<tr>
<td>Dan Norcross</td>
<td>Delta Airlines</td>
<td>Pilot</td>
</tr>
<tr>
<td>Derik Segerson</td>
<td>Alaska Airlines</td>
<td>Pilot</td>
</tr>
<tr>
<td>Shukri El-Khayyat</td>
<td>United Air Lines</td>
<td>Pilot</td>
</tr>
<tr>
<td>Kyle McKeever</td>
<td>Envoy Air</td>
<td>Pilot</td>
</tr>
<tr>
<td>Ryan Gornto</td>
<td>Envoy Air</td>
<td>Pilot</td>
</tr>
<tr>
<td>Austin Ashlock</td>
<td>Skywest Air Lines</td>
<td>Pilot</td>
</tr>
<tr>
<td>Jim Dees</td>
<td>American Air Lines</td>
<td>Chief Pilot / DFW</td>
</tr>
<tr>
<td>Chris Keys</td>
<td>FAA, retired</td>
<td>Flight Standards</td>
</tr>
<tr>
<td>Keith Scoskie</td>
<td>Southwest Airlines</td>
<td>Pilot/Check Airman</td>
</tr>
</tbody>
</table>

2. Describe Advisory Committee objectives and procedures, including the frequency of meetings and whether minutes are recorded.

The advisory committee is charged with reviewing the aviation degrees offered at Southeastern providing their insight into the course content and overall structure of the programs. Typically, the pilot advisory group meets annually each spring and meets with faculty and staff to review the programs and provide insight into the various areas of aviation with which they are associated. Minutes are not recorded. The management advisory group is a part of the John Massey School of Business Advisory Board and meet twice a year.

3. List dates of meetings in the last year.

   Professional Pilot – April 2016
   Management – January 2016
4. Describe the ways in which the Advisory Committee has assisted the aviation unit.

The advisory committee reviews any changes to the curriculum. The review process results in specific recommendations to our Professional Pilot and Aviation Management degrees. Although the committee felt that the aviation programs at Southeastern have met or exceeded their expectations.

X. B. Contributions

1. Indicate the total contributions made to the aviation unit during the past year and the five-year total. Show the number of donors in each group.

<table>
<thead>
<tr>
<th></th>
<th>Previous Year</th>
<th>Five-Year Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Amount</td>
</tr>
<tr>
<td>Aviation Industry</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Aviation Alumni &amp; Individuals</td>
<td>69</td>
<td>$71,542</td>
</tr>
<tr>
<td>Faculty/Staff</td>
<td>9</td>
<td>$2,250</td>
</tr>
<tr>
<td>Foundation Board</td>
<td>9</td>
<td>$4000</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>87</td>
<td>$77,792</td>
</tr>
</tbody>
</table>

2. List non-monetary (in-kind) contributions to the aviation unit during the last five years.

CAE Simulator: Citation type rating (Top pilot, Gornto).............$26,000
Gifts-in-Kind.......................................................................................$530
X. C. Seminars and Short Courses

Indicate the seminars and short courses conducted by the aviation faculty for the aviation industry during the past year. Indicate the names of the aviation faculty that participated as chairman, group leaders, lecturers, etc.

<table>
<thead>
<tr>
<th>Dates</th>
<th>Description</th>
<th>No. of Participating</th>
<th>Faculty Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Additional comments:

We had no seminars or short courses specifically for aviation industry in 2015 or 2016.
X. D. **Research**

1. Indicate research, both sponsored and un-sponsored, conducted by the aviation unit during the past five years. Indicate the sponsors, the amount of funding and the major investigator(s).

<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
<th>Sponsor</th>
<th>Amount ($)</th>
<th>Major Investigator(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 14-15, 2015</td>
<td>Gatekeeping Function in Collegiate Aviation Programs</td>
<td>OSU</td>
<td></td>
<td>Alluisi, Jacox, Thomas, Van Bebber</td>
</tr>
</tbody>
</table>

Additional comments:
X. E. Work Experience Programs

1. Describe the internship, cooperative or other work experience program.

Flight Department Internships are available with American Airlines (AA), Southwest Air Lines, United Air Lines, and Delta Airlines. The internships are both paid and unpaid. The applicants apply directly to the airline with advice and council help from the faculty and alumni here at Southeastern Oklahoma State University. The internships provide a broad overview of the company working structure including flight operations, flight training simulators, maintenance, and other departments.

2. Describe the summer job program. Indicate the number of students and companies involved during the past year.

Summer internships are available at United, Delta, American, and Southwest airlines. We have had no students in the past five years interested or involved.
X. F. Placement Assistance

1. Describe activities of the institution’s placement services to assist graduates with the job placement process.

For Southeastern students and graduates, the university Career Management Office offers assistance in the following areas:

- One-on-one career guidance, including help deciding on a major
- On-campus & off-campus regular/work study job listings
- Resume critique & interviewing skills assistance
- Job listings from Business, Industry & Schools/Universities
- Resumes & credential Files sent directly to Employers who request them
- Workshops & Special Events
- Southeastern Oklahoma State University does not guarantee that students or graduates/alumni will be placed in a job or employed at all.

For employers the university Career Management Office offers the following services:

- Resumes available to view online through the NACELink for employers system along with student credential files (unofficial transcripts, references) available upon request
- Easy Access to our campus via classroom interaction and/or recruiting presentations
- On-campus interview set up; schedule, and reserve interview rooms online
- Posting of job openings (online via the NACELink for Employers system, or send them to us by email)
- Career Fair every fall and Education Job Fair in the spring semester. Registration online for these events.

However, the SE Career Management Center was closed as of June 30, 2016 as budget cuts were mandated by the state of Oklahoma. It is now being reorganized and should be back in operation by January 1, 2017.

2. Describe activities of the aviation unit to assist individual employers with the job placement process. (Exclude the institution’s placement services discussed in #1 [above].)

For individual employers, our students, and our graduates, Southeastern Aviation Sciences Institute offers:

- Flight Training records of our students for prospective airline employers
- Certification of our graduates completing Southeastern’s FAA approved ATP academic training
- Interview scheduling with Envoy Air once or twice each semester
  - Practice interview for all prospective employees of a regional airline
- An annual Aviation Career Seminar every April with several regional airlines, major airlines, corporate aviation, fractional aircraft owners, and airline management personnel
3. Describe coordinated efforts with aviation industry and associations to place graduates with employers.

Southeastern Aviation and Envoy Air have an agreement signed by both parties to offer employment through Envoy’s cadet program. This Pipeline program allows our graduates to be employed as a First Officer with 1000 total hours and the eventual flow through to American Airlines. The job requires three interviews while gaining flight time as a Southeastern flight instructor.

Our SE Alumni Facebook page is now a major activity that helps notify all graduates of positions and job opportunities within all facets of aviation—airline, military, corporate, and flight instructor positions.

Southeastern’s Women in Aviation chapter, sponsored by Kyle Thomas, has attended the Women in Aviation National Conference from 2013 thru 2016. This provided the opportunity for our female and male students to interact and network with major airlines, regional airlines, corporate aviation departments, military aviation recruiters, and others in the aviation industry.
X. G. **Student/Industry Interaction**

1. List the national aviation associations that sponsor student organizations affiliated with the aviation unit. Describe the interaction with the sponsoring association.
   
   - Alpha Eta Rho
   - NIFA: Regional and National Flight Team Competition
   - Women in Aviation

2. List the major field trips taken during the past year. Include the location, number of participants and the associated course, if any.
   
   - Oklahoma City, OK—altitude chamber trip (AVIA 4643, 27 students)
   - FAA Fort Worth Air Traffic Control Center (AVIA 3023, 14 students)
   - FAA DFW West Air Traffic Control Tower (AVIA 3023, 14 students)
   - King Aerospace, Ardmore, OK (AVIA 3133, 2 students)
   - American Air Lines Maintenance, Tulsa, Ok (12 students)
   - Mid-America Museum, Mt. Pleasant, TX (12 students)
   - Air Force Museum, Wright Patterson AFB, OH (12 students)

3. List the guest lecturers for the past year. Include the lecturer's name, topic, date and course for each.
   
   1. **Billy Risley, FAAST Program Manager**
      - Voluntary Reporting and the WINGS program; October 5, 2016
      - AVIA 3173—Aviation Safety
   2. **Dr. Mike Reed, Southeastern Oklahoma State**
      - Kinesiology; November 24, 2015
      - AVIA 4643—Physiology
   3. **Rod Milton, Global Aerospace: attorney and underwriter**
      - Aviation law and the pilot; March 26, 2015
      - AVIA 3133—Aviation Legal Problems
# SECTION XI

CONTINUOUS ASSESSMENT AND IMPROVEMENT  
(AABI 201, Criteria 2.10, 3.10 and 4.10)

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XI. A. **Students**

Describe the specific process and timeline for ongoing evaluation of student admission, retention and graduation requirements, processes, rates, and placement:

1. **Timeline (schedule) of assessments**

   Assessment continues through each semester with a written Assessment Report each fall.

2. **What, how and from whom data are collected**

   Each instructor collects data for the classes they teach. This data is in the form of homework, tests, presentation and completed class work. Student knowledge and flight proficiency will be assessed during stage checks throughout the flight curriculum. FAA examiners give feedback on areas that are both deficient and successful.

3. **How assessment results are used and by whom to document successes and shortcomings**

   Faculty members identify the strengths and weaknesses of each class. Through collaboration with the aviation faculty, the results are evaluated and a plan is developed to improve the teaching areas in the classroom.

4. **How plans are established to address shortcomings**

   Each shortcoming is addressed with emphasis being placed on needed improvements to teaching methods as well and needed corrective actions.

5. **How the assessment results are used to improve program effectiveness**

   Faculty members are strongly encouraged to consider assessment results and share all ideas for improving program effectiveness. Faculty meetings, both formal and informal, are open to discussion and creative thinking. And although the final decision is that of the ASI director and respective department chairs, the departmental culture is such that everyone feels as if they have a say in all things related to program effectiveness.

Additional comments:
XI. B. **Program Mission and Educational Goals**

Describe the specific process and timeline for ongoing evaluation of educational goals:

1. **Timeline (schedule) of assessments**

   Each semester Department Chairs collect data on student progress during that semester’s classes. This data is analyzed and later combined with all the data for the academic year to produce the Program Outcome Assessment Report. The Program Outcome Assessment Report contains a section describing any corrective action which may be required. This report is produced and sent to the university administration early each fall.

2. **What, how and from whom data are collected**

   Each instructor collects relevant data from each of the classes they teach. This data is developed from homework assignments, examinations, writing assignments, formal presentations and FAA practical and written examinations. Student knowledge and flight proficiency is also assessed during stage checks throughout the flight curriculum. FAA examiners also provide feedback both in areas that are deficient as well as those completed successfully.

3. **How assessment results are used and by whom to document successes and shortcomings**

   Faculty identify the strengths and weaknesses of each class. Through collaboration with the entire aviation faculty the results are evaluated and a determination is made if a correction or modification to the curriculum is needed. If so, a plan is developed to improve the teaching areas in the classroom or lab.

4. **How plans are established to address shortcomings**

   Each shortcoming in student progress is evaluated, first to determine if a correction or modification to the curriculum is needed. If a modification is needed the faculty will addressed how to improve the teaching method or emphasize corrective action in the areas that are deficient.

5. **How the assessment results are used to improve program effectiveness**

   Again, each shortcoming in student progress is evaluated, first to determine if a correction or modification to the curriculum is needed. If a modification is needed the faculty will addressed how to improve the teaching method or emphasize corrective action in the areas that are deficient. All deficiencies and modifications are reported annually in each department’s Program Outcome Assessment Report. These reports also contain data for the previous five years so that longer term trends may be detected and analyzed.

Additional comments:
XI. C. Student Learning Outcomes

Describe the process and timeline for ongoing assessment of general, aviation core, program-level criteria and other outcomes, including:

1. Timeline (schedule) of assessments

   Continues through each semester with a written Assessment Report each fall.

2. What, how and from whom data are collected

   Each instructor for the classes they teach collects data. This data is from homework, tests, presentation and completed class work. Students knowledge and flight proficiency will be assessed during stage check thought the flight curriculum. FAA examiners give feedback of areas that are deficient and successful.

3. How assessment results are used and by whom to document successes and shortcomings

   Faculty identifies strengths and weaknesses of each class. Thru collaboration with the aviation faculty the results are evaluated and a plan is developed to improve the teaching areas in the classroom.

4. How plans are established to address shortcomings

   Each shortcoming will be addressed to how to improve teaching methods or emphasize corrective action in the areas that are deficient.

5. How the assessment results are used to improve program effectiveness

   The deficiency areas found in the assessment are used by faculty to improve student performance overall, so they will meet or exceed the educational objectives.

Additional comments:
XI. D. Curriculum

Describe the process and timeline for ongoing assessment of the curriculum, including:

1. Timeline (schedule) of assessments

   Each semester Department Chairs collect data on student progress during that semester’s classes. This data is analyzed and later combined with all the data for the academic year to produce the Program Outcome Assessment Report. The Program Outcome Assessment Report contains a section describing any corrective action which may be required. This report is produced and sent to the university administration early each fall.

2. What, how and from whom data are collected

   Each instructor collects relevant data from each of the classes they teach. This data is developed from homework assignments, examinations, writing assignments, formal presentations and FAA practical and written examinations. Student knowledge and flight proficiency is also assessed during stage checks throughout the flight curriculum. FAA examiners also provide feedback both in areas that are deficient as well as those completed successfully.

3. How assessment results are used and by whom to document successes and shortcomings

   Each instructor collects relevant data from each of the classes they teach. This data is developed from homework assignments, examinations, writing assignments, formal presentations and FAA practical and written examinations. Student knowledge and flight proficiency is also assessed during stage checks throughout the flight curriculum. FAA examiners also provide feedback both in areas that are deficient as well as those completed successfully.

4. How plans are established to address shortcomings

   Each shortcoming in student progress is evaluated, first to determine if a correction or modification to the curriculum is needed. If a modification is needed the faculty will addressed how to improve the teaching method or emphasize corrective action in the areas that are deficient.

5. How the assessment results are used to improve program effectiveness

   Again, each shortcoming in student progress is evaluated, first to determine if a correction or modification to the curriculum is needed. If a modification is needed the faculty will addressed how to improve the teaching method or emphasize corrective action in the areas that are deficient. All deficiencies and modifications are reported annually in each department’s Program Outcome Assessment Report. These reports also contain data for the previous five years so that longer term trends may be detected and analyzed.

Additional comments:
XI. E. Faculty and Staff

Describe the process and timeline for ongoing assessment of all aspects related to faculty and staff, including:

1. Timeline (schedule) of assessments

The Faculty Development and Evaluation process covers one year of performance for non-tenured full-time faculty except in certain instances; i.e., new faculty, faculty on leave, etc. Formal evaluations of tenured faculty are required at least each third year. However, formal evaluations may occur more frequently at the request of either the faculty member of the department chair.

Sections 4.4.4 and 4.4.5 of the Academic Policies and Procedures Manual describe the timing of the faculty development and evaluation process:

4.4.4 Faculty Development and Evaluation Process

The faculty development and evaluation process for the year includes the following three steps:

1. By September 15, the faculty revises and updates the previous year’s Faculty Development Plan as outlined in the following section entitled “Faculty Evaluation Guide.” It should list any activities completed the preceding year and not previously included in the “Faculty Development Plan.” The faculty forwards the revised plan to the department chair.

2. By October 1, the faculty and the department chair meet for a year-end evaluation. The chair should send the completed “Faculty Evaluation Form,” “Faculty Development Plan” and documentation (if applicable) to the dean of the school.

3. By November 1, the faculty and the chair complete the current year’s “Faculty Development Plan.”

4.4.5 Faculty Evaluation Guide

1. The following documents should be used: Faculty Development and Evaluation System (see department chair)

Faculty Development Plan

Faculty Evaluation Form (see department chair)

2. The evaluation for the preceding year should be made during September of the current year on the basis of the “Faculty Development Plan” completed in the fall of the preceding year and revised in August/September of the current year.
   a. Before the conference with the department chair, the faculty should conduct a year-end self-evaluation and succinctly describe progress for each exemplar listed in the preceding year’s “Professional Development Plan.” A brief statement indicating whether the exemplar was fully accomplished, partially accomplished, or not addressed is appropriate.
   b. As the faculty formulates an overall self-rating in the area of teaching, s/he should analyze progress on several exemplars and accurately combine these to give an overall rating. Overall self-evaluation with only one exemplar is not acceptable. Citing marks from a student evaluation, for example, is not adequate evidence for a rating in the area of teaching. The results from the student evaluations represent only one dimension of teaching effectiveness. Multiple methods need to be used to formulate an overall self-rating. For example, results from peer-evaluations, student evaluations, ETC Major Field Achievement Tests, and other exemplars should be combined to support the rating for teaching effectiveness.
   c. In the areas of research/scholarship and service, again evidence from several exemplars needs to be combined to formulate the rating in each area.
   d. The faculty should write a summary paragraph that combines various activities to give an overall rating for performance. If the standard evaluation form is used, the faculty should mark it to show her/his self-evaluation.

3. Both the faculty member and the chair should have copies of each of the basic documents.

4. When the self-evaluation is complete, the chair and the faculty member should schedule a conference.
5. In the conference, the chair should review the faculty member’s self-evaluation and make his/her own evaluation of the faculty member and mark it on the evaluation form. Documentation is required for ratings above or below proficient and should be attached to the evaluation forwarded to the dean.
6. By October 1, the chair should send a copy of the completed “Faculty Evaluation Form,” the “Faculty Development Plan,” and documentation (if any) to the dean of the school.
7. By October 31, the dean should write comments about the evaluation and return the copy to the chair.

2. What, how and from whom data are collected

While the APPM clearly states in section 4.4.1 “The System utilizes several sources of data, and these sources are clearly communicated…” the manual never explicitly states which data can or should be used.

3. How assessment results are used and by whom to document successes and shortcomings

The Faculty Development and Evaluation Process is “designed to improve faculty performance” as noted in section 4.4.1 of the Academic Policies and Procedures manual:

4.4.1 Introduction

Teaching, research, and service are the triad of professional responsibilities at the University. While this is primarily a teaching University, it is a basic principle of higher education that scholarly research informs effective teaching. At the same time, the University faculty contributes richness to the culture of the community at large through their unique skills and talents. Evaluation of faculty performance considers these three areas and provides a critical process for continuous improvement of the University and faculty.

Both the importance and the imperfection of a faculty development and evaluation system are duly considered in the Southeastern Oklahoma State University scheme. It is designed within the following guidelines:

* The Faculty Development and Evaluation System is designed to improve faculty performance.
* The Faculty Development and Evaluation System will provide important information for promotion and tenure decisions.
* The System utilizes several sources of data, and these sources are clearly communicated.
* Evaluation procedures are individualized and flexible.
* Individualization considers the institution’s nature, directions, and priorities, the administrative unit’s needs, and the individual’s interests.

An annual academic performance review (Faculty Development and Evaluation Summary) is submitted for each full-time faculty member. A formal evaluation is conducted for each non-tenured faculty member each year and for each tenured faculty member at least each third year.

4. How plans are established to address shortcomings

The Faculty Development and Evaluation Process is “designed to improve faculty performance” as noted in section 4.4.1 of the Academic Policies and Procedures manual. Further, Section 4.4.2 states that:

The document “Faculty Development Agreement” is an agreement for areas of emphasis for the forthcoming year. It is not an implicit evaluation of criteria not listed, however. Refer to Point 1 in the section entitled “Procedural Principles and Guidelines.”
Teaching, research, and service are the triad of professional responsibilities at the University. While this is primarily a teaching University, it is a basic principle of higher education that scholarly research informs effective teaching. At the same time, the University faculty contributes richness to the culture of the community at large through their unique skills and talents. Evaluation of faculty performance considers these three areas and provides a critical process for continuous improvement of the University and faculty.

Both the importance and the imperfection of a faculty development and evaluation system are duly considered in the Southeastern Oklahoma State University scheme. It is designed within the following guidelines:

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- The Faculty Development and Evaluation System will provide important information for promotion and tenure decisions.
- The System utilizes several sources of data, and these sources are clearly communicated.
- Evaluation procedures are individualized and flexible.
- Individualization considers the institution’s nature, directions, and priorities, the administrative unit’s needs, and the individual’s interests.

An annual academic performance review (Faculty Development and Evaluation Summary) is submitted for each full–time faculty member. A formal evaluation is conducted for each non–tenured faculty member each year and for each tenured faculty member at least each third year.

4.4.2 Faculty Evaluation System

The Regional University System of Oklahoma Board of Regents has specified five basic categories upon which academic rank and promotion in rank are based: (1) education and experience, (2) effective classroom teaching, (3) research/scholarship, (4) contributions to the institution and profession, and (5) performance of non–teaching or administrative duties.

The Faculty Development and Evaluation System of Southeastern Oklahoma State University is designed to promote faculty development and to assess faculty performance on those prescribed criteria. Instrumentation of the system consists of four documents:

- Faculty Development and Evaluation Criteria (see Appendix D)
- Catalog of Faculty Development and Evaluation Criteria (Appendix E)
- Faculty Development Agreement (Appendix F)
- Faculty Development and Evaluation Summary (Appendix G - includes G1 and G2)

The document entitled “Faculty Development and Evaluation Criteria” lists criteria for evaluating faculty performance in the four categories. The document “Catalog of Faculty Development and Evaluation Criteria” presents exemplars for each criterion. The exemplars are not all–inclusive, but do provide examples and extend the definitions of the criteria.

The document “Faculty Development Agreement” is an agreement for areas of emphasis for the forthcoming year. It is not an implicit evaluation of criteria not listed, however. Refer to Point 1 in the section entitled “Procedural Principles and Guidelines.”

“The Faculty Development and Evaluation Summary” provides for listing the education and experience of the faculty and then a rating of the faculty member’s performance in the categories of (1) effective classroom teaching, (2) scholarship, (3) service to institution, profession, and public, and (4) performance of non–teaching/administrative duties/assignments. It also provides for a rating of overall performance. Provision is made for commentary and signatures on the back.

Category 4, performance of non–teaching/administrative duties/assignments, is interpreted to include those duties or assignments which result in a reduced teaching load such as serving as department chair, project director, coach, and band director.
5. How the assessment results are used to improve program effectiveness

The use of faculty evaluations to improve program effectiveness is not specifically mentioned in the APPM.

Additional comments:

It should be noted that due to the many recent changes to the structure of the university administration over the past few years (e.g. the move from three deans to one dean to no position of dean and the elimination of the position of Director of the ASI) a number of sections and steps in the APPM and timelines are now moot. Changes are underway to remove all references to deans or a dean and timelines adjusted appropriately.
XI. F. **Facilities, Equipment and Services**

Describe the process and timeline for ongoing assessment of all aspects related to facilities, equipment and services, including:

1. **Timeline (schedule) of assessments**

   There is currently no formal or regularly scheduled assessment of ASI facilities or equipment. The ASI Co-Directors works closely with the Chief Pilot and the Lead Maintenance Technician to evaluate the ability of the ASI’s aircraft and facilities to meet the educational needs of the various aviation programs. However, since the ASI is an FAA Part 141 school the FAA does conduct an annual facility inspection.

2. **What, how and from whom data are collected**

   **Aircraft:** Data is constantly being collected from aircraft operations in order to determine the actual cost of each type or aircraft and each individual aircraft. Statistics on hours flown and fuel usage are also collected. The ASI Director reviews these data daily. The Director, along with the Lead Maintenance Technician and Chair of the Flight Department, also review the data periodically in order to assess the need for additional or different aircraft.

   **Computers:** The University IT department previously had a program to regularly replace faculty and staff PC’s as well as to upgrade PC laboratory computers on a regular rotation. This regular program has slowed due to recent budgetary difficulties. However, should a particular piece of computer equipment be needed to perform a specific function (e.g. FMS simulation) the IT department has always promptly responded to our needs.

   **Facilities:** There is currently no formal or regularly scheduled assessment of ASI facilities. The ASI Co-Directors works with the Director of SOSU’s Physical Plant and the President regarding the need to upgrade or replace facilities.

3. **How assessment results are used and by whom to document successes and shortcomings**

   When the ASI Co-Directors determines that shortcomings exist in aircraft, computers or facilities they work with the administration to remedy the situation. This has most easily been done with computer resources. However, while a regular program of rotating in new aircraft to replace older aircraft was attempted in the past, it was not successfully implemented due to problems associated with the long-term funding of such a project.

4. **How plans are established to address shortcomings**

   Typically, any plans to address shortcoming in any facilities area other than computer or networking equipment is accomplished on an as needed and as funds are available basis. Reduced funding has consistently stymied all efforts to implement any type of routine aircraft or facilities replacement schedule or upgrade program. Things have only gotten worse with the state budget crisis.

5. **How the assessment results are used to improve program effectiveness**

   When a need reaches the level where we believe that it will impact the safety of our flight program or the adversely affect the effectiveness or quality of an academic program the ASI Co-Directors and the administration manage to find a way to remedy the situation.

Additional comments:
XI. G. **Institutional Structure and Support**

Describe the process and timeline for ongoing assessment of all aspects related to institutional structure and support, including:

1. Timeline (schedule) of assessments

2. What, how and from whom data are collected

3. How assessment results are used and by whom to document successes and shortcomings

4. How plans are established to address shortcomings

5. How the assessment results are used to improve program effectiveness

Additional comments: We have been unable to obtain this information from our administration at this time. We will forward the answers to these questions as soon as we receive it.
XI. H. Aviation Safety Culture and Program

Describe the process and timeline for ongoing assessment of all aspects related to the safety program and culture, including:

1. Timeline (schedule) of assessments

   SASI will perform internal audits of its operational processes to determine the performance and effectiveness of risk controls. External audits are to be accomplished every two years.

2. What, how and from whom data are collected

   Safety data is collected from all faculty, flight instructors, mechanics, aviation students, and staff. Primary data is gathered from all hazard and incident reports. Our flight instructors and line crew are always vigilant in monitoring our operations.

   Starting in the fall of 2016, we participated in a Safety Culture Survey administered by Mike Robertson, Southern Illinois, Carbondale. This was a learning experience and a future survey adapted to our specific program will be forthcoming. This is just one tool of many to help assess our safety culture.

3. How assessment results are used and by whom to document successes and shortcomings

   The use of Safety Assurance functions to verify compliance and standardization is an integral part of the quality assurance system. An initial audit will cover all activities within the SASI operations. Records of hazard or incident reports are kept by the Safety Manger.

   The Safety Committee, which meets approximately once each month, reviews and takes action to correct problems, which is also documented by the Safety Manager.

4. How plans are established to address shortcomings

   SASI has addressed assessment with the more current terminology entitled Safety Assurance. Safety assurance provides all stakeholders an indication of the performance of the safety system in place. Assurance is “something that gives confidence.” After the controls for risk are made part of the safety system, safety assurance takes over to see that they work as intended.

   Safety evaluation is fundamental to the safety management process. Once each year, SASI’s safety management policies and procedures require an internal evaluation of the organization’s existing operations, operational changes, and future safety management planning. A new method we started this is year is a Safety Culture Survey, and we plan to survey our department as to what our real shortcomings might be.

   Safety problems are addressed at our annual fall Safety Stand Down day. Faculty, flight instructors, mechanics, and invited speakers present many of our safety issues to all of our pilot students. The forum for Stand Down follows the example of military safety stand down. All flight training stops and all students attend the five-hour session, which is required attendance. Focus for the day centers on flight operations safety.

5. How the assessment results are used to improve program effectiveness

   The Safety Committee ensures that standard operating procedures are followed and updated for safety-related operations and activities. In addition, SASI will periodically review supervisory and operational controls to ensure the effectiveness of the Internal Evaluation Procedures.

Additional comments:

   The SASI Safety Management System was initiated in January 2011. Complete implementation is ongoing. Each process is first implemented, then personnel are educated, and continuous improvement evolves through the Safety Committee.

   Starting in the fall of 2016 SASI holds a Safety Stand Down day with all aviation students, faculty, and mechanics to promote and educate all personnel with regard to our Safety Management System and safety culture. This event is in the form of a seminar with subjects presented from our flight instructors, faculty, and our FAA FISDO office in Oklahoma City. We anticipate additional aviation safety professionals outside of our university will be invited every year to help our aviation department enhance our safety culture.
XI. I. Relations with Industry

Describe the process and timeline for ongoing assessment of all relations with industry including:

1. Timeline (schedule) of assessments

   Assessment is due annually each September. All faculty communicate in April with our aviation industry representatives and our aviation alumni organization dealing with our graduate’s progress. Then at the end of each spring semester, faculty meet to adjust and review all aspects of our flight and management programs.

2. What, how and from whom data are collected

   An informal assessment of program relations with industry is accomplished during the annual aviation alumni reunion every spring. We also collect data with the scholarship award process. This includes detailed scholarship applications and an essay. Many aspects of each student’s application trigger a rigorous discussion of our program objectives every spring just prior to our Aviation Awards Banquet.

3. How assessment results are used and by whom to document successes and shortcomings

   Aviation faculty review the comments made by the aviation alumni and discuss those in a follow-up meeting during the assessment process. Aviation faculty have a more formal meeting at the end of the spring semester to review the data and make adjustments in our flight and management programs.

4. How plans are established to address shortcomings

   Our faculty collaborate continuously to review our course offerings, update all course learning objectives as the industry, and job opportunities change. The formal meeting at the end of the spring semester is where we put changes into our programs for the coming fall and spring school year.

5. How the assessment results are used to improve program effectiveness

   Our professional pilot and management programs are evaluated at the end of each spring semester to make sure we have our learning objectives in all courses targeted to AABI requirements and industry requirements. We evaluate the positive aspects and the improvements needed as a department. Each academic course and flight course are reviewed to assure that we have our meeting our learning objectives from the freshman to the senior level.

Additional comments:

Last year was our 50th Anniversary of Southeastern Aviation. We had 325 alumni and family, students and family, faculty, and staff in attendance for the Saturday evening banquet. This was the largest function for any alumni event in the history of Southeastern Oklahoma State. The Southeastern Aviation Alumni are active and supportive in every facet of our program. Chris Ferguson, first officer for American Airlines, has been the president of this organization for the last five years and participation has grown substantially. We have working alumni that will volunteer right seat time in their turbine aircraft, thus our students have a chance to learn and log multi-engine turbine time.

The Facebook forum and the Southeastern Alumni website have been a big part of our alumni getting involved again in Southeastern Aviation and this university.
VITA
Stanley J. Alluisi, Ed.D.
Professor and Co-Director, Aviation Sciences Institute,
Chair, Department of Aviation Management &
Graduate Program Director
John Massey School of Business
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EDUCATION

1997
Ed.D., Higher Education,
Oklahoma State University, Stillwater, Oklahoma

1994
MS, Applied Educational Studies,
Oklahoma State University, Stillwater, Oklahoma

1980
BS, General Studies,
University of Maryland, College Park, Maryland

ACADEMIC AND RELATED NON-ACADEMIC EXPERIENCE

2015 - Present:
Co-Director, Aviation Sciences Institute,
Chair, Department of Aviation Management & Graduate Program Director
Southeastern Oklahoma State University

2014 - 2015:
Interim-Director, Aviation Sciences Institute & Graduate Program Director
Southeastern Oklahoma State University

2000 - Present:
Chair, Department of Aviation Management
Southeastern Oklahoma State University
2004 – 2016:
Associate Professor
Southeastern Oklahoma State University

1998 - 2000:
Assistant Professor of Aerospace
Aerospace Department
Southeastern Oklahoma State University

1997-1998:
Help Desk Technician,
University of Oklahoma Health Sciences Center

1981-1992: United States Air Force:

1990-1992
Chief, AWACS Navigator Training
Saudi AWACS Technical Assistance Field Team
Riyadh Air Base, Kingdom of Saudi Arabia

1985 – 1990
Navigator & Instructor Navigator
964th Airborne Warning and Control Squadron
Tinker Air Force Base, OK

1983 - 1984
Instructor Weapons Director
966th Airborne Warning and Control Squadron
Tinker Air Force Base, OK

1981 - 1983
Weapons Director
963rd Airborne Warning and Control Squadron
Tinker Air Force Base, OK

PROFESSIONAL INTERESTS
Aviation History - Specifically, the impact of military aviation upon society
Unmanned Aircraft Systems
Gatekeeping Function in collegiate professional pilot degree programs

SELECTED COMMITTEES AND SPECIAL ASSIGNMENTS
2016 – Present: Faculty Senate - Senator
2014 – Present: Graduate Council
2014 – Present: Honors Committee
2010 – Present: AABI Accreditation/Reaffirmation Coordinator
2002 – Present: Academic Council
2002 – 2014: Curriculum Committee
1999 – 2014: John Massey School of Business Public Affairs Committee
2009 – 2011: University Council on Engagement & Service (Secretary)
1999 – 2004: University Human Subjects Research Committee
2000 – 2005: Faculty Senate - Senator
2001 – 2005: Chair, University Affairs Committee (Faculty Senate)
2003 – 2004: Graduate Council
2002 – 2003: Member - Homeland Security & Research Center Committee
1999 – 2001: Technology Goals Team Member

**Faculty Advisor for Student Groups**
2005 – Present: Alpha Eta Rho
2012 – Present: Southeastern Freethinkers Society
2022 – 2012: SOSU Young Democrats

**AWARDS AND HONORS**
SOSU Faculty Senate Award: Excellence in Teaching Award - 2012/2013
SOSU Faculty Senate Award: Excellence in Teaching Award - 2009/2010
SOSU Faculty Senate Award: Excellence in Teaching Award - 2004/2005
SOSU Faculty Senate Award: Excellence in Teaching Award - 2000/2001

**PROFESSIONAL ASSOCIATIONS & MEMBERSHIPS**
2012 - Present: American Association of University Professors
  2014 - 2015: State Conference President
  2015 - 2016: Chapter Vice President
2012 - Present: Association of Unmanned Vehicle Systems International
2004 - Present: Women in Aviation, International
1998 - Present: University Aviation Association
1987 - Present: Experimental Aircraft Association
1987 - Present: Association of Old Crows
1985 - Present: United States Naval Institute
1982 – Present: Aircraft Owners and Pilots Association

**EFFECTIVE TEACHING**

**Undergraduate Classes Taught**
AVIA 2113 Aviation Management
AVIA 3023 Air Traffic Control
AVIA 3113 Aviation Legal Problems
AVIA 3133 Aviation Administration
AVIA 3143 Aviation History
AVIA 3293 Aviation Transportation
AVIA 4643 Aviation Physiology
AVIA 4663 Contemporary Topics in Aviation
ORIE 1002 College Success – Aviation Section
**Graduate Classes Taught**
BIM 5793 Business Information Management

**Other Classes Taught**
Rocketry class and rocket flight demonstration taught during ASI Aviation Summer Camps

**PUBLICATIONS**

**Journal Articles & Presentations**


**Publications Outside of the Aviation Field**


**PROFESSIONAL LICENSES, CERTIFICATES AND RATINGS**

2014 – Present  
FAA Airman Certification Representative
FAA Private Pilot, Single Engine Land
FAA Ground Instructor, Basic
MILITARY SCHOOLS
1985 Instructor Navigator Upgrade Training, Tinker AFB, Oklahoma
1984 Undergraduate Navigator Training, Mather AFB, California
1983 Instructor Weapons Controller Upgrade Training, Tinker AFB, Oklahoma
1982 Automated Weapons Controller School, Tyndall AFB, Florida
1981 Manual Weapons Controller School, Tyndall AFB, Florida
1981 Water Survival Course, Homestead AFB, Florida

UNIVERSITY AND COMMUNITY SERVICE
2014 - 2015 AAUP State Conference President
2012 – 2014 Chapter Secretary, American Association of University Professors
2011 - 2013 Secretary, University Aviation Association
2003 - Present Faculty Friend
2003 - Present Freshman Convocation
2000 - 2010 Editor, Executive Summary, publication of the John Massey School of Business
2000 - Present Honors Day - Essay Grader
1999 - 2005 Durant Balloon Festival
1999 - Present Annual Aviation Alumni Awards Banquet
2000 – 2005 Faculty Senator

ADVISING AND ADMINISTRATIVE DUTIES
Advise all Aviation Management majors on the Durant campus.
Assist in advising Professional Pilot majors on the Durant campus.
Review and approve all Aviation Management majors for graduation
(Durant and Oklahoma City Community College, Rose State College and Tinker AFB)
Review & approve all Aerospace Administration & Logistics MS degree students for graduation
(Durant and Oklahoma City Community College, Rose State College and Tinker AFB)
Developed curriculum for new Aviation-specific Orientation (ORIE 1002) course.
Manage curriculum for the four Aviation Management degree programs:
   AM-1 Business Option
   AM-2 Maintenance Management Option
   AM-3 Safety Option
   AM-4 Security Option
Developed curriculum for new AM-5 Productions & Operations degree option
Manage curriculum for the Aerospace Administration & Logistics MS degree program
Coordinate hiring of all adjuncts for courses taught on the three OKC campuses

ORIGINAL PRINTED MATERIALS
2000 – Present: Created ASI Graduate Brochure
1999 – Present: Created ASI Undergraduate Brochure
1999 – 2013: Created ASI Advertisements for Plane & Pilot Magazine
1999: Developed Physiology booklet for AVIA 4643 Aviation Physiology course
2000: Developed Rocketry booklet for students in ASI Aviation Summer Camp
ORIGINAL ELECTRONIC MATERIALS
1998-2010: Developed and edit all common Aviation Sciences Institute web pages
2001-2003: Created several Macromedia Flash animation projects for ATC class
Angela N. Anderson  
640 Daniel Lee Dr.  ●  Choctaw, OK 73020  
angela.anderson15@gmail.com  
Cell: (405) 534-2187

EDUCATION

Ph.D. Organization and Management  
November 2007
Capella University, Minneapolis, MN
  ●  Dissertation topic: *Investigating the career barriers of women of color in the 21st century.*
  ●  Related courses: Leadership Theory; Diversity; Organizational Culture and Behavior

MS, Human Relations Management  
May 2001
University of Oklahoma, Norman, OK
  ●  Concentration: Human resource and management

BS, Resource Management  
July 1995
Troy State University, Troy, AL
  ●  Emphasis: Leadership and management

A.A.S. Materiel Management  
July 1983
Community College of the Air Force, Maxwell AFB, AL
  ●  Inventory Management and Logistics

TEACHING PHILOSOPHY

I thoroughly enjoy bringing my expertise in leadership into the educational environment to share my experiences and bring course work alive. I am highly experienced in employee development and training, human resources, and personnel development and training program management. My experience coupled with my interest and passion for developing others’ talents and helping them define their own goals is my primary motivation for working in education.

Throughout my career, I have been highly dedicated to the learning, training and advancement of others. In each of my positions, I have found ways to incorporate professional and adult learning and education into my work. I have years of experience developing programs to assess workforce capabilities and deficiencies, allowing development of individualized programs to enhance employee skills – and enjoy doing this for my students. My goal in the online classroom is to create a comfortable and interactive learning environment based on respect rather than fear of the subject matter. In order to achieve that, I must build strong rapport with my students so that material can be presented in an environment conducive to the learning process. Likewise, communication is an important key to an effective teaching and learning process in the academic setting.
TEACHING EXPERIENCE

College Level

Adjunct Faculty, Southeastern Oklahoma State University, Durant, OK 2016-Present

• AVIA 5233 Logistical Strategies in Aerospace Admin: This course is designed to introduce modern strategic logistics concepts utilized in Aviation & Aerospace Administration and covers the various applications of integrated Logistics in Dept. of Defense (DoD) and commercial aviation sectors. The scope covers Aviation & Aerospace operations in all phases of the logistical process. Contemporary topics such as workforce diversity lean manufacturing, logistics, and supply chain management programs are included in the curriculum.

• AVIA 5213 Aerospace Economics and Fiscal Control: This course reviews major areas of emphasis include the role of government, union and management relations, airline integration, centralized scheduling, flight and crew operations center structure, and crew management. The course will also examine the integration of all the areas of fiscal impact to include advertising, customer relations, maintenance coordination, compute code share, calculate air seat mile and the impact on the profit/loss.

Adjunct Faculty, University of the Rockies, Denver, CO 2012-Present

• Leadership and Management: This course reviews essential principles and current issues in leadership and management theory and practice. The concept is to explore the evolutionary progress of leadership and management theories and practices from the early industrial age to the present. Students learn to distinguish effective management and leadership practices for different organizations and operating environments. This course also examines systematic approaches to leadership in the context of organizational culture and interpersonal factors such as leadership ethics, organizational mission, individual motivation, leadership power, organizational strategy and team performance. Students have an opportunity to reflect on their own learning as they contemplate the work of growing people and organizations to achieve their highest potential.

• Introduction to Performance Management: This course focuses on improving performance from the individual level, to teams, and overall organizational performance. Students explore influences upon individuals' performance in organizations, with an emphasis on the strategic and tactical decisions required to deploy human resources effectively. This course also includes systematic themes, models, and theories for making decisions related to recruitment, selection, training,
development, placement and retention. Students also learn the basics of conducting job analysis and performance evaluation, as well as how to recommend solutions to organizational leaders in business terms. Topics include legal, ethical, and diversity issues related to employee selection, performance measurement and evaluation and progressive sanctions.

- **Additional Courses Taught:**
  - Advanced Seminar: Human Resources Business Strategy, Online
  - Principles of Project, Program, and Operations Management

**Adjunct Instructor, University of Phoenix, Oklahoma City, OK** 2008 to 2010

- **Organizational Development:** This course introduces students to many of the basic principles of human behavior that effective managers use when managing individuals and groups in organizations. These include theories relating to individual differences in abilities and attitudes, attribution, motivation, group dynamics, power and politics, leadership, conflict resolution, organizational culture, and organizational structure and design.

- **Management Theory and Practice:** This course is a study of management techniques and their application in order to improve understanding and managerial effectiveness. This course is intended to draw on essentially all of the student's previous preparation. Students will be asked to draw upon their knowledge from theoretical and practical concepts of management, statistics, economics, finance and marketing to determine the success of an organization

- **Additional Courses Taught:**
  - Business Management
  - Critical Thinking
  - Leadership (graduate level)

**FUTURE TEACHING INTERESTS**

- Global Marketing; Human Resource Management; Diversity; Ethics; Global Leadership practices; Supply Chain Management; women’s studies; Organizational Behavior and related courses

**PROFESSIONAL WORK EXPERIENCE**

**UNITED STATES AIR FORCE**

**Jul 14- Present: Chief, KC-46 New Systems Acquisition:** USAF, Air Force Sustainment Center (AFSC), 448th Supply Chain Management Wing, Tinker AFB, OK.

- Focal point and primary supply chain integrator for implementation and execution of new workload, partnering initiatives, agreements and repair development initiatives
- Supply Chain lead for activating new standup of the aircraft supply chain, provisioning, budgeting to ensure the accuracy and procurement of initial spares
• Oversee and manage the development of new Weapon System Sustainment Support packages and recurring Business Case Analysis (BCA) supporting organic sustainment options
• Subject Matter Expert for all product support matters regarding cost, schedule, performance, and supportability for sustainment
• Manage, collaborate, and provide input to stakeholders on timely and accurate reporting of supply chain related issues; engage with the Prime Contractor on deliverables to include provisioning and sustaining engineering
• Apply expert knowledge in identifying and analyzing common and peculiar aircraft parts and establishing initial requirements determination for fielding and organic depot repair stand up

Jul 12-Jul 14: Director, 424 SCMS StructuresSquadron: USAF, Air Force Sustainment Center (AFSC), 448th Supply Chain Management Wing, Tinker Air Force Base, OK.

• Managed 140 multi-disciplined staff of military, civilian, and/or contractors assigned to a program of national scope, interest, and significance of a major segment of a critical agency-wide program as well as participating organizations
• Operated a $3.2B annual requirements budget for 10K commodity items ~ $5.1B and 6K support equipment items worth $1B
• Initiated work statements for maintenance, repair and overhaul of supply chain end items
• Planned, directed, integrated, and executed all aspects of programs within cost, schedule, performance and supportability
• Led Process improvement event to reduce flow days by 60%; guided team in decreasing critical mission hours by 67%
• Developed goals and objectives that integrate organization and acquisition management objectives
• Established, revised, or reviewed policies, procedures, mission objectives, and organization design as necessary to eliminate work problems or barriers

Apr 12-Jul 12: Deputy Director of Staff: USAF, Air Force Sustainment Center (AFSC) Tinker AFB, OK

• Daily management and direction for integrated administrative, technical and management support to the Commander; advise on administrative and operational policies, programs and control techniques that involve total Center operations
• Developed and executed project plans, gaining leadership confidence resulting in increased autonomy for employees; addressed internal personality conflicts overcoming communication issues and maximized benefit of diversity in experiences
• Ensured compliance while transmitting the commander’s decisions, directions and policies to staff agencies and sub-units; establish metric and analysis systems for units to assess efficiency, effectiveness, and compliance with regulatory procedures
• Provided management and oversight of the Commander's Protocol, Commander's Action Group and Support Staffs

• Conducted, analyzed and prepared presentations for the Total Force Cost per Flying Hour Program, Working Capital Fund for Logistics Operations to includes manpower authorizations, facilities, and associated costs; prepared strategies for planning
• Consolidated Program Element Codes for logistics sustainment and operations, to include Supply depot operations, inventory control, and materiel management related requirements computations, commodity management, standardization, cataloging, systems and procurement
• Executed all certified funding documents; utilize and manage multiple financial systems, provide historical data/documents, and brief the status of funds based on monthly obligations and expenditures to the Commander and Division Directors
• Ensured senior level visibility of potential issues that significantly affect budgetary policies and provide expert analysis of actions that involve decisions, policy changes, and guidance affecting logistic plans, programs, budget and execution


• Planned, programmed, and executed organizational requirements; Identified shortfalls, secured additional dollars for new programs
• Technical advisor for managing the Program Objective Memorandum, budget estimates, reclamas, appeals, policies, and procedures, format content, and documentation
• Utilized and managed multiple financial systems for execution of all certified funding documents and provide historical data/documents and status of funds update on monthly obligations and expenditures; worked closely with the finance offices
• Provided guidance for Unfunded Requirements; consolidated inputs for review by the divisions prior to sending to next level; Provided monthly Funds briefing to the Director and Division chiefs on obligation and commitment status; created burn-down

Jun 09- Dec 10: Chief, KC-135 PDM Production Support: USAF, Aircraft Sustainment Directorate, KC-135 Tanker Division, Oklahoma City Air Logistics Center, Tinker Air Force Base, OK.

• Planned, engaged, and developed Programmed Depot Maintenance (PDM) performance goals and objectives; integrated multiple logistics processes to include oversight and execution of PDM and organic repairs for 419 aircraft
• Supervised 18 employees; provided administrative oversight, promote team building, provide feedback, accomplish performance plans and appraisals.
• Resolved complex workload problems and policy changes – informed commander of impacts
• Supported business requirement plans utilizing direct site funding for contract modifications, Depot Purchase Equipment and Government Furnished Material to reduce work stoppages
• Performed key role in developing a business case analysis for multiple projects; Developed cost and metric data report; supported a cross-depot look at future workload and evaluated options for organic infrastructure upgrades
• Researched, interpreted, and analyzed trends using historical data to identify growth or decrease in demand for future spares requirements.
**Oct 08-Jun 09: Chief, Financial Execution Flight:** USAF, 848th Supply Chain Management Group, Tinker AFB, OK.

- Monitored and tracked $43M of overhead and engineering funds. Analyze trends using historical data identifying areas of growth/reduction to forecast future spares requirements. Communicate execution targets, establish/disseminate policy and track $2.9B in cost and work authority for obligated/committed spares requirements prior to end-of-year closeout
- Established and disseminated policy and tracked approximately $3.0B in cost and work authority for all obligated/committed buy and repair requirements prior to end of year closeout
- Performed commitment accounting and fund certification for the Government Purchase Card Program, Fund Cite Authorizations, and other funding authorizations. Obligates and authenticates TDY and performs follow-up as required
- Briefed senior leaders on financial targets and execution strategies; research, interprets, and analyzes trends using historical data to identify growth or decrease in demand for future spares
- Supervised and provided guidance to 33 personnel to include two section chiefs; translated organizational goals into concrete objectives, plans, priorities, and assignments. Established recognition programs for morale building initiatives
- Championed lean process initiative for the 1000-Day Plan Work stream Process Improvement

**May 05-Oct 08: Chief, requirements/Budget Control Flight:** USAF, 448 Supply Chain Management Wing, Tinker AFB, OK

- Completed performance appraisals, train, mentor, and provide management oversight to 66 employees and 3 section chiefs
- Actively participated in multiple process improvement and lean events to improve and enhance processes
- Ensured required wholesale training was made available for inventory managers and equipment specialist to include, support equipment and nuclear or nuclear related computer based training classes; achieved 100% attendance for all required personnel
- Performed management analysis functions; established metrics and conducted 100% quality reviews on approximately 1,200 computations during quarterly file maintenance; identified gaps and deficiencies and worked with IMs for correction
- Established timelines and monitored progress on over 7,000 purchase request initiations each year; ensured clean closeout
- Provided continuous guidance to personnel to ensure accurate requirements for the D200A computations were corrected prior to budget closeout; Briefed squadron and group commanders on progression and budget submissions prior to sending to AFMC
- Planned, directed, and supervised group operations to dispose of $80M of excess material within USAF policy. Effectively prepared annual $3.1billion budget data for analysis and complied narrative data to support and defend the budget

**PROFESSIONAL DEVELOPMENT & TRAINING**

2012 - University of the Rockies Blackboard Training/ and Turnitin Training
2008 - University of Phoenix: Blackboard Training
REFERENCES

Roderick French, Ph.D.
Adjunct Faculty
(703) 307-1220
rcfrench@aol.com

Stephen Lee, (ABD)
Adjunct Faculty
(210) 385-5082
stephenmlee2005@yahoo.com

Patricia Welch
Adjunct Faculty
(405) 550-2122
Pwelch34893@att.net
CURRICULUM VITA

DAVID WILLIAM BARNA
Adjunct Professor, Aviation Alliance
72 MSS/DPEE, Bldg. 201SE
7751 1st Street, Suite 105
Tinker AFB, OK 73145-9148
405.739.2574
Fax: 405.733.2514
E-mail Address: davebarna001@cox.net

EDUCATION:

1990 Bachelor of Science Military History United States Air Force Academy
1998 Master’s Degree Logistics Management Georgia College & St. University

ACADEMIC AND RELATED NON-ACADEMIC EXPERIENCE:

AVIA 5233  Summer 2016
            Spring 2016
            Summer 2015
            Fall 2014
            Summer 2013

Jul 2001 - Jul 2004: Chief, Fuels Management Branch & Chief,
Distribution Policy Branch, Headquarters Pacific
Air Forces, Hickam AFB, Hawaii.

PROFESSIONAL INTERESTS:

- Supply Chain Management
- Leadership

PROFESSIONAL MEMBERSHIPS:

National Defense Transportation Association
EDUCATION:

2004  Associates in Arts Liberal Studies-Aviation Emphasis  
      Rose State College

2006  Bachelor of Science Aviation Management-Safety  
      Southeastern Oklahoma State University

2008  Master of Science Aerospace Administration & Logistics  
      Southeastern Oklahoma State University

2011  Occupational Safety & Health Administration (OSHA) General Industry (501) Trainer

2012  IS-00100.b Introduction in Incident Command System, Emergency Management Institute (EMI)

2013  Smith System of Defensive Driving Trainer

      IS-00700.a National Incident Management Systems (NIMS), Emergency Management Institute (EMI)

      IS-00701.a Multiagency Coordination Systems (MACS), Emergency Management Institute (EMI)

      IS-00200.b ISC for Single Resources & Initial Action Incidents, Emergency Management Institute (EMI)

      Associate in Risk Management (ARM) 55 – Risk Assessment & Treatment

2014  Integrated Emergency Management Course, Emergency Management Course (EMI)

2015  Occupational Safety & Health Administration (OSHA) General Industry (503) Trainer Update

2016  IS-00907 Active Shooter: What You Can Do
ACADEMIC AND RELATED NON-ACADEMIC EXPERIENCE:

2010-Present  Adjunct Professor for Southeastern Oklahoma State University

2016-Present  Training & Safety Specialist for the City of Oklahoma City

2009-2016  Safety & Training Officer for Central Oklahoma Transportation & Parking Authority (COTPA) dba EMBARK

2007-2009  Environmental Health & Safety Specialist for Environmental & Occupational Risk Management (EORM)

2001-2007  Aircraft Mechanic for Oklahoma Air National Guard

PROFESSIONAL INTERESTS:

Counterterrorism
Department of Transportation Safety
Occupational Safety
Vehicular Accident Investigation

SELECTED COMMITTEES AND SPECIAL ASSIGNMENTS:

2011-Present  American Public Transportation Association Risk Management Committee

2011-Present  American Public Transportation Association Safety Committee

AWARDS AND HONORS:

2012  Safety & Training Award from Oklahoma Transit Association (OTA)

PROFESSIONAL MEMBERSHIPS:

American Society of Safety Engineers
Oklahoma Safety Council
Toastmasters International

GRANTS and CONTRACTS:

Integrated Genetec Access Control & CCTV Solution
$255,998, Sep 4, 2014 - Present
Union Station Asbestos Abatement Contract
$87,505, Mar 25, 2013 – Apr 22, 2013

Q’Pod Acquisition / ADA Vehicle Equipment Improvements Grant

PROFESSIONAL SERVICE:

Agency Representative (AREP) for City of Oklahoma City Multiagency Coordination Center (MACC)
CURRICULUM VITA

Darrell A. Davis  
Adjunct Professor  
OKC Aviation/Aerospace Education Alliance  
Tinker Education Center  
Building 201SE Tinker Air Force Base OK  
Southeastern Oklahoma State University  
405.642.7913  
darrell.davis.2@us.af.mil

EDUCATION:

2008  Professional Military Education  Maxwell AFB, AL  
Air War College (Seminar)

2000  Defense System Management College  Fort Belvoir, VA  
Advanced Program Management Course

1995  Webster University  St Louis, MO  
Master of Arts in Management

1983  Morehouse College  Atlanta, GA  
Business Administration & Management

ACADEMIC AND RELATED NON-ACADEMIC EXPERIENCE:

2007 – Present  Adjunct Prof, AVIA 5533, Communication in Aerospace Mgt  
This course focuses on the fundamental skills of business communications used in complex, formal organizations. The various functions, aspects and characteristics of business communications will be reviewed in the context of today’s organizational environment and students will be asked to identify the skills that must be applied to planning a communications strategy that solves the day to day challenges in a company or organization.

Adjunct Prof, AVIA 5303 Mgt & Admin of Aerospace Contracts. This course presents a comprehensive analysis of the procurement process and the various contractual relationships in the aerospace industry. This course also provides a detailed review of the laws and right governing the contractual process from design through product delivery and material maturity.

February 2012 to Present, Chief Installation Contracting Division. Manage over 160 civilian and military contracting personnel. Responsible for over $2 Billion dollars in annual appropriations. Supporting worldwide missions and
warfighter. Providing solutions to support the Complex diverse workload. Lead office to create enterprise contracts that support Tinker, Robins and Hill Air Force Bases. Implement operational strategies to support Tinker AFB various workloads.

February 2008 to 2012, Chief Human Resources and Enterprise Acquisition Divisions. Manage 35 employees in the Resource Management Division facilitating hiring, training, and rotation of the contracting personnel supporting 327 Aircraft Sustainment Wing, 72 Air Base Wing, and AF Global Logistics Center. Developed intern pre-placement training program relieving annual burden on receiving organization. Leading 56 employees in performing Enterprise Acquisition Division supporting transformation of aircraft and engine maintenance lines in the Tinker Aerospace Complex.

September 2005 to February 2008, Director, C/KC-135 Contracting Division. Contracting lead for 11 employees responsible to provide airframe and avionics sustainment.


October 2001 to November 2001, Chief C/KC-135 Contracting Section. Lead contracting organization with 11 employees with contract values greater than $1B with annual obligations of $200M. Instrumental in leading the KC-135 Turkish PDM Source Selection. Developed C/KC-135 contract transition plan to Tinker AFB.

April 1999 to September 2001, Chief Contractor Logistics Support (CLS) Section. Lead contracting organizations with 13 employees with contract values greater than $1B with annual obligations of $250M. Support Defense Acquisition Commander (DAC) programs CLS for DoD fleet of 6 commercial derivative aircraft. Implemented commercial contracting techniques to acquire CLS support resulting in obtaining greater competition while reducing program cost and reducing acquisition procurement times.

January 1999 to April 1999, Chief B-2 System Program Office Contracting Section. Lead organizational structure of 13 employees with annual contract awards greater than $500M. Responsible for executing contracting solutions in three phases of the ACAT-1, B-2 sustainment programs: Engineering and Manufacturing Development (EMD), Productions and Sustainment.

September 1996 to January 1999, B-2 Major Program Contracting Officer. Lead Procuring Contracting Officer (PCO) for the $225M B-2 Interim Contractor Support (ICS) Contract. Implemented strategy to negotiate up-front level of effort and teaming arrangements to streamline Option IV
Request for Proposal (RFP) issuance to contract award was reduced by 10 percent from normal lead-time of 180 days on this $40M requirement.

July 1990 to September 1996, Communication Major Program Contracting Officer. Lead PCO for $2B Red Telephone Switching System program. Facilitated cross cutting acquisition reform initiatives on this Air Force critical program. Proactive involvement by me resulted in significant reduction in proposal preparation cost, acquisition lead times and a overall 50% settlement reduction in Request for Equitable Adjustments were achieved. Lead PCO for Continental United States (CONUS) Air Force Base Communication Authorizations services. Actions led the Command in developing acquisition strategy to facilitate the deregulation of the communications industry in providing competitive service providers across the Air Force.

November 1988 to July 1990, B-1B Major Program Contracting Officer. Lead PCO for the B-1B Technical Support Contract (TSC), providing computer integration support to the System Program Manager during transition of workload to organic capability at Tinker AFB. Lead PCO for the B-1B TSC Source Selection.

October 1985 to November 1988, B-52 Major Program Contract Specialist. Spare Part Buyer for B-1B and B-52 weapon systems as they migrated out of provisioning. Lead specialist over special project to close-out over aged B-52 major program contracts.


**PROFESSIONAL INTERESTS:**

Increasing Effective Communication in an Digital Society
SELECTED COMMITTEES AND SPECIAL ASSIGNMENTS:

Community

2015 – Present  Board Member University of Central Oklahoma
                 Master of Public Administration

2011 – Present  Edmond City Councilman

1998 – 2011  Chairperson, Edmond Park and Recreation
             Advisory Board

2006-2010  Board Vice-President, Oklahoma Youth Symphony
2004-2010  Board Member, Oklahoma Youth Symphony

1999  Leadership Edmond - Graduate Class XIV

1997 – 1998  Arts and Humanities Council Board Member

1997  Edmond Plan III Committee Member

1996 – 1997  Tomorrows Edmond Steering and Implementation
             Committee
             Co-Chair: Community Design, Housing,
             Neighborhood and Land Use

1996  Edmond All Sport Inc Advisory Board Member

1996  Edmond Citizen Improvement Process
             Chairman: Transportation Committee

1988 – 1999  Ambassadors Youth Choir – Parent Council,

AWARDS AND HONORS:

2002  Air Force Civilian Achievement Award,

1998  Nominee – Secretary of the AF Professionalism in Contracting,
             Non-Supervisory

1998  Notable Achievement Award

1997  Certificate of Commendation

1993  Outstanding Civilian in Contracting, Communications Systems
             Center
PROFESSIONAL MEMBERSHIPS:
National Contract Management Association
Oklahoma Municipal League
Toastmaster International

EFFECTIVE TEACHING:

Courses Taught
SOSU AVIA 5533  Communication in Aerospace Management
SOSU AVIA 5303  Management & Administration of Aerospace Contracts

PUBLICATIONS OR ARTISTIC ACHIEVEMENTS:
N/A

OTHER PROFESSIONAL ACTIVITIES:
N/A

GRANTS and CONTRACTS:
N/A

PROFESSIONAL SERVICE:
N/A
Kevin Ray Elmore  
Adjunct Instructor Aviation Sciences Institute  
Southeastern Oklahoma State University  
7751 1st Street, Suite 105  
Tinker AFB, OK 73145-9148  
405-625-6560  
kelmore@se.edu

EDUCATION:

2012  Master of Science  Aerospace Administration and Logistics  Southeastern Oklahoma State University

2006  Bachelor of Science  Professional Aeronautics  Embry-Riddle Aeronautical University

ACADEMIC AND RELATED NON-ACADEMIC EXPERIENCE:

2012-Present  Adjunct Professor/ Southeastern Oklahoma State University

Qualified to teach:
- Aviation Management
- Air Transportation
- Aviation Administration
- Management & Organization Behavior
- Aviation History
- Human Resource Management
- Aviation Safety
- Fund. of Safety Eng. & Human Factors

2009-Present  B-2 Bomber Program Manager/ U.S. Air Force

Within my 29 years of aviation I have held many positions. From lead technician, to team leader, to instructor. I was tasked to write a lesson plan for the Australian Air Force maintenance technicians. This lesson plan covered 8 different disciplines within the Air Force maintenance community. I have investigated aircraft mishaps and inspected a variety of aircraft for safety and compliance of directives.

PROFESSIONAL INTERESTS:

Aviation safety  
Management  
Human Factors
JOHN C GATLIN, Esq  
johngatlin@cox.net  
5013 Deerhurst Drive, Norman Oklahoma  
405.641.3359

EDUCATION:

1968  B.A. Political Science  
University Oklahoma

1969  M.A. Political Science/Public Administration  
University of Oklahoma

1975(Dec) Juris Doctorate  
University of Oklahoma College of Law

2004  Air Command and Staff School (Seminar)  
Air University, Maxwell AFB

1976-Current (Minimum Requirement: 12hrs. Includes 1hr Ethics): In-Residence Seminars and Continuing Legal Education focusing on: Federal Acquisition Law, Fiscal Law, Environmental Law, Ethics (Joint Ethics Regulations), Contractor/Government Relationships, Protests of Award, Legal Assistance, Civil/Criminal Fraud, Disputes Process( Litigation), and Alternative Disputes Resolution Processes. Sponsorships: Air University, Defense Acquisition University, Office of the General Counsel, Department of the Air Force, Oklahoma Bar Association.

NON-ACADEMIC EXPERIENCE: 1989-2016

2012-Current: Licensed Attorney at Law (Oklahoma); Federal contract law consultant with Logistics Specialist Inc., Utah-based business consulting company; Expert Witness for Contractor Defendant in Qui Tam litigation, Federal District Court for the Western District of Oklahoma. Provided advice and counsel to trial counsel regarding federal government contracts, examination of Complainant's pleadings, expert reports and contracts in question, drafted Expert Report in support of Defendant Contractor, Rebuttal and surRebuttal reports, provided Deposition (approx. 1 Year engagement). Private representation in other civil matters, Cleveland County District Court.

2009-2012: Chief (GS-14), Acquisition Services Law Services Division, Office of the Staff Judge Advocate, Oklahoma City Air Logistics Center, Tinker AFB OK. Served as the Chief, Acquisition Law Services Division, Office of the Staff Judge Advocate, Oklahoma City Air Logistics Center, Tinker AFB, OK. Supervised 5-6 Acquisition
Attorneys (Military and Civilian) and one paralegal. Served as the Center’s Senior Counsel for Acquisition, Ethics, Fraud, and Fiscal law issues. Advised/directed Program Offices and Contracting Officers, and assigned counsel, regarding Requests for Equitable Adjustment, Protests of Award, Alternative Dispute Resolution processes, fiscal law, ethics, and strategic partnering. Division responsible for the legal health of approximately $6B in contracts relating to the maintenance, modification, and repair of the weapons systems supported by the OC-ALC.

2000-2009. Special Matter Expert (GS-14), Attorney-Advisor (Contracts), Acquisition Law Services Division, Office of the Staff Judge Advocate, Oklahoma City Air Logistics Center, Tinker AFB, OK.  Acquisition Law counsel in support of all of the major Directorates at the Center including Propulsion, Contractor Logistics Support, Aircraft and engine Maintenance, all major program offices, Plans and Programs, and Engineering. Served as the Center’s principal counsel for Business Development and Industry Partnering Agreements pursuant to the authority of 10 USC 2474. Assist AF Trial Counsel in preparation for (Requests for Equitable Adjustment) claims against the government filed before the ASBCA and Court of Federal Claims. Represented Agency with AFLOA Commercial Litigation counsel before the Government Accountability Office in hearings relating to Protests of Award; co-counsel in ADR proceedings. Assigned as Program Counsel in major Source Selections relating to all weapons systems supported by the OC-ALC. Provided legal advice to contracting officers and Program officers/Directors on all aspects of federal acquisition law and policy. Reviewed contract and other award documents for legal sufficiency (Over $1M) on a daily basis.

1989-2000  Attorney-Advisor (Contracts), GS-13, Acquisition Law Services Division, Office of the Staff Judge Advocate, Oklahoma City Air Logistics Center, Tinker AFB OK. Work identical in all respects to that outlined above, 2000-2009. Also included serving as Program Counsel for the Center's proposal to the Air Force to perform the work being accomplished by the BRAC'd San Antonio Air Logistics Center. Center won competition with its private partner, $12.5B award. Served as Co-Counsel with Trial Counsel at WPAFB, Dayton, Ohio, in a filed action before the Armed Service Board of Contract Appeals.

1987-1989  Private Practice, General Practice, emphasis upon Commercial/Business law

1981-1987  General Counsel, Vice President, Continental Savings & Loan Association, Oklahoma City, Oklahoma
1976-1981  General Counsel, Assistant Vice President: First Life Assurance Company, Oklahoma City Oklahoma

1969-1973  Active Duty, USAF: Contracting Officer, Tyndall AFB, Fla.; Procurement Staff Officer, Hamilton AFB, CA.


RELATED ACADEMIC EXPERIENCE: 1984-2016

1984-2004  Adjunct Instructor, Assistant (Adjunct) Professor, Government Contract Law, Air Force Institute of Technology, Defense Acquisition University, Wright Patterson AFB, OH.

1989-2013  Guest Lecturer, various professional groups and organizations within the Department of the Air Force, including but not limited to: Air Force Office of Special Investigation (OSI) School, National Property Managers’ Association, National Contract Management Association, Tinker Management Association, Lieutenant Governor’s Small Business Development Seminar, Major Weapons Systems Source Selection Processes, Issues, and Problems. Countless seminars on various Federal Acquisition issues to all major weapons systems Directorates and Senior Leadership at the Oklahoma City Air Logistics Center, Tinker AFB, OK, 1989-2013

2004- 2010  Instructor (Distance Learning) Air Force Systems and Logistics Course, Air Force Judge Advocate General’s School, Maxwell AFB, AL


2004-2012  Instructor, Oklahoma State University, Oklahoma City Campus, Contract Law with UCC Applications.
2006-Current  Instructor, Aviation and Business Law courses (Graduate and Undergraduate), Aviation/Aerospace Alliance, Southeastern Oklahoma State University, Durant Oklahoma-Tinker AFB Campus. Courses currently Teaching: Fundamentals of Aviation Law (Undergrad); The Legal Environment of Business (Undergrad); Legal and Ethical Issues in Aerospace (Graduate)

PROFESSIONAL INTERESTS:


AWARDS AND HONORS:

1969-1996 USAF Meritorious Service Medal-5 Oak Leaf Clusters; Commendation medal; Achievement Medal

1985 AFLC Harmon Award (Outstanding Reservist) Nominee

1996 AFMC Outstanding Attorney of the Year (Non-Supervisory)

1996 – 2004 Four Certificates of Commendation, AF Deputy Assistant Secretary for Acquisition (Four separate events, different Weapons Systems Programs-legal support)

1998 Department of the Air Force Exemplary Civilian Service Award

2008 AFMC Outstanding Attorney of the Year (Non-Supervisory)

2008 Air Force General Counsel’s Procurement Law Award for 2008

1989-2012 - 17 Letters of Commendation/Appreciation from, Ass't Sec of the Air Force for Acquisition and Logistics; AFMC/JA; USAF/JA; Center Commanders, Program Directors; Air University, Defense Acquisition University (formally Air Force Institute of Technology)

PROFESSIONAL MEMBERSHIPS:

Oklahoma Bar Association
ELIZABETH HALL-FLAGGERT  
Adjunct Professor  
Aviation Education Alliance Southeastern Oklahoma State University  
Tinker (Work) 405-582-5585  
(Cell) 405-206-1775  
busvelizabeth33@hotmail.com  
elizabeth.hall-flaggert@tinker.af.mil

EDUCATION:

March 2011   Master of Science   Aerospace Administration & Logistics  
Southeastern Oklahoma State University  
(12 hours in Master in Public Administration at University of Oklahoma)

May 2007   Bachelors of Art   Human Relations   Minors in Zoology & Chemistry  
University of Oklahoma

ACADEMIC AND RELATED NON-ACADEMIC EXPERIENCE:

September 2011-Present   Adjunct Professor, Southeastern Oklahoma State University

CLASSES TAUGHT
Grad course: Aerospace Finance.  
Undergrad course: Contemporary Topics in Aviation  
Undergrad course: Aviation Administration  
Undergrad course: Human Resource Management  
Undergrad course: Management and Organizational Behavior

Mar 2009-Present   Department of Defense-United States Air Force  
Dec 2014-Present: F119 Program Manager  
Sep 2014-Dec 2014: F119 Logistics Manager  
Oct 2010-Jun 2012: Inventory Manager  
Mar 2009-Oct 2010: Palace Acquire Program (Financial Analyst, Staffing  
Program Manager, Logistics Manager, Inventory Manager, Equipment Specialist)

2008-2009   University of Oklahoma, Program Manager
2007-2008   Omni Packaging Corp., Inventory Manager

PROFESSIONAL INTERESTS:

Human Resource Management  
Management & Organizational Behavior
Contemporary Topics in Aerospace
Finance
Human Relations
Aerospace Administration

SELECTED COMMITTEES AND SPECIAL ASSIGNMENTS:

2015  AFTOC Conference Representative
2014  Propulsion Program Managers
2010-2011  Supply Chain Management Twisters Committee
2009  Tinker AFB Junior Force Council
2009  Tinker Management Association

AWARDS AND HONORS:

2015  Employee of the quarter and performance award
2014  Employee of the month and performance award
2014  F119 Group Time off award
2009-2010  Supply Chain Management Performance Award
2009-2013  Supply Chain Management & Maintenance Time-off Award for Superior Performance
2012  Cause for Applause Award for Outstanding Management of the SORA Process

PROFESSIONAL MEMBERSHIPS:

Delta Delta Delta Sorority
Palace Acquire Mentors List
F119 Engine Program Managers
Logistics Officers Association (LOA)

EFFECTIVE TEACHING:

Facilitate student involvement and interaction through examples and questions to get students to think about their own experiences and potential experiences, which has led to student recommendation.

Actively promote program to Tinker and FAA employees.

PUBLICATIONS OR ARTISTIC ACHIEVEMENTS:

None

OTHER PROFESSIONAL ACTIVITIES:

Resource Advisor
GRANTS and CONTRACTS:

F119 SPaRE 2 contract ($6.7B)

PROFESSIONAL SERVICE:

Guest speaker for Palace Acquire Internship Brown Bag Lunches at Tinker AFB.
CURRICULUM VITA

Susan A. Humphrey
Adjunct Professor Aviation Science
Adjunct Professor
7751 1st Street, Suite 105
Tinker AFB, OK 73145-9148
Office: 405.739.2574
Fax: 405.733.2514
Cell (405) 361-6996
shumphrey@sosu.edu ; susan.humphrey@us.af.mil ; s.amelia.humphrey@gmail.com

EDUCATION:
2005 MBA  Oklahoma City University
2003 BA   Information Systems and Operations Management, University of Central Oklahoma
1997 BS   Chemistry American Chemical Society Certificate University of Central Oklahoma

ACADEMIC AND RELATED NON-ACADEMIC EXPERIENCE:
2010 to Present:  Lead Program Manager; Air Force Discrepant Materiel Reporting office (AFDMPO)
2011 to Present  Adjunct Professor, SEOSU, Tinker
2009 - 2010  Executive to Designated Acquisition Official (DAO) for Tinker AFB, supporting Command on Acquisition process
2008 -2009  Lead/Electronic Counter Measures Improvement (ECMI) PM/Strategic Radar Replacement (SR2)
2005 - 2008  Program Manager for Evolutionary Data Link (EDL) communication system for B-52 aircraft
2003 - 2005  Communication Navigation Assistant Program Manager on $800M acquisition program for B-52
Intern: Mentor Mark Lucash: Worked budgeting and design requirement documentation for new fuel component test facility Military Construction project (MILCON). Analyzed data for lean cell design study for MILCON. Developed Ribbon cutting Ceremony policy and proven effective when put into use at the new Air Accessories Overhaul & Test Facility. During monthly meetings I presented reports of safety statics, projections and new
requirement information to the complete engineering staff. Reviewed and evaluated Performance Work Statements (PWS) for contract development of new engineering workload requirement. Managed financial reports for Division projected material budget.

**Intern: Mentor Deborah Talley:** Worked Distinguished Visitors visits at Tinker. Worked security and assisted with Vice President Cheney visit and with Senator Inholfe visit to Tinker AF. I worked on Commanders Staff for Pratt and Whitney Ribbon cutting ceremony.

**Intern: Mentor Sharon Gardner:** Supported PM on Navigational trainer T-43. Source Selection for contractor and I put developed contracting documents to include Justification and Approval (J&A) for a $14M contract. Coordinated Program Management Review (PMR).

**Intern: Mentor Denise Hay:** Worked Acquisition and Contracting documents on Portable Radar Unit. I gathered and analyzed raw data to assemble documentation and detailed analysis for radar unit engineering determination.

**Intern B-52 Mentor Dean Morris,** Worked Acquisition Document. Participated in contract Performance Rating process. Assisted PM to support two fully funded modification programs.

1999 - 2001  
Accurate Metrology Laboratory Marketing and Sales Dir

1997 – 1999  
Business Owner, Edmond Oklahoma

1996 – 1998  
Student/Chemistry Lab Assistant, UCO

1997 – 1998  
Accounting office Assistant, Terry Dallas CPA

1995 – 1996  
Bartender

1985 – 1995  
Safeway/Homeland Stores, Office Manager in Supply Chain

**PROFESSIONAL INTERESTS:**

**Air Force Certifications:**
Level III Program Management  
Level III Logistics  
Level III System Engineering (SPRDE)

**Courses Taught**

AVIA 5233 Logistics  
AVIA 5543 Systems Engineering  
AVIA 5343 Implementing Logistics and Acquisition Program Management  
AVIA 5223 Hazard Control and Analysis
SFTY 4183 Hazardous Material and Waste Management
LEAN 5980 Capstone
MGMT Production and Operations Management (ERAU)
MGMT Transportation / Logistics (ERAU)
CURRICULUM VITA

George Corbin Jacox
Co-Director, Aviation Sciences Institute
Assistant Professor, Aviation Sciences Institute, Aviation Flight
Chair, ASI Department of Aviation Flight and Asst. Chief Flight Instructor
Southeastern Oklahoma State University
1405 N. 4th Avenue, PMB 4136
Durant, Oklahoma 74701
(580) 745-3245 (Voice)
(580) 745-3268 (Fax)
gjacox@se.edu

EDUCATION:

1999  Master of Business Administration
Southeastern Oklahoma State University

1990  Bachelor of Science - Aviation
Southeastern Oklahoma State University

ACADEMIC and RELATED NON-ACADEMIC EXPERIENCE:

July 15 – Present  Co-Director Aviation Science Institute
Assistant Professor/Chair, Aviation Flight Department, Aviation Sciences Institute.

August 01 – July 15  Assistant Professor/Chair, Aviation Flight Department, Aviation Sciences Institute

July 92 – August 01  Chief Pilot/Assistant Director Operations

Sep. 91 - July 92  Assistant Chief Flight Instructor (S.O.S.U.)

Dec. 90 - Sept. 91  Instructor, Lead Flight Instructor (S.O.S.U.)
Sept. 89 - Dec. 90  Flight Instructor (S.O.S.U.)
Aug. 86 - June 89  Head Lineman (S.O.S.U.)

PROFESSIONAL INTERESTS:

- Flight Instruction from Private to Flight Instructors
- Teaching in the Aviation environment

SELECTED COMMITTEES AND SPECIAL ASSIGNMENTS:

- Chaired Committee for Aviation Finical Assistant 2014
- Chaired Committee for Student Activities coordinator 2014
- Athletic aid appeals committee member 2014
- Alternate member of Faculty Appellate Committee
- John Massey School of Business Curriculum Committee (2008-2014)
- John Massey School of Business Mission Committee (2010-11)
- John Massey School of Business Faculty Senator (2009-2014)
- Campus Sustainability Committee (2010-2012)
- University Affairs Committee (2009-2011)
- Chair of Human Resources Hearing Committee (99-2000)
- Academic Council (2002-2014)
- Chair of Aviation Chair Search Committee (97)
- School of Business Committee member (95-2008)
- Computer Technology Committee (2001-2003)
- North Central Self Study Committee (2002 - 2003)
Aviation Search Committee:

Chief Flight Instructor (96)
Chief of Maintenance (96)

AWARDS AND HONORS:

2014 Faculty Senate Recognition Award
2011 Years of Service Award, 20 years
2011 The Spirit of Southeastern Award

PROFESSIONAL MEMBERSHIPS:

Member of the University Aviation Association
Member of National Association of Flight Instructors
Member of Aircraft Owners and Pilots Association
Member of Future Aviation Professionals of America (89-91)
Member of Alpha Eta Rho International Aviation Fraternity (85-9)

EFFECTIVE TEACHING:

Teaching:

Commercial Ground, Fundamentals of Instruction,
Flight Instructor Ground, All Flight courses.

Revised syllabi for Aviation classes

Conduct Stage checks with flight students
14 CFR part 141 Assistant Chief Flight Instructor privileges
    Check Flight and Examination

Academic Advisor and Counselor

Manages Departmental Flight Schedule, Dispatching, Invoicing, Fuel, Budgets, and Employees (faculty and students)

Supports SOSU Aircraft Maintenance Personal

Amended All Flight Training curriculum so that it surpasses all FAA regulations and Standards

**PUBLICATIONS or ARTISTIC ACHIEVEMENTS:**

2014  Panel Discussion member – Transformational Change in Flight School Applicants, Oklahoma Aviation Education Symposium, OSU


2010  Conway, Dr. David, Alluisi, Dr. Stanley J., Hetsel, Dr. Gene, Thomas, Mr. Kyle, Jacox, Mr. George, A descriptive and comprehensive study of UAA affiliated collegiate flight programs. Oklahoma Aviation Education Symposium, Oklahoma State University.

2007  Jacox, G.C., Thomas, Kyle, Conway, Dr David, The Migration of University Aviation Professional Pilot Students into Non-flying degree Options. Oklahoma Aviation Education Symposium, Oklahoma State University

2005  Jacox, G.C., Implementing 40 CFR Part 1552 Transportation Security Administration Requirements into a University Flight Training Program. Oklahoma Aviation Education Symposium, Oklahoma State University
2004  Jacox, G.C., *Cost Analysis of Integrating Six New 2002 Cessna 172R Aircraft into an Existing University Based Flight Training Program*. Oklahoma Aviation Education Symposium, Oklahoma State University

2003  Oklahoma Aviation Education Symposium, Oklahoma State University

Chaired two panel discussion on the following:

1. Internet Flight Scheduling
   - Flight Schedule vs. Class Schedule
   - Weekday vs. Weekend
   - No Show/Cancellations

2. Facilitating the Development of Situational Awareness Through the Systematic Integration of Simulation Throughout a Professional Pilot Curriculum, Power Point presentation by Dr. Stan Alluisi

2002  Oklahoma Aviation Education Symposium, Oklahoma State University

Chaired a panel discussion on the following subjects:

Operational Issues:

Scheduling, Student Workers, Flight Accounts, Aircraft Insurance.


**OTHER PROFESSIONAL ACTIVITIES:**

2011  Vanderbilt University Peabody College. Peabody Professional Institute for Higher Education Management, Summer Fellow
2011 Harvard University Professional Development program. Dr. James Honan, Senior Lecturer on Education at the Harvard Graduate School of Education

2010 University Aviation Association, Successful completion of ‘Developing Effective Instruction Using Gagne’s Nine Events of Instruction’.

2009 Garmin Approved G1000 Line Maintenance Course for Cessna Nav III Aircraft

2008 Technically Advanced Aircraft Transition course (G-1000) Cessna Aircraft Company Independence Kansas

2006 Training on Modular Flight Deck Flight Simulator Precision Flight Controls, Inc. 10555 Norden Avenue, Mather, CA 95655

1999 Master of Business Administration

1989-13 Renewal of Flight Instructor Certificates

1995 Received Airline Transport Pilot Certificate

1995 Designated Examiner School

1995 Training on 2001XG Scheduling program

1992 TCAS and Runway Incursions Seminar

1991 Crew Resource Management Seminar

University Aviation Association meeting (Fall 2009, 2010)

Aviation Accreditation Board International (Fall 2008, Summer 2010, Spring and Summer 2011, Fall 2012)


National Business Aircraft Association Convention (90, 94, 95, 01)

Aviation Information System Users Conference (95,96,98)

Council on Aviation Accreditation (97)
Future Aviation Professionals of America Convention (91, 94)
National Congress on Aviation and Space Education (93, 94)
Airway Science National Symposium (92)
Canadian Business Aircraft Association Convention (92)
Airway Science National Symposium (91)

**GRANTS and CONTRACTS:**

Oklahoma State Regents for Higher Education 2012, 2013 Summer Academies Grant, two year grant for a total of 50,000.00

**PROFESSIONAL SERVICE:**

**COMMUNITY SERVICE**

National Incident Management System, NIMSICS 100, 200, 300, 400 Training, 2012

Tom Bean High School Career Day Spring 2011

Oklahoma Area Flight Instructor Association Seminar,

Co-Hosted with Mr. Thomas

Teaching Airworthiness Requirements (2009)

Fundamentals of Instruction (2010)

The City of Durant, Airport Advisory Board (2009-2014)

Durant High School Band Booster (2007-2012)

Denison High School Career Day Fall 2007
Magnolia Festival:

Weather Briefer (97)

Event Site Director (98, 99)
Event Committee Member (2001-2003, 2005)

Durant Soccer Club Coach (02-03)

FAA CERTIFICATES, RATINGS and PRIVILEGES

Airline Transport Pilot - Multiengine land

Commercial Pilot - Airplane Single engine land Instrument

Flight Instructor - Airplane Single and Multiengine land

Instrument Airplane

FLIGHT TIME

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SERVICE TO SOUTHEASTERN

Southeastern Faculty Symposium 2012


Compiling the information for Aviation Sciences Institute Aviation Accreditation Board International Reaffirmation self-study. (2010-2012)

Completed the Emergency Management Institute, National Incident Management System, An Introduction (NIMS) IS-00700.a course.

Completed the Emergency Management Institute, Introduction to the Incident Command System ICS-100 for Higher Education course.

Southeastern Oklahoma State University Ambassador Program (2009/2011)

Member of the planning committee for the annual Aviation Alumni Awards banquet. (2003-2014)

Denison High School Career Day Fall 2007

Developed and maintain Southeastern Oklahoma State University Employee Security Awareness Training for flight schools.

Developed and maintain SOSU Transportation Security Administration requirement of verification of each flight student eligibility to begin flight training.

Compiled the information for Aviation Sciences Institute Aviation Accreditation Board International Accreditation self-study. (Section 3, Curriculum and Section 7, Relation with Industry)


School of Business Advisory Council (03)

Faculty Friend (02, 03, 04, 05, 06, 08, 10, 11, 12)

Strategic Planning (01, 03, 04, 05,11)

Developed and/or maintained a new invoicing program for Aerospace Department (99-2004)


National Intercollegiate Flying Association flight competition held in Durant

Event Director (92, 97, 2004)
National Intercollegiate Flying Association

Regional and National Competition (85 – 90, 96, 2000-2004, 2006, 2008 - 2010)

Developed Airway Science Degree for the Aerospace Department

Maintains the new Precision Flight Controls Simulator for the Aerospace Department

Participated in Self-study of Aerospace Department

SOSU Honors Day Competition (98 – 2004, 2008-2010, 12-13)

Instructed Elementary School Teachers during the summers for Dr. Lewis Barker (96, 97, 98)
VITAE

CHARLES L. MARSHALL
Associate Professor of Aviation Management and Aerospace Administration and Logistics
Southeastern Oklahoma State University
Aviation Sciences Institute at Tinker Air Force Base
Rose State College and Oklahoma City Community College
6420 S.E. 15th Street Ste. 200
Oklahoma City, OK 73110-2704
Office Phone (405) 736-0222
Fax (405) 733-7921
E-mail: cmarshall@se.edu

EDUCATION:

Graduate
1978-1984 University of Oklahoma, Norman, Oklahoma
   Department of Civil Engineering & Environmental Sciences
   Ph.D. Engineering

1974-1977  Duquesne University, Pittsburgh, Pennsylvania
   M.S. Biological Sciences

Undergraduate
1970-1974 Duquesne University, Pittsburgh, Pennsylvania
   B.S. Biology

ACADEMIC EXPERIENCE:

2010-Present  Associate Professor
Southeastern Oklahoma State University
Aviation Sciences Institute
Rose College, OCCC and
Tinker Air Force Base - Aviation/Aerospace Education Alliance

2004-2010  Assistant Professor
Southeastern Oklahoma State University
Aviation Sciences Institute
OCCC & Tinker Air Force Base - Aviation/Aerospace Education Alliance

2001- 2004  Adjunct Professor
Southeastern Oklahoma State University
Aviation Sciences Institute
Tinker Air Force Base - Aviation/Aerospace Education Alliance
1987-1999        Adjunct Professor
University of Central Oklahoma, Edmond Oklahoma
Industrial Safety Department/Occupational and Technology Education

ACADEMIC TEACHING EXPERIENCE:

Southeastern Oklahoma State University from January 2001- 2013*
Graduate Core Courses:
AVIA 5223 – Aerospace Hazard Control and Analysis
AVIA 5103 – Aerospace Safety Program Development
AVIA 5960 Directed Reading in Aerospace
Undergraduate Courses:
AVIA 4663 – Contemporary Topics in Aviation
SFTY 1313 – Introduction to Occupational Safety and Health
SFTY 4003 – A Systems Approach to Hazard Control
SFTY 4143 – Safety Program Management
SFTY 4154 – Industrial Hygiene
SFTY 4163 – Fundamentals of Safety Engineering and Human Factors/Ergonomics
SFTY 4183 – Hazardous Materials and Waste Management
*Nominate for SOSU Faculty Senate Award for Excellence in Teaching in both 2009, 2011 & 2013

University of Central Oklahoma from 1987-1999
Undergraduate and Graduate Courses:
Basic Measurements for Safety Professionals
Industrial Hygiene I
Industrial Hygiene II
Industrial Ventilation
Occupational Noise
Healthcare Safety
Toxicology of Hazardous Materials and Wastes

ACADEMIC PUBLICATIONS:


AWARDS and HONORS:

- 2013 “Fellow of AIHA” – National Award from the American Industrial Hygiene Association
- 1998 Governor’s Conference Award “For Excellence in the Field of Industrial Hygiene”

SERVICE (also see Professional Organization Leadership Section):

Planning Committee Member for Annual Oklahoma Aviation Research Symposium
First Presbyterian Church of Norman, OK
- Trustee
- Chairman, Legal and Insurance Committee
- Lead Volunteer for Community Service Work for Church’s Recycling Program.

PROFESSIONAL CERTIFICATIONS:

1989 - Present Certified Industrial Hygienist (CIH)
American Board of Industrial Hygiene
Comprehensive Practice Certification #4489, since 1989

1990 - Present Certified Safety Professionals (CSP)
Board of Certified Safety Professional
Comprehensive Practice Certification #9941, since 1990

1990-Present Certified Hazardous Materials Manager (CHMM)
Institute for Hazardous Materials Management
Master Level Certification #1905, since 1990

1989-Present Certified Healthcare Safety Professional (CHSP)
Board of Certified Hazard Control Management
Master Level Certification, #521, since 1989

PROFESSIONAL MEMBERSHIPS:

1992 – Present American Industrial Hygiene Association (AIHA)
Full Professional Membership, since 1990

1986 – Present Oklahoma Local Section of AIHA (OKAIHA)
Professional Membership since 1985
2010 - Present  American Conference of Governmental Industrial Hygienists (ACGIH)
Professional Member since 2010

2008 – Present  University Aviation Association (UAA)
Professional Member since 2008

2014 – Present  Association of University Professors (UAA)
Professional Member since 2014

PROFESSIONAL ORGANIZATION LEADERSHIP:

2009  Officer in Local Section of the American Industrial Hygiene Association
2007-2009 President Elect, President and Past President Offices
1994-1996 President Elect, President and Past President Offices
1993 Treasurer

PROFESSIONAL REGISTRATION:

1977 - Present  Registered Professional Environmental Specialist*
Registered Sanitarian*
Oklahoma State Department of Health, Reg. No. 710, since 1977
*Requires Completion of Biannual Continuing Education Requirements

PROFESSIONAL LICENSES*:

1987 - Present  Licensed Asbestos Project Designer, Oklahoma State Dept. of Labor
1987 - Present  Licensed Asbestos Management Planner, Oklahoma State Dept. of Labor
*Requires Completion of Annual Continuing Education Requirements

PROFESSIONAL CERTIFICATIONS*:

Oklahoma Department of Food, Forestry and Agriculture, Pesticide Application Certifications in:
2014 - 2019  Category 7A – General Pesticide
2014 - 2018  Category 7B – Wood Destroying Insects
2014 - 2015  Category 7C - Fumigation
*Requires Completion of Annual Continuing Education Requirements

CONTINUING EDUCATION:

Professional Certification Maintenance:

1989 – Present  American Board of Industrial Hygiene (ABIH)
Complied with Certification Maintenance Requirements for
2007-2012 Certification Cycle as Certified Industrial Hygienist (CIH) in
Comprehensive Practice, next cycle 2017
1990 – Present  Board of Certified Safety Professional (BCSP)
Complied with Certification Maintenance Requirements for
2006-20011 Certification Cycle as Certified Safety Professional (CSP) in
Comprehensive Practice, next cycle 2016

1990 – Present  Institute for Hazardous Material Management
Complied with Certification Maintenance Requirements for
2007-20012 Certification Cycle as a Certified Hazardous Materials
Manager (CHMM) at the Masters Level, next cycle 2017

**Continuing Education Conferences:**

2013  American Industrial Hygiene Conference and Exposition (AICHE) 2013,
May 18-24, 2013. Montreal, Canada, Palais Convention Center, ABIH
approved for 4.0 Certification Maintenance Points. 4.0 CEU

2013  12th Annual Oklahoma Aviation Education Symposium, April 17th and
April 18th, 2013. Oklahoma State University, Stillwater Oklahoma

2012  American Industrial Hygiene Professional Conference 2012,  October 29-
30, 2012. San Antonio, Texas, ABIH approved for 3.0 Certification
Maintenance Points. 2.4 CEU

2012  11th Annual Oklahoma Aviation Education Symposium, April 18th and
April 19th, 2012. Oklahoma State University, Stillwater Oklahoma,

2011  10th Annual Oklahoma Aviation Education Symposium, April 20th and
21st, 2011.Oklahoma State University, Stillwater, Oklahoma

2011  Annual Safety and Health Conference, Oklahoma Safety Council, June 8-
10, 2010 at Embassy Suites Hotel, Norman, OK.

2010  American Industrial Hygiene Conference and Exposition (AICHE) 2010,
May 24-26, 2010. Denver Convention Center, Denver Colorado. ABIH
approved for 3.0 Certification Maintenance Points. 2.4 CEU

2010  9th Annual Oklahoma Aviation Education Symposium, April 21st and 22nd,
2010.Oklahoma State University, Stillwater, Oklahoma

2009  University Aviation Association (UAA) Fall Education Conference,
Wichita, KS, October 29-30, 2009

2009  Oklahoma Safety Council, Governor’s Conference on Safety and Health,
June 3-5, 2009, University of Central Oklahoma, Edmond, OK.
2008  8th Annual Oklahoma Aviation Education Symposium. Stillwater, OK. April 16-17, 2008

2007  5th Annual Oklahoma Aerospace Summit and Expo. May 21-23, 2007, Cox Convention Center, Oklahoma City, OK


2006  4th Annual Oklahoma Aerospace Summit. May 1-2, 2006, Cox Convention Center, Oklahoma City, OK.

2006  6th Annual Oklahoma Aviation Education Symposium. Oklahoma State University, Stillwater OK. April 19-20, 2006

2005  3rd Annual Oklahoma Aerospace Summit. May 2-3, 2005, Cox Convention Center, Oklahoma City, OK.


2002  Professional Conference on Industrial Hygiene. AIHCE, San Diego, CA. June 1-6, 2002

Professional Development Courses and Presentations:

2013  Managing and Marketing Your Industrial Hygiene Program, April 23, 2013. Sponsored by the American Industrial Hygiene Association (AIHA) Local Section. ABIH approved for 1.0 Certification Maintenance Points. 0.50 CEU

2012  Electrical Safety I – Basic Principals & Electrical Installation/Engineering Controls, Professional Development Course (PDC), Oct. 27, 2012, San Antonio, Texas. Sponsored by the American Industrial Hygiene Association (AIHA), awarded ABIH approved for 1.34 Certification Maintenance Points. 0.8 CEU.


2012  OSHA’s New Hazard Communication Standard, Workshop sponsored by Oklahoma Department of Labor and Federal OSHA at Moore Norman Technology Center, October 4, 2014. ABIH Credits 0.25 CMU’s.
2011  Legal Side of Industrial Hygiene, TeleWeb-Seminar, April 27, 2011. Sponsored by the American Industrial Hygiene Association (AIHA), ABIH approved for 0.42 Certification Maintenance Points. 0.25 CEU

2011  “Occupational Exposure Limits (OELs) – What They Mean and How They Are Developed.” AIHA Local Section, Moore Norman Technology Center, Oklahoma City, Oklahoma, April 14, 2010.

2011  “IAQ/Mold Issues and their effects on the educational process.” Presented at Oklahoma State University, for the OACUPPA (Oklahoma Association of College & University Physical Plant Administrators) Schools, Stillwater, Oklahoma, April 15, 2011.

2010  Community Noise, Professional Development Course (PDC 105), May 22, 2010. Sponsored by the American Industrial Hygiene Conference and Exposition (AIHE), Denver, Colorado. ABIH approved for 1.34 Certification Maintenance Points. 0.8 CEU

2010  Noise Engineering Control, Professional Development Course (PDC 420), May 23, 2010. Sponsored by the American Industrial Hygiene Conference and Exposition (AIHE), Denver, Colorado. ABIH approved for 1.34 Certification Maintenance Points. 0.8 CEU

2010  “Current Industrial Hygiene Issues.” AIHA Local Section, Francis Tuttle Technology Center, Oklahoma City, Oklahoma, April 5, 2010.

2009  Workshop: Developing Leaning Objectives and Test Items, Sponsored by the University Aviation Association (UAA) Fall Education Conference, Wichita, KS, October 28, 2009

2009  Toxicology of Engineered and Incidental Nanoparticles, September 30, 2009. TeleWeb-Seminar Sponsored by the American Industrial Hygiene Association (AIHA), ABIH approved for 0.50 Certification Maintenance Points. 0.25 CEU

2009  Update on Control Banding: Fundamentals, Issues, Applications and Strategies for Implementation. September 18, 2009. TeleWeb-Seminar Sponsored by the American Industrial Hygiene Association (AIHA), ABIH approved for 0.50 Certification Maintenance Points. 0.25 CEU

2009  Professional Ethics, Doing What is Right in the Practice of Industrial Hygiene. September 01, 2009. TeleWeb-Seminar Sponsored by the American Industrial Hygiene Association (AIHA), ABIH approved for 0.50 Certification Maintenance Points. 0.25 CEU
2009 “Focus on Your IH Program: OSHA Already Is,” AIHA Local Section, Francis Tuttle Technology Center, Oklahoma City, Oklahoma, April 28, 2009.


2008 “CURRENT INDUSTRIAL HYGIENE ISSUES: Hexavalent Chromium, Toxicology, Sampling Considerations, and Ventilation Control,” AIHA Local Section, Francis Tuttle Technology Center, Oklahoma City, Oklahoma, April 24, 2008.

2007 “Industrial Hygiene Issues for Pandemic or Bioterrorism Events,” AIHA Local Section, Francis Tuttle Technology Center, Oklahoma City, Oklahoma, April 17, 2007.


PAST PROFESSIONAL ACTIVITIES AND CERTIFICATE PROGRAMS:

Past Member, Oklahoma Worker Safety Policy Council, appointed by the Commissioner of the Oklahoma Department of Labor (ODOL)

Past Treasurer and Past President, Oklahoma Local Section of the American Industrial Hygiene Association (AIHA).

Past Member, American Electroplaters and Surface Finishers Society
Oklahoma Department of Environmental Quality (DEQ), Environmental Protection Agency (EPA) and Housing and Urban Development (HUD) Authority - approved Instructor/Trainer for Lead Based Paint Inspector/Risk Assessor, Worker and Supervisor Courses.

Completed Certificate Training Program for Leaking Underground Storage Tanks (LUST) and Oklahoma Risk Based Corrective Action (ORBCA) Program, Oklahoma Corporation Commission (OCC).

Completed Certificate Program and Training in the Natural Attenuation of Groundwater Pollutants at University of Oklahoma Health Sciences Center

Trainer – Moore Norman Technology Center: Hazardous Waste Operations and Emergency Response (HAZWOPER) 40 Hour Course and Refresher Courses.

GOVERNMENT, BUSINESS and INDUSTRY EXPERIENCE:

10 Years of Service in Governmental Affairs:
- U.S. Army Corps of Engineers, Pittsburgh District, Hydrology Branch, Biologist
- City of Oklahoma City, Water and Wastewater Utilities Division, Chemist
- Oklahoma City-County Health Department, Section Head and Assistant to Medical Director

30 years of Consulting Experience to Industry and Government:
- Stanley Engineering, Inc., Vice President
- Alpha Analytical Laboratories, Co-Founder and President
- MED-INCIN, President
- INFORM CORP, President
- Marshall Environmental Management, Inc., Founder and President
JAMIE MARSHALL
1301 N Martin Luther King Avenue, Oklahoma City, OK 73117 | 405.361.8138 | jamiemarshall@marshallenvironmental.com

EDUCATION
University of Oklahoma
Master of Science 2013
Industrial Hygiene & Environmental Science
Dissertation: “The Influence of Suspension Particle Size on Aerosolization during Toilet Flushing”

University of Central Oklahoma
Bachelor of Science 2008
Chemistry
Minor: Business

WORK EXPERIENCE
President, Marshall Environmental Management, Inc. January 2015 – Current
Environmental & Industrial Hygiene Associate, Marshall Environmental Management, Inc. May 2008 – July 2010

PROFESSIONAL EDUCATION EXPERIENCE
Southeastern Oklahoma State University
Adjunct Faculty – System Approach to Safety, Industrial Hygiene, & Industrial Hygiene Lab 2016 – Present

University of Central Oklahoma
Adjunct Faculty – Healthcare Safety & Hazard Control, Industrial Hygiene I & II 2013 – 2016

Metro Technology Center
Lead Instructor – ODEQ Lead-Based Paint Program 2012 – 2013

CERTIFICATIONS
ABIH Board Certified Industrial Hygienist
EPA Certified AHERA/ODOL Licensed Asbestos Management Planner
EPA Certified AHERA/ODOL Licensed Asbestos Project Designer
NIOSH 582E Asbestos Fiber Counting Certificate
EPA Accredited/ODEQ Licensed Lead-Based Paint Inspector & Risk Assessor
Susan Amelia Mass

Contact Information
Susan A Mass
Home: 17101 SE 119th St Newalla, OK 74857, 405-361-6996, Amelia17101@gmail.com
Work: 7851 Arnold Street, Rm 132, DSN 852-9716, (405) 582-9716, susan.mass.1@us.af.mil

Education:
University of Central Oklahoma, Edmond OK, BS Chemistry ACS Certificate 1997, 154 hrs
University of Central Oklahoma, Edmond OK, BA ISOM/POM 2003, 64 hrs
Oklahoma City University, Oklahoma City OK, MBA, May 2005, 36 hrs

Air Force Certifications:
Level III Program Management
Level III Logistics
Level III System Engineering (SPRDE)

PME
Air Command Staff College (ACSC) completed 2011
Squadron Officers School (SOS) currently enrolled

Tinker Air Force Program Manager
December 14, 2001 to Present: GS-13 step 5
Tinker AFB, GS-04 to GS-13 (present)
JOB SERIES; 346, 1101
I am an American Citizen

July 2010 to Present: 346 Lead Program Manager: AF Program, Discrepant Materiel Reporting office (AFDMPO) Responsible for leadership and correlating the requirements for program support. I evaluate current supply chain practices, procedures regarding organic, and contractor operations of discrepant materiel. I conducts studies and recommend changes in methods and/or operations to achieve productivity improvements across the ALCs, AFMC, USAF and private industry supply chain. Responsible for assessing problems or bottlenecks within the commodity Supply chain and recommend improvements and formulating strategies to implement improvements. Conduct analysis to assess the performance of Discrepant Materiel against stated goals and objectives. Develop, publish and update supply chain strategies and associated implementation plans that support the achievement of supply objectives. Perform a variety of tasks in support of the demand/supply planning process and for continuous improvement to eliminate counterfeit materiel. Identify specific requirements for money, manpower, materials, and services needed to support the program. This is due to the large requirement to support new policy. I correlate these requirements of policy with program plans to assure that the needed support is provided. I have knowledge of agency program planning, funding and management information systems. I have broad knowledge of the organization and functions of activities in providing logistical support. I coordinate and evaluate the efforts of functional specialist to identify specific requirements and to develop and adjust plans and schedules for actions needed to meet requirements on time.
To monitor progress toward meeting the logistics plan and identify the cause and impact of delays or other problems varying degrees of responsibility for taking actions to prevent or overcome such problems may also be included. To adjust plans and schedules for all related actions as required by delays or changes to logistics requirements. I evaluate plans of logistical support for feasibility, efficiency, economy, and develop alternatives when required. I consult with technical specialists on specific requirements and capabilities, lead times, costs, and other matters affecting logistics planning. I understand the functional fields involved in sufficient depth to accurately understand and analyze the logistics management implications of the information obtained.
Susan Amelia Mass  
Conduct analysis to assess the performance of the Program against stated goals and objectives. Monitor performance against goals and objectives, document performance. Conduct fact gathering and analysis. Develop, publish and update strategies and associated implementation plans that support achievement of commodity and supply objectives. Collaborate with stakeholders to select best options for program strategies. Prepare comprehensive long-range and short-range strategy planning documents identifying major/minor milestones to correct current or potential deficiencies in supply chain support for the program. Establish goals, objectives, acceptable levels of operating tolerance and other criteria for overall performance of the supply chain. Track progress and develop supply chain improvement recommendations to management in areas of inventory control, distribution of assets, requirements computations and replenishment policy.

The program is an Air Force program beginning implementation to reach out to the Operational bases.

April 09 to July 2010; 1101 Program Manager; Executive Assistant to the Designated Acquisition Official (DAO) for Tinker. Acquisition assistant to OC-ALC Executive Director with documentation and milestones for all ACAT III programs under Program Executive Officer (PEO) portfolio supporting Defense Acquisition Workforce Improvement Act (DIAWA). I have extensive knowledge of required events for program planning, funding and management information to support Milestones and events of the Acquisition cycle. I have very extensive knowledge in the Air Force Acquisition process to include experience gained from weekly SAF/AQ meetings. I was the POC for the PEO Financial accounting system (SMART) for programs here at Tinker.

Mar 08 to April 09  GS-12 ; 1101 Program Manager; Electronic Warfare (EW)Lead/Electronic Counter Measures Improvement (ECMI) PM/Strat Radar Replacement (SR2) team member: Program Manager during sustainment for ACAT I program. I worked duties for Branch Chief when required and directly with Air Combat Command ACC and Operational bases to support the unfunded installations of the remaining five jets to receive the ECMI kits. The program expended all available money for additional kits to support the installation of the remaining jets. I ensured coordination through operational commands and ACC supported to complete the installation of the jets. I identified specific requirements for money, manpower, materials and services needed to support the program. I correlated the requirements of the program with program plans to assure that the needed support is provided at the right time and place.

- ACAT II FY10 new start
- Using 5000.2 and AFI 63-1101
- Populated SMART
- Prepare Monthly activity report (MAR), report to Wing Level
- Nov 05 to Mar 08
- 327 ACSG

GS-9 to 11 346 EDL Program Manager: Program manager (PM) for the Evolutionary Data Link (EDL) for the B-52 aircraft in the System Program Office (SPO). Tracking and reporting financials in ABSS/CCARS/IDECS. Quality Assurance Evaluator for Administrative contractors working at Tinker on two separate Company contracts. Track Assistant & Administrative Services financial requirements for Branch. Coordinated instructions for class taught at Tinker. Work concurrently with other MAJCOMS to support war-fighter needs on communication system. Advisor to a $460M Fleet Support contract which supports B-52 sustainment. Mentor to Tinker Intern Program (TIP Interns) focusing on a career in Program management. Advise and lead Contractor on the Logistics and project direction to ensure quality product for US Air Force. Elected 4th Vice President of Tinker Management Association two consecutive years, elected Historian and photographer. While holding this office for TMA I am responsible for all money and charge accounts for the 900 members across base. Previous work duties: Deputy PM for the CONECT (ACT I) program, tracking and reporting financials for CONECT: Worked with HQ/AMC congruently on certifications for Air Operational Command (AOC) for program implementation. Identified the specific requirements for money, manpower, material, facilities, and services.
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needed to support the program and correlating those requirements with program plans to assure that the needed support is provided at the right time and place. Position required the knowledge of agency program planning, funding, and management information systems. Also broad knowledge of the organization and functions of activities involved in providing logistical support, and ability to coordinate and evaluate the efforts of functional specialists to identify:

- Worked with SAF/AQPB using GWOT money
- Completed all documents for New Start package for out of cycle funds
- Worked process with Air Combat Command (ACC) for CONOPS to be signed off by A6
- Worked with Designated Approval Authority (DAA) system certification with ATC/ATO
- Built documents and test procedures with Testing organizations for software certification and Total System certification
- First to set standards in B-52 to set up EITDR (Enterprise Information Technology Data Repository) program then trained group on experiences
- Overcome challenges by DAA moved from A4 to 8th AF
- Now initiate new DIACAP (converted from DITSCAP) process for S/W communication system.
- Worked directly with AOC (one of 8 Air Operational Commands) at Hanscom to coordinate system of C2ISR (Intel-Surveillance Reconnaissance)
- Briefed Operational bases Commanders and QA for process to implement kit on jet and list objectives.
- Worked directly with Operational bases to complete kit-proof and TCTO verification.
- Directly inventoried kits-transported to flight line-coordinated necessary personnel to install kit
- Briefed Base Commanders on success and failures
- Quality Assurance Evaluators (QAE) for two contracts in office
- Developed first OSS&E book for program
- Assisted ACC to write Combat Capability Document
- Worked directly with HQ/AMC to create synergy of system certifications
- Mentor TIP
- Analyzed performance data to identify additional training needs and other activities to support the User of the system.
- Constantly identified “trade offs” to satisfy either the user requirements and funding constraints.

Work required continuing contracts with contracts with system design personnel and operational bases to coordinate efforts to satisfy the support needs. Developed analyzed and maintained management information which serves as the basis for decision regarding the use of and support provided to the temporary system. Overall focal point with the organization to support the system for the most immediate information and expertise on problems and requirements of the system, with responsibility for assuring the coordination of any necessary support required for full operational capability.

Dec 03 Nov 05 OC-ALC/LHMN

GS-7 to 9 Communication Navigation Assistant Program Manager on $800M acquisition program for B-52. Composed and briefed PEM A8 and SAF/AQPB on funding and acquisition plan. Trained and certified as COR for two separate contracts. Organized and supported all financial transactions program planning, funding, and management information systems for the program in applications such as ABSS/CCARS/IDECS. First person in B-52 to evaluate DoDI regulation 5000.1 in support of the required document Information Support Plan (ISP) demonstrating how the B-52 will connect to the Global Information Grid (GIG). Developed training for AF on Net Centric Operations Training which demonstrated the software utility to build Operational View (OV) and Situational Views (SV) which are pictorials required in all acquisition documentation. Key person for building document and brief to support the Acquisition Strategy Plan (ASP) for Milestone Decision Authority (MDA). Mentor of Program Management for Tinker Intern Program interns within the B-52. Supported and lead IPT for new antenna called Family of Advanced wideband Terminals (FAB-T) program. Monitored progress for
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meetings for the program plans and to identify the cause and impact of the delays and actions to prevent or overcome such problems. Obtained Nuclear Certification training at Kirkland AFB to specifically support the efforts of the program.

University Instructor Master level classes
South Eastern Oklahoma State University (SEOSU):
July 2011 to Present
Dr. David Conway
SEOSU Instructor for Master level classes to include; Transportation Logistics, Systems Engineering, Hazard Safety/Analysis and Lean Logistics classes for the University. I apply practical understanding of program objectives and the particular procedures such that are applied at the Air Force Base regarding the transportation and supply chain. I build the syllabus for the class along with the lesson plan and build all charts and demonstrations for the class. I control and lead class in discussion regarding topics of the assigned agenda. I direct and promote open discussion among students to build their confidence in the areas of the class discussion. I train and instruct students to make it possible for them to pass the tests that I have developed which correspond with the Universities criteria for a Master level class.

Lab Technician and Sales Representative
Accurate Laboratories:
June 1, 2000 to January 12, 2002:
Mickey Switzer 823-0726
Technician working on certified work requirements for the Metrology lab. I would retrieve a set of instructions which pertained to the description on the job order. I would complete the calibration procedures and then return item along with certification to shipping/receiving to be sent back to the customer. Job duties also included performing certifiable calibration services on aircraft maintenance tool such as bore gauge, scales, balances, torque, gauge blocks, calipers, dial indicators, pressure gauges with levels of accuracy ranging from 160 to 1,000 psi and design measuring tools in accordance with ISO-9000 guidelines and ISO Guide25 which also included 17025 Guide Lines Quality System. I worked as a professional sales representative for the company where I MADE and ACCEPTED or NEGOTIATED OFFERS with POTENTIAL CLIENTS of the company regarding services for an A2LA certificated company. I was able to show my familiarity with data, statistics and issues in the Research and manufacturing community and to be able to communicate successfully with Operations managers and PhD Research scientists due to my background in Chemistry in different areas. I provided technical expertise in support of the engineering and logistics related to assigned tasks and supported operations office with tours of facility and services offered by company. My profits were demonstrated in bonuses along with my regular salary. I regularly attend meeting where contracting with purchasing professionals is strong, with Research Scientists and Operation Managers of Manufacturing facilities. I spent most of my time informing laboratory managers about the services and products we offer to support Metrology work in the manufacturing and medical research facilities around the Oklahoma City area. I used excellent VERBAL AND WRITTEN COMMUNICATIONS SKILLS demonstrated as I also made phone contact with manufacturing business to sell calibration services and parts to support their manufacturing facility. I designed, developed and implemented a process for tracking sales tracking for clients. The method eliminated repeating tasks when contacting clients for business. I developed a database of manufactures that were in need of Metrology services. I worked closely with the Shipping and Receiving Department to ensure a beginning to end completion of the service of a client was complete.
Experience

2005- Present Department of Defense Oklahoma City, OK
Supervisory Air Traffic Control Specialist/Tower Simulator Administrator
  ▪ Received six performance awards/10 time off awards
  ▪ Named Air Force Association Civilian Supervisor of the Year for Oklahoma
  ▪ Twice named Superior Performer during HQ inspection

2012- 2015 University of Oklahoma Norman, OK
University Adjunct Instructor
  ▪ Introduction to Air Traffic Control

2013- Present Oklahoma State University Stillwater, OK
University Adjunct Instructor
  ▪ Aerospace Leadership
  ▪ Air Carrier Industry
  ▪ Aviation Labor Relations

2016-Present Southeastern Oklahoma State University Durant, OK
University Adjunct Instructor
  ▪ Aviation History
  ▪ Research Methods

2003-2005 United States Air Force Tinker AFB, OK
Tower Chief Controller (Air Traffic Manager)
  ▪ Managed 24/7 operations for USAF Class C, intersecting rwy facility
  ▪ Led 26 controller cadre supporting POTUS, VPOTUS, SECDEF visits
  ▪ Air Force Materiel Command ATC Enlisted Manager of the Year
  ▪ Senior Noncommissioned Officer of the year 2004, 2005
  ▪ Retired from military service, SMSgt (E-8)

2002-2003 United States Air Force Tinker AFB, OK
Chief, ATC Training and Standardization & Evaluation
  ▪ Developed web based training program benchmarked by command
  ▪ Led 180⁰ turnaround of training program—worst to first in command
  ▪ Earned Air Force Achievement Medal for program revitalization

2001-2002 United States Air Force Kunsan AB, Korea
Assistant Chief Controller, Radar Approach Control (RAPCON)
  ▪ Led USAF’s only multinational radar facility in Korea
  ▪ Served as Chief Controller for four months during manning crisis
  ▪ Laundered during biannual inspection for leadership
  ▪ Earned second Meritorious Service Medal
2000-2001 United States Air Force  

**Operations Superintendent, Combat Communications**  
- Developed procedures for establishing bare airfield  
- Deployed to Tuzla Air Base, Bosnia in support of Operation JOINT FORGE  
- Authored LOA w/KTIK for personnel to train/work in KTIK  
- Earned Meritorious Service Medal  

1996-2000 United States Air Force  

**Air Traffic Control Supervisor, Control Tower**  
- Mastered ICAO/FAA/USAF rules into unique working framework  
- Supported Operations ALLIED FORCE, JOINT FORGE and JOINT ENDEAVOR  
- Deployed to Tuzla AB, Bosnia in support of Operation JOINT FORGE  
- Earned first CTO  

1993-1996 United States Air Force  

**Air Traffic Control Supervisor, Radar Approach Control**  
- Led 15 person crew for one military and nine civil satellite airports  
- Facilitated 214K annual ops in 1,800 square mile airspace  
- Utilized restricted area, CFA, ATCSS, MOA, warning and alert area airspace  
- 1 of 2 host facilities for USAF ATC Officer training  

1990-1993 United States Air Force  

**Air Traffic Controller, Radar Approach Control**  
- Approach Facility Rated, numerous mobile AT ratings  
- Controller of the Year 1992  
- Air Force Commendation Medal  

**Education**  

2006-2007 Southeastern Oklahoma State University  

**B.S. Aviation Management**  
- Graduated Summa Cum Laude  

2007-2008 Southeastern Oklahoma State University  

**M.S. Aerospace Administration and Logistics**  
- Graduated with 4.0 average  

2010-2013 Oklahoma State University  

**Ed. D. Applied Educational Studies with emphasis on Air and Space Science**  
- Graduated with 4.0 average  

**Published Researcher**  

“Situational Leadership in United States Air Force Air Traffic Control Towers”  

Published in International Journal of Aviation, Aeronautics, and Aerospace, Vol 1, (2014) Issue 4  

http://commons.erau.edu/ijaaa/vol1/iss4/10/
CURRICULUM VITA

William D. Pettigrew
Attorney at Law
Adjunct Professor
2006 Timbercrest
Norman, Ok. 73071
(405) 280-7900 voice
(405) 280-7919 fax
Wmpettigrew@aol.com

EDUCATION:

1986         Bachelors of Arts in Criminal Justice, Summa Cum Laude, East Central Oklahoma State University, Ada, Oklahoma
1989         Juris Doctorate, Oklahoma City University

ACADEMIC AND RELATED NON-ACADEMIC EXPERIENCE:

1999 - 2005  Adjunct Professor, Oscar Rose State University.
Teaching in an ABA approved paralegal education program.

2007 - Present  Adjunct Professor, Southeastern Oklahoma State University (Tinker).
Teaching in an undergraduate and master’s level education program.

PROFESSIONAL INTERESTS:

2005 - Present  Partner, Noland Pettigrew & Lewis.
The firm specializes in defending civil cases across the State of Oklahoma and it’s federal courts. The primary areas of practice are negligence, premises liability and manufacturer’s product liability. All manner of legal work is involved from the initial pleadings through discovery, trial and appeal.
1993 - 2005

**In-house Counsel, Farmers Insurance Company, Inc.**

The firm specialized in defending civil cases across the State of Oklahoma and its federal courts. The primary areas of practice are negligence, premises liability and statutory and common-law liability for injury by animals. More than 60 jury trials were completed.

**SELECTED COMMITTEES AND SPECIAL ASSIGNMENTS:**

1990 - current Law Related Education Committee, “Lawyers in Classroom”

**AWARDS AND HONORS:**

Past member of ABOTA: American Board of Trial Advocates.

Appreciation Award by the Rose State Paralegal Club.

Winner 1998 Farmers “Trial Horse of the Year,” award for more jury trials than any other Farmers Attorney in the nation.

Attorney of the Year, 1997 by COLA - Central Oklahoma Legal Assistants.

**PROFESSIONAL MEMBERSHIPS:**

1990 - Current Oklahoma State Bar Association

1990 - Current Oklahoma County Bar Association

2013 - Current Cleveland County Bar Association

**EFFECTIVE TEACHING:**

Active with “Lawyers in the Classroom,” a program through the County Bar Association that places lawyers in the role of assistant teachers (usually for a specific class).
PUBLICATIONS OR ARTISTIC ACHIEVEMENTS:

Effective Discovery Strategies for the Litigation Paralegal in Oklahoma:

Personal Injury Settlements in Oklahoma, Practical Methods for Perfecting the Settlement of a Claim:


Troubleshooting How to be Ready for Anything, July 20, 2001.

Advanced Civil Discovery for the Litigation Paralegal in Oklahoma:


PROFESSIONAL SERVICE:

1979 – 1985 U.S. Army, Station Technical Control
THOMAS A. SCHERM
Adjunct, Aviation Sciences Institute
Aviation Education Alliance
Southeastern Oklahoma State University
Bldg. 201SE
7751 1st Street, Suite 105
Tinker Air Force Base, OK 73145-9148
Ph: 405.473.7562
tom.scherm69@gmail.com

EDUCATION:

1968  B.S.  Forestry  Michigan State University
1975  M.A.  Public Administration  State University of NY (Plattsburgh)
1984  N/A  USAF Aircraft Accident Investigation, Flight Safety Officer Course, University of Southern California

ACADEMIC AND RELATED NON-ACADEMIC EXPERIENCE:

1975 – 1981  USAF Academic Classroom Instructor, Instructor Pilot
1984 – 1991  Flight Safety Officer, Kadena Air Base, Japan; Chief of Safety (Flight, Ground, Explosive, Industrial Safety), Tinker Air Force Base, OK
1992 -1993  Ground School Instructor, Univ. of Oklahoma Aviation Dept.
1993 – Present  Airport Staff, Will Rogers World Airport
2010 – Present  Adjunct, Southeastern Oklahoma State University

Courses Instructed:
AVIA 3173 Aviation Safety
AVIA 3293 Aviation Transportation
AVIA 5103 Aerospace Safety Program Development
AVIA 5153 Aircraft Accident Investigation
AVIA 5323 Airport Operations
SFTY 4143 Safety Program Management

PROFESSIONAL INTERESTS:

Airport operations and administration, aviation safety, aircraft accident investigations

PROFESSIONAL MEMBERSHIPS:

Order of Daedalians  (Organization of active, former, and retired military aviators)

PROFESSIONAL SERVICE:

Scholarship Selection Committee, Order of Daedalians
EDUCATION

Oklahoma State University Doctoral Program-Accepted for Admission. Start 2017

Southeast Oklahoma State University, Major: Aerospace Administration and Logistics. Master of Science, Graduated July 2009

Embry Riddle Aeronautical University. Major: Professional Aeronautics, Bachelor of Science; Minor: Aviation Safety.
August 2001 – May 2007

July 1996 – October 1996

March 1991 – November 1991

PROFESSIONAL EXPERIENCE

The Boeing Company, Oklahoma City, Oklahoma                                                             August 2007-  Present
Customer Training Specialist. Assemble, evaluate, and research documents for airborne warnings system training programs. Extensive research and customer contact and validating data for implementation of source documents to customer base. Review training materials and equipment to evaluate impacts on trainers due to upgrades of aircraft. Document and update aircraft specifications on trainer group and ground system support segment specifications. Adapt to changing situations in testing and create relationships with local team members and customers to establish best practice and outcome of changes. Manage projects such as Transitional Network Capability and MIMS. Developed processes and procedures for government proposal. Instruct students on developed courses and certify completion. Trained in ISO 9001:2000/AS9100 Internal Auditor Training.

KC-135 Aircraft Mechanic. Remove major components of aircraft structure or systems; refuel/defuel and tow aircraft; install, align and adjust less complex aircraft systems, subsystems, assemblies and components; jack and level aircraft, install and adjust engines, landing gear assemblies, flight control systems; troubleshoot and repair all airframe mechanical systems for post assembly checkout. Review and follow process documents and collaborate with engineers on possible repairs. Worked closely with other members of crew, ensured best repair methods that interfere with other systems in repair. Ensured safety at all times for all persons involved. Followed directions of Technical orders, process order, and supervisors. Practiced Lean processes to minimize waste and exercised change process to update old processes.

MESA AIR GROUP Phoenix, Arizona     December 2004 – November 2005
Lead Quality Control Inspector. Supervised two individuals and was responsible for quality oversight for Mesa Air Group aircraft at a FAR 145 repair station. Established production and Quality Assurance standards and monitored data regarding nonconformance, corrective actions, internal audit results, and/or trends that may develop by interpreting and applying current technical and engineering specifications. Responsible for airworthiness of aircraft when returned to revenue service and initiation of internal investigations for discrepancies on aircraft as well as accomplishing all required documentation. Prepared reports and charts depicting quality analyses using varying statistical methods. Completed audits and inspections on vendors to establish acceptance of their product by Mesa in addition to developing and briefing recommended changes and worked with the FAA on local audits to ensure all aircraft maintenance followed Federal Aviation Regulations. Utilized root cause analysis to determine repeat or recurring discrepancies. Review and update General Procedures Manual (GPM) to encompass latest changes in policy or procedures. Monitoring operations to prevent the production of defects and to verify adherence to quality plans and requirements.
UNITED STATES AIR FORCE Tinker Air Force Base, OK May 2001 – January 2005

Superintendent of Integration and Testing and Instructor Flight Engineer. Responsible to the commander for implementation of programs introduced to E-3 aircraft. Supervised as many as 15 people on duties required to operate as a Computer Maintenance Display Technician, Airborne Radar Technician, and Communications Technician. Managed programs and personnel, involving things such as computerized performance data that related specifically to aircraft systems and aircraft performance and performed evaluations and inspections on personnel performing maintenance and on equipment undergoing inspections and maintenance. Administered flight checks and inspected flight-line and maintenance shops to ensure full compliance with all technical procedures and regulations. Evaluated facilities and procedures for the purpose of maintaining E-3 aircraft. To include airfield operations, runways strength, approach and departure procedures, bird watch conditions, runway condition reports, runway surface conditions, local weather procedures, snow removal, traffic patterns, deicing fluid runoff, and aircraft performance. As an instructor, I was responsible for teaching quarterly weapons systems to fellow engineers. Documented competition and testing of lesson for data collection, currency, and trend analysis. Documented discrepancies from test flights and tracked trends with test aircraft. Responsible for over 1 million dollars in Air Force Squadron inventory with no losses.

UNITED STATES AIR FORCE Tinker Air Force Base, OK May 2001 – May 2003

Operations Superintendent, Evaluator Flight Engineer. Supervised 20 people in daily operations of a flying squadron. Provided oversight and guidance for daily flying and training schedules of squadron members as well as planning and directing unit manning requirements, coordinating with wing and higher headquarters to address squadron manning issues and shortfalls. Responsible for promoting enlisted personnel to various leadership positions, while directly supervising eight Senior Enlisted leaders within the squadron. Established standards, enforced discipline, reviewed all enlisted performance reports and awards, and conducted individual counseling for all subordinates. Served as advisor to the commander and higher headquarters on personnel and quality of life issues as well as enlisted leadership, training, discipline, budget utilization, and other employment matters in addition to managing additional duties, career field progression, and classification actions for all personnel. Led training seminars for career development of subordinates as well as carrying out NCO duties and responsibilities. Responsible for planning and implementing programs and policies used to increase unit cohesion, morale, and esprit de corps.

LICENSURE/CERTIFICATIONS/TRAINING

Airframe and Powerplant License - 447741552
Private Pilot License - 447741552
Flight Engineer License - 447741552

Computer programs such as Outlook, Excel, Powerpoint and Word.
Leadership and Management Training
Supervisor Safety Training, July 2001

Below is a list of courses I feel I am qualified to instruct. This past year I have taught AVIA 3133, AVIA 1004, AVIA 2113. I would like to continue to instruct these course and add a few more to expand on knowledge of other subjects, possibly through Blackboard or continue in classroom. This would be a tremendous addition while pursuing doctorate. I have also filled in for other courses due to instructor absence.
AVIA 3293 Aviation Transportation
I have not taught this course, but feel qualified to instruct due to my 30 years in aviation in both a maintenance and operations capacity. I have worked with commercial airlines and feel I have a good grasp of their operations and how they must manage their business to be successful.

AVIA 2113 Aviation Management
During my time as a pilot and flight engineer, I was exposed to airports on a daily basis and continue today to work with the Boeing Company with sustainment of aircraft. Through this avenue I am working on and around airports and Air Force Bases every day. I have taught this course and find it entertaining and fulfilling to work with the students.

AVIA 3133 Aviation Administration
As a former aircraft maintenance specialist, I was responsible for the daily maintenance operation of assigned aircraft. Daily activities consist of records review, maintenance tasks, supervising subordinates, receiving and issuing assignments. During deployments I served as superintendent of maintenance ensuring safety, maintenance, and briefing commanders of aircraft status.
Daily management of aircraft and personnel to ensure proper disposition of all maintenance actions, documentation, parts, schedules, temporary duties and aircraft coverage.
After retirement and as lead quality assurance inspector, I worked with maintenance repair and overhaul facilities to oversee maintenance actions and release aircraft for flight. Worked with FAA on inspections and training for all employees and trained new hires on general maintenance procedures.
As a flight engineer and pilot, I have also been involved and experienced the procedures in working with and at an airport. Communications, NOTAMS, weather and ATC are all functions that I have worked with by virtue of being an aviator.

AVIA 3143 History of Aviation
I have been in the aviation business for 25 years and during that time and during many courses; I have studied aviation history associated with many of the legislation we have today. Courses in accident investigation and safety have all started with a review of history and how the rules came to what they are today.

AVIA 3173 Aviation Safety
I have a minor is aviation safety, combined with three license from the FAA that would not be issued if I had not exercise safety first. I have, during my studies written research papers in an effort to understand how to make aviation safer than it is today. One of my goals is to one day be an aviation safety inspector and that would not be possible if I did not take aviation safety very serious.
As a licensed pilot, flight engineer and airframe/powerplant mechanic, I have to be concerned with not only my safety but the safety of people around me. Throughout my training in aviation, safety has been the first rule to observe.

SFTY 4143 Safety Program Management
While in the military, I worked as a safety manager and as an evaluator flight engineer. Safety during these positions was at the forefront of every working task. On occasion, I was tasked to update or write procedures that would be implemented into the safety book or to write reports on an incident that occurred.
While working for Mesa Air Group, I was tasked with overseeing quality of work as well as safety on assigned aircraft at part 145 facilities. This required a continuity book on company safety procedures and contact list of safety personnel.
Within the safety program, I implemented procedures to deal with accidents, incidents, hazardous spills, disposal, PPE and buddy care.

**AVIA 1004 Primary Ground Instruction**
As a pilot and flight engineer, I was responsible for figuring aircraft performance, FAA regulations, evaluating weather for flight and understanding my health as to when safe to fly or not. Flight physiology as a crewmember and to understand what the body goes through when at altitude and possible lack of oxygen. I have attended altitude chamber courses and been tested in the chamber for signs of hypoxia. I have also attended water survival and land survival.

**AVIA 5153 Aircraft Accident Investigation**
I have been involved with accident investigation with the military and have taken several courses in the study of human factors, accident investigation, and aircraft operations and maintenance. I have been exposed to investigations in both operations and maintenance functions as a part of being a flight crew member and a maintenance inspector. As a party to an investigation, I was tasked to recreate action of a crew in the simulator for purpose of evaluation of crew actions. I was then to report the results to lead for inclusion in report.

I have been part of evaluation team to determine disposition of crewmembers after an incident. Evaluate training records, history, interview current associates and document finding to commanders for disposition.

**AVIA 5103 Aerospace Safety Program Development**
As a safety minor, evaluator and quality assurance inspector, one of my responsibilities was to ensure that the rules of safety were followed at all times. A safety program does require a rewrite or update based on new technologies or safety inputs from FAA or even a team member. The rules of safety are the most important or any program and must be identified before any task is started. The proper way is to ensure each person is aware of the safety rules and regulations and reporting procedures. Developing a safety program is one consistent way that the rules are applied evenly across the board with all workers and supervisors. It also provides a checklist for any incident or accident if one occurs. Development of such a program takes experience in the classroom and in the field and I feel I can bring these attributes to the academic environment.

**AVIA 5423 Applications in Crew Resource Management**
As a pilot, flight engineer and maintainer, I have attended several courses in crew resource management and have to work through emergency procedures on a aircraft with agencies such as ground control, maintenance operations and ATC. All these agencies bring a skill to what could be a bad situation if CRM is not utilized. Everyone has a unique attribute that can change the outcome of a bad situation. It is CRM and brings these skills in to help save a potential bad situation. I have attended courses and utilized these skills to satisfy a safe outcome.
CURRICULUM VITA

Drew Edward Spears  
Adjunct Professor Aviation Department  
FAA Repair Station #X2OR074B  
FAA Accountable Manager  
OC-ALC/QA  
72 MSS/DPEE, Bldg 201SE  
7751 1st, Suite 105  
Tinker AFB, OK., 73145-9148  
Office: (405) 734-0909  
Home: (405) 391-4093/Cell (405) 208-3424  
Fax: (405)733-2514  
drew.spears@us.af.mil / radarspears@aol.com

EDUCATION:

2010 MS Aerospace Administration and Logistics  
Southeastern Oklahoma State University

2009 BS Aviation Management – Aviation Maintenance  
Southeastern Oklahoma State University

ACADEMIC AND RELATED NON- ACADEMIC EXPERIENCE:

2012-Present - Adjunct Instructor  
Embry-Riddle Aeronautical University

2011-Present - Adjunct Instructor  
Southeastern Oklahoma State University

2016–Present – FAA Accountable Manager  
Tinker, AFB - OK Civil Service

2013-2016 - FAA Accountable (ALTN) Manager  
Tinker, AFB - OK Civil Service

2005-2013 - Aircraft Maintenance - Quality Assurance Specialist  
Tinker, AFB Civil Service

2005-2005 - Aircraft Quality Lead Inspector  
AAR Corporation

2005-2005 - Quality Assurance Manager  
Mundo-Tech Inc.
2004-2005 - C-130 Turboprop Inspector/Technician
L-3 Communication/Vertex

2002-2004 - Manufacturing Flightline Supervisor
Dassault Falcon Jet

1999-2002 - Materials/Flightline Quality/Production Supervisor
Ozark Aircraft Systems (OAS)

Pratt-Whitney PSD

1993-1997 - Line Mechanic 206 Bell Helicopter
Air Evac Medical Emergency

1989-1992 - Adjunct Instructor (Aviation Department)
St Philips Junior College (San Antonio, TX)

1972-1992 - Aircraft Maintenance Training Branch Chief - Maintenance Expeditor -
-Production Control Supervisor - Quality Assurance/Control -
Maintenance Operations Senior Controller, Aircraft Crew Chief, Jet
Engine Technician
United States Air Force

PROFESSIONAL INTERESTS:

Educator in Higher Education

SELECTED COMMITTEES AND SPECIAL ASSIGNMENTS:
2016- Present- KC-10 / KC-46 / Pratt & Whitney -117 engine Manager Tinker AFB, OK
2013-2016 – KC-10 / KC-46 / Pratt & Whitney -117 engine (ALTN Manager) Tinker AFB, OK
2009 2013 – PMEL Calibration / Lost Tool and Item Manager, Tinker AFB, OK
1978 -1985 - Safety Forum (chairman) Tinker AFB, OK
1980 -1985 - Foreign Object Damage (chairman) Tinker AFB, OK
1985- 1989 – Foreign Object Damage (chairman) RAF Alconbury, UK

AWARDS AND HONORS:
2016- Promotion
2015- Cash Award
2014– Cash Award
2013- Promotion
2012- Time off Award
2012– Cash Award
2012 - Notable Achievement Award
2011 - Letter/Certificate of Commendation
2011 - Time Off Award
2011 - Performance Award
2010 - Time Off Award
2009 - Maintenance Award KC-10
2008 - Time Off Award
2008 - Logistics Standardization Evaluation Team/Most Valuable Player Award
2007 - Notable Achievement Award
2006 - Notable Achievement Award
1987 - Master Technician Award

PROFESSIONAL MEMBERSHIPS:
Member of Benevolent and Protective Order of Elks (#1987)

EFFECTIVE TEACHING:
Aircraft Accident Investigation
Crew Resource Management
Aviation Safety
Aviation Administration
Aviation History
Aviation Safety
Aviation Management
FAA Part 145 Training Program
Return to Service (RTS) Program for F-117/ KC-10
Embry–Riddle Aeronautical University – Certificate of Appreciation
Production Management

PUBLICATIONS OR ARTISTIC ACHIEVEMENTS:
N/A

OTHER PROFESSIONAL ACTIVITIES:
N/A

GRANTS and CONTRACTS:
N/A

PROFESSIONAL SERVICE:
2015 - Embry Riddle Aeronautical University Aircraft Accident Investigation Course
2014 - Transportation Safety Institute Aircraft Accident Investigation Course
2012 - NFPA 70E Qualified Worker Awareness
2011 - AS9110 Internal/Lead Auditor Transition Training
2010 - Occupational Safety and Health (OSHA)
2010 - AS9110 RABQSA Certified Lead Auditor Training
2007 – Aircraft Weight and Balance
1980 - Airframe/Powerplant Certificate
Summary
Ken has over thirty-years experience with The Boeing Company supporting Military and Commercial Derivative Aircraft for the United States Air Force, Japanese Self Defense Forces and the Italian Air Force. He has worked as a Liaison Engineer (designing aircraft repairs), Reliability & Maintainability (R&M) Engineer and is the Director of Maintenance on Boeing’s FAA Part 125 Operators Certificate. He is currently the ASC2 Sustaining Engineering Manager supporting E-3, E-6, (E-7) Wedge Tail, Peace Eye, Peace Eagle and Military 707 Derivatives.

Experience
Ken has worked as the Product Support Manager responsible for development of business and technical strategies, goals and objectives to design and Integrated Support System adaptable to various Customer requirements integrating: Sustaining Engineering, Logistics Engineering, Field Support Services, Supply Chain Management, Training, Commercial Aircraft Services (CAS) and Technical Publications into tailored Support Packages to meet unique Customer needs.

Ken fielded a fleet of four KC-767 Tanker aircraft at Pratica di Mare AB in Rome Italy providing both Line and Heavy maintenance using a custom Low-Utilization Maintenance Program (LUMP) which re-packaged the Commercial maintenance Letter Checks (A and C-Checks) into Phase Checks that can all be performed at the Base level (O-Level) eliminating the need and expense to travel to a off-site Depot.

His recent accomplishments include starting and operating a FAA Part 125 Charter Airline within The Boeing Company. As the Director of Maintenance, Ken accelerated site activation to accept early aircraft arrival which included establishing a qualified Maintenance workforce, laying-in necessary Spares, Support Equipment, AGE and Tech Data, plus providing both Maintenance and Aircrew Training. This “Airline” safely operated a 234-passenger 767-200ER in routine daily service throughout Italy, Europe, Middle East and North Africa for over two-years with a 98+% Dispatch Reliability using Italian Air Force Pilots and Flight Attendants under direct FAA oversight.

Kens direct hands-on management coordinating, planning, scheduling, validating maintenance concepts, insuring availability of resources, verifying proper spares level (O,I or D), and validating that Tech Data supports the prescribed Maintenance Concept, have all been an invaluable experience insuring a truly Integrated Logistics Support program.

Sustaining Support Consolidation
Ken was the Lead Engineer consolidating the sustaining engineering support of the VIP/SAM Fleet (VC-25, E-4B, VC-137 & T-43) under an Umbrella Program in Oklahoma City. This involved identifying common systems and identifying one focal (engineer) across all multiple platforms. This method was applied to: airframe, engines, SB/ADs evaluation, Cockpit upgrades and Field Inquiries with great effectiveness, lowering our sustainment costs, and providing a better quality product to the Customer.

Other Boeing Experience
Previous hands-on work at Boeing include: R&M Engineer, Liaison Engineering Lead (on the VIP/SAM Fleet), Maintenance Scheduler/Planner and Studies & Analysis Lead Engineer. Ken is considered a Subject Matter Expert (SME) of Life Cycle Cost Modeling and Economic Analysis within The Boeing Company. Ken has several published articles on Life Cycle Cost modeling which is also the subject of his Doctorial dissertation.

Ken is currently the Functional Skill Captain for Product Support “GJ and GK” Skill Codes. This involves conducting one-on-one interviews identifying growth paths and coaching continuing education recommendations. Ken routinely consults the Hiring Managers insuring the appropriate skill Level is specified based on program requirements.
Ken retired from the USAF Reserves in 1997 after serving 4-years Active and 16-years in the active Reserves as a Flight Engineer with over 2,000 Flight Hours on the C-141 Starlifter. During his twenty-year military career in parallel to his Boeing career, he worked in aircraft Maintenance on the KC-135, as a Jet Engine mechanic and Flight Operations, serving in both the Pacific and European Theaters. Ken has the breadth of Product Support experience to earn the respect and communicate effectively with aircraft mechanics or Senior Executives interested in dissecting an economic Balance Sheet.

Ken serves as Adjunct Professor at Oklahoma Christian University and Southeastern Oklahoma State University teaching Graduate courses in: Logistics Management, Project Management, Supply Chain Management, Quantitative Methods and Leadership. Ken previously developed and taught the Life Cycle Customer Support Workshop (Economic Business Case Module) at the Boeing Leadership Center. Chair of the Self-Initiated Logistics Brown-Bag Study Group at Boeing OKC studying for Certified Professional Logistician exam.

Doctorate of Education in Aviation, Oklahoma State University
Masters of Natural and Applied Science in Aerospace Science, Oklahoma State University
Bachelor of Science in Mechanical Engineering, California State University Sacramento

Society of Logistics Engineers (SOLE), Society of Cost Estimating and Analysis (SCEA)
Consulting Editor, FAA Academy Journal of Aviation Research and Development
Federal Airframe and Powerplant Mechanics License (A&P License)
VITA
Kyle V. Thomas
November 14, 2016

Assistant Professor and Chief Flight Instructor
Professional Pilot Department
Aviation Sciences Institute
Southeastern Oklahoma State University
1405 N. 4th Avenue, Box 4136
Office: Eaker 101
(580) 745-3246
kthomas@se.edu

EDUCATION

Master of Administrative Studies
Southeastern Oklahoma State University
December 1995

Bachelor of Science
Double Major - Aviation/Business Management
Southeastern Oklahoma State University
May 1991

FAA CERTIFICATES, RATINGS and PRIVILEGES

- FAA Designated Pilot Examiner
- Master Flight Instructor Accreditation
- Flight Instructor-
  - Airplane Single and Multiengine Land
  - Instrument Airplane
- Airline Transport Pilot
  - Airplane Multiengine Land
- Commercial Pilot Certificate
  - Airplane Single-engine, Instrument Airplane
- 14 CFR part 141 Chief Flight Instructor privileges
  - Check Flight and Examination- March 12, 1996
- FAA Second Class Medical, no restrictions,
- Certified Test Center Supervisor, FAA Airmen Knowledge Exams
- FAASTeam Lead Representative, OKC Flight Standards District Office
FLIGHT EXPERIENCE

Total Flight Time: +4,200 hrs
Time as Flight Instructor: +3,500 hrs
Pilot in Command: +4,000 hrs
Sample of Aircraft Flown: BE35-C33, PA-32-300, PA-23, C-150/152, C-172, C-182, C-310R, C-401, C-414, B200, BE-C90

PROFESSIONAL EXPERIENCE

- FAA Designated Pilot Examiner
  Will Rogers Flight Standards District Office
  June 2016 - Present
- Chief Flight Instructor and Assistant Professor
  Aviation Sciences Institute
  August 1996 - Present
- Interim Department Chair and Chief Flight Instructor
  Department of Aerospace
  August 1997 – May 1998
- Interim Chief Flight Instructor
  Department of Aerospace
  March 1996 - August 1996
- Assistant Chief Flight Instructor
  Department of Aerospace
  December 1994 - March 1996
- Staff Flight Instructor
  Department of Aerospace
  March 1992 - December 1994

PROFESSIONAL ACTIVITY and DEVELOPMENT

- Women In Aviation, National Conference, Nashville TN 2016
- Women In Aviation, National Conference, Dallas 2015
- Women In Aviation, National Conference, Orlando FL 2014
- Women In Aviation, National Conference, Nashville TN 2013
- Summer Fellow, Vanderbilt University’s Peabody College of Education And Human Development, *Peabody Professional Institute for Higher Education Management*; 2011
- High Altitude and Pressurized Aircraft Endorsement, C-414 2009
- Lead Representative, Federal Aviation Safety Team (FAASTeam) 2009-Present
- Steering Committee, Oklahoma Area Flight Instructor Association 2009-2011
- Technically Advanced Aircraft Transition Course (G-1000), Cessna Aircraft Company, Independence Kansas 2008
- Master CFI Accreditation, National Association of Flight Instructors- 2006
Master CFI Accreditation, Required Renewal- 2008
Master CFI Accreditation, Required Renewal 2010
• Rules Committee, National Intercollegiate Flying Association, Region 6 2005
• Flight Instructor Renewal, FAA Practical Exam 2005
• Physiological Training, FAA, CAMI,OKC, OK 2003
• Aviation Safety Counselor, Aviation Safety Program-Flight Standards 2001-2005
District Office, Southwest Region

PUBLICATIONS AND PRESENTATIONS

2009 Thomas, K. V. (2009). Teach Beyond the Minimums. The Oklahoma Aviator, 27(6), 11
2006 Oklahoma Aviation Education Symposium, Oklahoma State University
Chaired a panel discussion: “Operational Issues in Collegiate Flight Programs, Safety, Security, & Sanity”
2005 Thomas, K.V., Hetsel, G., Analysis of a Grass Field Training Clinic, Oklahoma Aviation Education Symposium Proceedings, Oklahoma State University
2004 Thomas, K.V., Management of University Flight Instructors, Oklahoma Aviation Education Symposium Proceedings, Oklahoma State University
2003 Oklahoma Aviation Education Symposium, Oklahoma State University
Chaired a panel discussion on the following:
Program Outcomes Assessment in University Aviation
• Assessment - “14 CFR Part 141 in the college environment. How can we meet the requirements of 14 CFR Part 141 while satisfying the demands of an academic environment? Can part 141 and academia work together?”
2002 Oklahoma Aviation Education Symposium, Oklahoma State University
Chaired a panel discussion on the following subjects:
Flight Management
• “Appropriate actions regarding challenging students. What actions should be taken when it becomes necessary to discontinue a student’s flight training?”
• “The Ritalin Generation. Students on Ritalin do not qualify for first class medicals”
• “Flight School Security and compliance with N 8700.11 and N 8700.12”
• “Hangar Rash. Should we hold students responsible for damaged aircraft?”
Tenure of University Based Aviation Faculty – A Comparative Analysis,
Presented to the University Aviation Association by Dr. S. Alluisi.

1997 Anderson, S., Thomas, K.V., Tort Reform within the General Aviation Community: The
General Aviation Revitalization Act and Other Proposed Reform Measures
SWAFAD – Southern Academy of Legal Studies in Business New Orleans, LA
-not submitted for publication

COURSE ASSIGNMENTS

Classroom Instruction
AVIA-1004 Private Ground
AVIA-3284 Instrument Ground
AVIA-3362 Inst. Flight Instructor Ground

Flight Courses
AVIA-3164 Commercial Flying
AVIA-3321 Instrument Flying
AVIA-3241 Flight Instructor Flying
AVIA-3401 Inst. Flight Instructor Flying
AVIA-4600 Multi Engine Flying
AVIA-4631 AME Flight Instructor Flying

SERVICE TO UNIVERSITY and PROFESSION

• Faculty Grievance Committee 2015-2018
• Principal Director and Advisor, Region VI SAFECON Fall 2012
• Harvard Professional Development Program 2011
• Academic Appeals Committee 2011-2015
• Co developed G-1000 TAA transition seminar 2011
FAA Safety Team (FAAST), OKC Flight Standards District Office
• Authored Sections 5 and 8 of AABI Self Study 2007
• Organized Research & Program Review Committee 2006-2008
• Chair, SOSU Committee on Student Conduct 2005-2015
• University, Committee on Student Conduct: 2003-2015
• Faculty Senate, Committee on Committees 2002-2003
• University, Curriculum Committee: 2001-2006
• University, Student Personnel Policies Committee: 2001-2004
• Faculty Senate, Personnel Policies Committee 2001-2002
• Faculty Senate, Budget Committee: 2000-2001
• SOSU Faculty Senate: 2000-2003
• Testing Center Supervisor for all FAA Knowledge Exam 1998-present
• ASI, (Chair) Chief Ground Instructor Search Committee: 1997-1998
• ASI, Director/Chairman Search Committee: 1997-1998
• Numerous School of Business Committees and Teams 1997-present
• Aviation Alumni Awards Banquet 1997-present
COMMUNITY INVOLVEMENT

- Chair, Board of Deacons, First Presbyterian Church, Durant OK 2013
- Coach, Durant Youth Soccer Fall, 2009
- Assistant to the Chief Judge, Texoma 100 Air Race, April 2008
  - North Texas Regional Airport, Sherman Texas
- Ordained Elder, First Presbyterian Church, Durant Oklahoma 2004-Present
- Chair, Christian Education Committee, 2004-2007
  - First Presbyterian Church, Durant Oklahoma
- Durant Magnolia Festival, Hot Air Balloon Rally (Safety Officer): 1996-2005
- Coach, Durant Youth Basketball Association 2003-2004

FACULTY ADVISOR

2012-Present The Sierra Sierra Chapter of Women in Aviation International
1996-present Academic Advisor for Professional Pilot Majors
1996-1999 Alpha Eta Rho, International Aviation Fraternity
1999-2007 The Sierra Sierra Chapter of Women in Aviation International

PROFESSIONAL MEMBERSHIPS

- Women In Aviation, International
- University Aviation Association
- Society of Aviation and flight Educators
- Oklahoma Area Flight Instructor Association
- National Association of Flight Instructors

HONORS

2013 Recognized by Southeastern Oklahoma State University’s President’s Club as the outstanding Faculty Advisor for 2012-2013
2006 Recipient of the Faculty Senate Recognition Award for excellence in Teaching in the John Massey School of Business
2005 Nominated for the Faculty Senate Recognition Award for excellence in Teaching
2005 Nominated for the Faculty Senate Recognition Award for Service
2004 Nominated for the Faculty Senate Recognition Award for excellence in Teaching
2004 Recognized by Southeastern Oklahoma State University’s President’s Club as the outstanding Faculty Advisor for 2003-2004
2003 Nominated for the Faculty Senate Recognition Award for excellence in Teaching
I have over 15 years' experience in training, recognizing, evaluating, and controlling chemical, biological and physical hazards in the workplace, OSHA compliance, health and safety program development, health and safety training, and asbestos management. I have performed such services for private industry, government agencies, and military installations. I have been responsible for preparing site-specific safety and health plans, field audits, employee exposure monitoring, and conducting employee training. I have been responsible for providing health and safety support for a $31 million dollar design build project for the Corp of Engineers at Tinker Air Force Base.

Currently, I provide industrial hygiene support for the FAA at the Mike Monroney Aeronautical Center and work part time as an adjunct professor at Southeastern Oklahoma State University (SOSU).

**Employment**

**Asbestos**
- Asbestos Inspection, University, University of Central Oklahoma, Edmond, OK (Investigator)
- Asbestos Remediation Project, Department of Environmental Quality (DEQ) Court Ordered Remediation Project, Former BF Goodrich Tire Plant, Miami, OK (Air Sampling & Owner Representative during remediation projects)
- Asbestos Remediation Project, Transite removal on cooling towers, Western Farmers Electric, Hugo, OK (Air monitoring)
- Asbestos Operations and Maintenance, University of Central Oklahoma, Edmond, OK (Investigator)

**Respiratory Protection Program**
- Respiratory Protection Program, Mike Monroney Aeronautical Center, Oklahoma City, OK (Manage Program, Conduct Field Audits, Conduct Fit Testing, Evaluate Exposures for Respirator Selection)

**Bloodborne Pathogens**
- Exposure Control Plan (ECP), “First Responders/Security Personal ECP”, Mike Monroney Aeronautical Center Federal Aviation Administration, Oklahoma City, OK (Developed ECP procedures)
- Exposure Control Plan (ECP), “Plumbers ECP”, Mike Monroney Aeronautical Center Federal Aviation Administration, Oklahoma City, OK (Developed ECP procedures)
CURRICULUM VITAE
Damon Thompson, CSP
Industrial Hygienist/Safety Manager/Adjunct Professor
629 Cross Timbers Dr.
Moore OK, 73160
Phone 405-735-8334
Email damon_thompson@att.net

- Exposure Control Plan (ECP), “Laboratory Activities ECP”, Mike Monroney Aeronautical Center Federal Aviation Administration, Oklahoma City, OK (Developed ECP procedures)

Chemical Exposure

- Industrial Hygiene Investigation, “Job Safety Analysis”, Mike Monroney Aeronautical Center Federal Aviation Administration, Oklahoma City, OK

- Industrial Hygiene Investigation, “Waste Anesthesia Gas and Laboratory Chemical Assessment”, University of Oklahoma Teaching Hospital, Oklahoma City, OK

Hazardous Materials

- Hazardous Material Management, Evaluation and Inspection, Asbestos, Radon, Lead-Based Paint, Mike Monroney Aeronautical Center Federal Aviation Administration, Oklahoma City, OK (Technical Support)

- Hazardous Material Management, Evaluation and Inspection, Lead-Based Paint, Oklahoma Gas & Electric, Lead Based Paint Inspection of Power Plants, Statewide, OK (Lead Investigator)

- Hazardous Material Management, Evaluation and Inspection, Lead-Based Paint Inspections and Risk Assessments, City of Norman Housing Authority, Norman, OK (Inspector/Risk Assessor)

- Hazardous Material Management, Evaluation and Inspection, Lead-Based Paint Inspections and Risk Assessments, City of Edmond Housing Authority, Edmond, OK (Inspector/Risk Assessor)

Noise

- Noise Monitoring Study, Plywood Manufacturer, Southeaster OK (Evaluation, Exposure Monitoring, Recommendations)

- Noise Monitoring Studies, Mike Monroney Aeronautical Center (Evaluation, Exposure Monitoring, Recommendations)

Health and Safety Plans

- Site Specific Health and Safety Plan, Mike Monroney Aeronautical Center Federal Aviation Administration, Oklahoma City, OK, Hazardous Energy Control (Technical Support and plan development)

- Site Specific Health and Safety Plan, Mike Monroney Aeronautical Center Federal Aviation Administration, Oklahoma City, OK, Machine Guarding (Technical Support and plan development)
CURRICULUM VITAE
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Moore OK, 73160
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Email damon_thompson@att.net

- Site Specific Health and Safety Plan, Mike Monroney Aeronautical Center Federal Aviation Administration, Oklahoma City, OK, Electrical Safety (Technical Support and plan development)

Incident Investigations

- Electrical Incident Investigation, Mike Monroney Aeronautical Center Federal Aviation Administration, Oklahoma City, OK, Electrical Shock Incident. Conducted an investigation following an incident in the Engine Generator Class Laboratory. A student in the class received a shock from a 120 volt circuit during one of the laboratory exercises. An investigation was conducted and a comprehensive report was prepared detailing the causative factors and conditions leading up to the incident. The report included recommendations for actions and procedures to avoid a repeat of the incident. (Principle Investigator)

- Electrical Incident Investigation, Mike Monroney Aeronautical Center Federal Aviation Administration, Oklahoma City, OK, Electrical Short. Conducted an investigation following three separate incidents were electrical shorts occurred. Each of the three electrical short incidents involved a single electrician working for a contract company. An investigation was conducted and a comprehensive report was prepared detailing the causative factors and conditions leading up to the incident. The report included recommendations for actions and procedures to avoid a repeat of the incident. (Principle Investigator)

Indoor Air Quality

- Indoor Air Quality Investigation, Hertz Corporation, Oklahoma City, OK, Quarterly detailed indoor air quality inspections were performed to assess employee exposure to dust, mold, and other environmental contaminants. Extensive sampling for culturable and non-culturable mold was conducted throughout the five buildings, which Hertz Corporation operated within. At the conclusion of each assessment a report-of-findings was prepared providing a summary of the mold sampling results and recommendations for improving indoor air quality within the facility. (Project Manager)

- Indoor Air Quality Investigation, Oklahoma County Jail, Oklahoma City, OK, Conducted a detailed indoor air quality assessment to evaluate employee and inmate exposure to biological contaminants following a severe backup of the buildings sewer system, which partially flooded the basement. Airborne samples were collected on all of the floors of the jail to evaluate for mold and bacterial contamination. Bulk samples were collected of water damaged building materials and contents, such as furniture, file cabinets, etc., which were assessed for mold and bacterial contamination. Surface wipe samples were collected from building surfaces and tested for biological contamination. (Investigator)
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Industrial Hygienist/Safety Manager/Adjunct Professor
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Moore OK, 73160
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Email damon_thompson@att.net

- **Indoor Air Quality Investigation**, Edmond Public Schools, Edmond, OK. Conducted mold assessments on classrooms with water damage to assess room for mold contamination. (Investigator)

**Job Safety Analysis**

- **Job Safety Analysis**, Mike Monroney Aeronautical Center Federal Aviation Administration, Oklahoma City, OK, “Venipuncture Procedure”, (Technical Assistance)

- **Job Safety Analysis**, Mike Monroney Aeronautical Center Federal Aviation Administration, Oklahoma City, OK, “Welding and Cutting”, (Technical Assistance)

- **Job Safety Analysis**, Mike Monroney Aeronautical Center Federal Aviation Administration, Oklahoma City, OK, “Branson Cleaner”, (Technical Assistance)

**Safety Inspections and Assessments**

- **Annual Safety and Health Inspection**, Mike Monroney Aeronautical Center Federal Aviation Administration, Oklahoma City, OK. Conducted safety and health inspections of Federal facility in accordance with OSHA 1910.60. Prepared reports documenting findings and recommendations for abatement. (Investigator)

- **Annual Increased Risk Safety and Health Inspection**, Mike Monroney Aeronautical Center Federal Aviation Administration, Oklahoma City, OK. Conducted safety and health inspections of Federal facility in accordance with OSHA 1910.60. Prepared reports documenting findings and recommendations for abatement. (Investigator)

- **Material Wall Lift Safety Assessment**, Mike Monroney Aeronautical Center Federal Aviation Administration, Oklahoma City, OK.

**Safety and Health Training/Program Development**

- **Adjunct Professor**, Oklahoma State University, Oklahoma City, OK.

- **Adjunct Professor**, Southeastern Oklahoma State University

- **Hazardous Energy Control (Lockout/Tagout) Program Development and Training**, Mike Monroney Aeronautical Center Federal Aviation Administration, Oklahoma City, OK.

- **Asbestos Awareness Training**, Oklahoma University Teaching Hospital, Oklahoma City, OK.

- **Care and Use of Electrical Safety Gloves**, Mike Monroney Aeronautical Center Federal Aviation Administration, Oklahoma City, OK.

- **HAZWOPER Refresher Training**, Moore Norman Vo-tech, Norman, OK.
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Air Pollution
• Toxic Air Emissions Inventory, Trailer Manufacturer, Madil, OK (Technical Support)
• Toxic Air Emissions Inventory, Trailer Manufacturer, Kingston, OK (Technical Support)

Employment
2011-Present   Lockheed Martin, Oklahoma City, OK
Position: Industrial Hygienist

2010-2011 Native Energy & Technology, Oklahoma City, OK
Position: Industrial Hygienist

2007-2010 The Benham Companies, LLC, Infrastructure & Environment (Science Applications International Corporation), Norman, OK
Position: Industrial Hygienist

2004 to 2007 J M Waller and Associates and Lockheed Martin, Oklahoma City, OK, provide environmental health and safety services to Mike Monroney Aeronautical Center Federal Aviation Administration
Position: Environmental, Occupational, Safety and Health Project Manager

Position: Industrial Hygienist

Education
B.S./1996/Environmental Health Science/East Central University
Associate of Applied Science/Electronics/1991/Oklahoma City Community College
Associate of Science in Mathematics/1998/Oklahoma City Community College

Special Training
NIOSH 582e Sampling & Evaluating Airborne Asbestos Dust
Asbestos Inspector/Asbestos Management Planner
Asbestos Project Designer
40 Hour HAZWOPER
McCrone Research Institute “Indoor Air Quality: Microscopy of Pollen, Spores & Dust”, 2001
OSHA Construction Outreach Trainer #C0041845
OSHA 30 Hour #600216387
OSHA 10 Hour #001362890
ASTM Environmental Site Assessments for Commercial Real Estate

SOCIETIES/REGISTRATIONS/CERTIFICATIONS
Certified Safety Professional (#19031), 2006
American Industrial Hygiene Association (AIHA) - Oklahoma Local Chapter
American Society of Safety Engineers (ASSE)
CURRICULUM VITAE
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Industrial Hygienist/Safety Manager/Adjunct Professor
629 Cross Timbers Dr.
Moore OK, 73160
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EFFECTIVE TEACHING

Courses Taught
SFTY 4143- Safety Program Management (SOSU)
SFTY 2003 - Introduction to Fire Science (SOSU)
SFTY 4163 – Fundamentals of Safety Engineering and Ergonomics (SOSU)
SFTY 4183 – Hazardous Materials & Waste Management (SOSU)
FPST/PTDT 1313 – Introduction to Occupational Safety (OSU-OKC)
FPST/PTDT 1513 – OSHA Regulations and Safety Codes (OSU-OKC)
OSHA 30 Hour Construction Safety (TEEX)
CURRICULUM VITAE
August 9, 2016

John G. Van Bebber, Jr.
Assistant Professor, Aviation Sciences Institute
Southeastern Oklahoma State University
1405 N. 4th Avenue, PMB 4136
Durant, Oklahoma 74701-0609
Office: 580-745-3242
Fax: 580-745-3268
jvanbebber@se.edu

EDUCATION

2007 M.S. Aerospace Administration Southeastern Oklahoma State University
1972 B.S.E.E. Electrical Engineering University of Arkansas

Military Schools:
Air Force Undergraduate Pilot Training
C-141 Initial Qualification
C-141 Aircraft Commander Training

ACADEMIC AND RELATED NON-ACADEMIC EXPERIENCE

2008-Present Assistant Professor, Southeastern Oklahoma State
1977-2005 Pilot, Delta Airlines, Inc., Atlanta, GA
2005-2005 Captain B-777 International
2003-2005 Captain B-767 ER International
2000-2003 Captain B-767, B-757
1988-2000 Captain MD-88, MD-90
1988-1988 First Officer B-767, B-757
1984-1988 First Officer B-727
1977-1984 Second Officer B-727
1972-1978 Pilot, United States Air Force and United States Air Force Reserves, Charleston AFB, SC
C-141 Aircraft Commander, First pilot, Co-pilot
Mission scheduler for pilots
Command Post duty officer
Undergraduate Pilot Training, U.S. Air Force, Williams AFB
**Flight Experience Aircraft:**
Cessna 150, 172, Piper Arrow, Citabria, Apache, T-37, T-38, C-141, B-727-100, B-727-200, MD-88, MD-90, DC-9, B-757, B-767-200, B-767-300, B-767 ER, B-777-200
Total flight time: 18,759 hours

**FAA Ratings:**
Airline Transport Pilot (1977)
Airplane Multiengine Land: DC-9, B-727, B757, B-767, B-777
Commercial: Airplane Single Engine Land
Flight Engineer: Turbojet
Advanced Ground Instructor (2009)

**PROFESSIONAL INTERESTS:**
Flight Simulation Training at all levels
Technology in the Classroom
Safety Management System implementation at Southeastern Aviation

**SELECTED COMMITTEES AND SPECIAL ASSIGNMENTS**

**University**
- 2016-present Institutional Care and Use of Animals Committee
- 2016-present Institutional Review Board
- 2011-2013 SE Curriculum Committee
- 2011-2016 SE Human Subjects Research Committee
- 2011-2014 SE JMSOB Assessment Committee
- 2008-2010 SE Faculty Senate (two committees)
- 2009-present SE General Education Council
- 2009-present Southeastern Aviation Safety Manager
- 2009-present Southeastern Aviation Safety Committee Chairman
- 2009-present UAA Safety Committee
- 2009-present UAA Simulation Committee

**Community**
- 2012 National Incident Management System (NIMS) course training 100, 200, 300, and 400
- 1978-present Kiwanis International
  - Sherman Kiwanis AC Football Concessions Chairman (2014-present)
  - Sherman Kiwanis Bike Rally Chairman (2007-2009)
  - Sherman Kiwanis Vice President (2006)
  - Sherman Kiwanis Board (2005-2009)
  - Sherman High School Kiwanis Key Club Advisor (2002-2007)
- 2006-2007 St. Stephen’s Episcopal Church Vestry
- 1998-2009 Sherman Great Days of Service
Awards
2015  Sherman Kiwanis: Kiwanian of the Year
2015  Sherman Kiwanis: Legion of Honor: 25 years

PROFESSIONAL MEMBERSHIPS
2009-present  University Aviation Association: Safety Committee member
2009-present  University Aviation Association: Simulation Committee member
2005-present  Aircraft Owners and Pilots Association
1977-2005    Air Line Pilots Association
2008-present  FAA Safety Team,
2011-present  FAAST Representative

EFFECTIVE TEACHING

Courses taught and presently teaching:
Undergraduate courses:
  Aviation Transportation (AVIA 3293)
  Integrated Flight Management Technology and Commercial Operations (AVIA 3503)
  Aviation Safety (AVIA 3173)
  Advanced Aerodynamics (AVIA 3334)
  Aviation Meteorology (AVIA 3003)
  Advanced Aircraft Systems (AVIA 3233)
  Crew Resource Management (AVIA 4674)
  Multi-Engine Ground Instruction (AVIA 4562)

New Course Origination
(AVIA 3503)

PUBLICATIONS, PRESENTATIONS, OR ARTISTIC ACHIEVEMENTS

       University Flight Training Program: An Initial Look. 14th Annual Oklahoma Aerospace
       Education Research Symposium, Stillwater, OK
2010  Author of Southeastern Aviation Sciences Institute Safety Management System

OTHER PROFESSIONAL ACTIVITIES

2016  Director 3rd Annual Spring SE Aviation Career Seminar
2015  Director 1st Annual Fall SE Aviation Open House
2015  Director: 2nd Annual Spring SE Aviation Career Seminar
2014  Director: 1st Annual Spring SE Aviation Career Seminar
2013  Director: SE Aviation Leadership Seminar
2012  AABI accreditation: SE Aviation Sciences Institute B.S. Aviation Professional Pilot
2011  Participated in SE Aviation Sciences Institute Aviation Accreditation Board
      International (AABI) accreditation self-study (2011) (Section 9, Safety)
GRANTS and CONTRACTS

2008  CPAT Global (http://www.cpat.com/) I secured, at no cost to Southeastern, the B-737 NG Systems courseware. This is a computer based training courseware for our use for an indefinite time at an estimated value to Southeastern Aviation of $250,000.

PROFESSIONAL SERVICE

2011-2013  SE Curriculum Committee
2011-2016  SE Human Research Committee
2011-2014  SE JMSOB Assessment Committee
2008-2010  SE Faculty Senate (two committees)
2009-pesent  SE General Education Council
EDUCATION:

Southeastern Oklahoma State University
Master’s Degree: December 2009
Master of Science: Aerospace Logistics and Administration

Mid-America Christian University
Bachelor’s Degree: June 2005
Bachelor of Science: Management and Ethics
Honors: Cum Laude

ACADEMIC AND RELATED NON-ACADEMIC EXPERIENCE:

Southeastern Oklahoma State University
Adjunct
June 2015 – Present

Aerospace Marketing
1. Knowledge of and the understanding of the marketing environment in the aerospace industry
2. Knowledge of realistic solutions to aerospace marketing problems
3. Knowledge of how to reinforce the importance of using marketing strategies, modern tools and technique for today’s aerospace marketing environment
4. Knowledge of providing students with the techniques for identifying Aerospace Marketing uncertainties

Logistical Strategies in Aerospace Administration
1. Knowledge of the analytic model based approach for solving logistics and supply chain problems
2. Knowledge of how to reinforce the importance of using total supply chain costs in the analysis process
3. Knowledge on how to provide students with the techniques for measuring and managing supply chain uncertainty
4. Knowledge on how to introduce the idea of using segmentation and a portfolio of solutions, rather than a single approach, for real-world logistics problems.

Ethics of Decision Making
1. Knowledge on how to draw clear ethical lines to clarify student thinking and consistently guide right action in the Aerospace environment
2. Knowledge on how to generate creative alternatives to resolve dilemmas
3. Knowledge on how to identify potential compromises
4. Knowledge on how to respond skillfully and intelligently to the Aerospace environments inevitable ethical challenges
5. Knowledge on how to offer opportunities for students who are preparing for employment in the Aerospace Industry to examine and to practice the application of professional codes of ethics in the workplace

Logistics Management Specialist
Tinker Air Force Base Foreign Military Sales Financial Manager 430 SCMS/GUIA
December 15, 2013 to present

1. Knowledge of basic theories and principles of systems design, specifications development techniques; and an understanding of acquisition and maintenance requirements as well as organizational functions involved in logistical support.


3. Knowledge of system life cycle concepts and design as they apply to system research, development, and acquisition.

4. Plan, analyze, and coordinate a system or portion of a major system's acquisition and transfer into operational use, to include the identification and correlation of specific requirements for money, manpower, materiel, facilities, and services needed to support the program.

5. Develop and analyze data to determine logistic objectives and goals, identify support requirements (including funding, contract development, and other technical support requirements), and establish relationships between the participants involved in deploying the plan.

Contract/Program Management Specialist/Chief Contracting Officer Representative
Tinker Air Force Base Contract Support OC-ALC/OBWK Business Operations Office
February 24, 2013 to December 14, 2013

1. Knowledge of Federal Acquisition laws, regulations, policies and procedures pertaining to contract services, to include requirement development, acquisition processes and procedures, contract administration, and quality assurance techniques.

2. Knowledge of government and private industry policies and practices related to business
management, industrial management, financial systems, technical concepts, and production practices. Ability to gather, analyze, and evaluate a variety of program information, such as commercial business practices, market conditions, offer acceptability, contractor acceptability, contractor responsibility and/or performance to determine acquisition strategy and sources.

3. Knowledge of the missions, roles, functions, organizational structures, and operation of the Department of Defense (DoD), Air Force (AF), and other entities that govern, interface with, and/or influence management control of proposed and ongoing service contracts. Makes sound judgments concerning program progress, and effectively communicate recommendations orally and in writing to higher organization management and contractors.

4. Ability to lead a team and/or individual members of a team ensuring the organization's strategic plan, mission, vision and values are communicated to the team and integrated into the teams' strategies, goals, objectives, work plans, and work products and services. Ability to advise/guide personnel and achieve organizational goals, objectives, and work plans.

5. Ability to establish and maintain good relationships with individuals and groups within the office as well as outside the immediate work unit and to be persuasive in representing the best interests of the government when dealing with personnel with highly divergent points of view.

6. Ability to plan, organize, analyze problems, conduct research, summarize results, make appropriate recommendations, and manage critical aspects of service contract requirements as related to the assigned functional area and meet deadlines.

Program Analyst Lead
Tinker Air Force Base Business Development Branch (Maintenance Wing) OC-ALC/OBP
April 29, 2009 to February 23, 2013

1. Knowledge and skill in the application of DoD, Joint, and AF management principles, concepts, and methodologies and management directives, concerns, procedures, guidance and policy.
2. Knowledge and skill in applying analytical and evaluative technique to the identification, consideration and resolution issues or problems concerning efficiency and effectiveness of program operations to devise organizational structuring options for complex, diverse organizations.
3. Accurately documents business development initiatives and produces well thought-out and developed proposals and conclusions in a timely manner.
4. Coordinates effective actions with all organizations having input or being affected by the initiatives.
5. Knowledge of standard safety and health practices and established policies and procedures.
6. Skill in conducting interviews with supervisors and employees to obtain information about organizational missions, function, and work procedures.
7. Provides effective, complex support services as they pertain to assigned programs or projects.
8. Provides effective advisory services in strategic planning actions to support changing environments.
9. Ensures assigned partnership agreements are accurately formulated, developed and implemented.
10. Accurately assesses all pertinent issues found during the review of assigned agreements.
11. Provides accurate information on partnership workload metrics in the area of assignment.

Industrial Engineer Technician Lead (IET)
Air Accessories, Avionics and Electronics Production Support Flight 550 CMMXS/MXDXAB
July 14, 2002 to April 29, 2009 (40+ hours per week)

1. Knowledge of the policies, practices, regulations and laws concerning the systems acquisition/logistics process and initiatives.
2. Knowledge of safety and security regulations, practices and procedures.
3. Knowledge of the mission, roles, functions, organizational structures, and operation of the DoD, AF, and organizations that govern, interface with and/or influence the systems acquisitions process.
4. Skill to lead, plan, organize and direct the functions and staff in critical aspects of development and production, support of systems, subsystems, or equipment and to coordinate various aspects of systems managements such as engineering, contracting, financial management, configuration, test and manufacturing.
5. Ability to communicate orally and in writing, clearly, concisely, and with technical accuracy.

2003 United States Department of Agriculture (USDA) Grant Writing Techniques

PROFESSIONAL INTERESTS:

Honor Development
Continuous Process Improvement
Supply Chain Management
Development of Rural Areas
Ensuring compliance with Security Assurance Programs (SAP) policy and directives
Antiquities
Master Gardening Techniques

SELECTED COMMITTEES AND SPECIAL ASSIGNMENTS:

Technical Order Data Office Workshop 2016
Financial Management for Foreign Military Sales 2015
Defense Institute of Security Assistance Management 2014
Management of Security Cooperation for Foreign Military Sales 2014
Intermediate Leadership Development Program 2013
Supply Chain Fundamentals 2013
Fundamentals of Logistics 2013
Employee Enhancement Program 2010
Security Cooperation Management CONUS Course and Case Management 2014
Lead Transformation Depot Partnering for Avionics 2008
Board Member of the Wanette Community Development Authority 1999 – 2011
President of Wanette Women’s Club 2002 – 2011
Board Member of the South Pottawatomie Development Authority 2001-2003

AWARDS AND HONORS:

Certificate of Appreciation - Contribution and Knowledge 2014
Certificate of Appreciation - Leading by Example 2014
Directors Award 2008
Employee of the Month 2014
Employee of the Quarter 2007, 2015
Employee of the Year 2007
Air Force Outstanding Unit Award 2008
Outstanding Performance and Efforts for the AFMC Unit Compliance Inspection 2006

PUBLICATIONS OR ARTISTIC ACHIEVEMENTS:

Various small town articles for the Canadian Sands South Pottawatomie County Newspaper
James A. Weselek
4708 Sandy Oak Ln. ● Newalla, OK 74857 ● (405) 702-2835 ● james.weselek@gmail.com

Education and Certifications:

MBA, Business Administration, Mid-America Christian University, 2013
MS, Aerospace Administration & Logistics, Southeastern Oklahoma State University, 2010
BS, Professional Aeronautics, Embry-Riddle Aeronautical University, 2001
Aviation Safety Certificate, Embry-Riddle Aeronautical University, 2000

Summary of Qualifications:

• Outstanding training, leadership, and communication skills; 15 years management experience
• Adept at tracking, inventorying, managing aircraft and engine parts, equipment, and personnel
• Team player with meticulous attention to detail and safety standards; ISO 9100 compliant

Instructional Experience:

Adjunct Professor, Southeastern Oklahoma State University, 2015-Present Tinker AFB, OK
• Current on-ground adjunct instructor for BS in Aviation Management and MS in Aerospace Administration & Logistics; programs; certified to teach AVIA 5213 Aerospace Economics and Fiscal Controls, AVIA 5313 Aerospace Finance, MNGT 3113 Management and Organizational Behavior, MNGT 3533 Human Resource Management, and backup for Logistics courses

Adjunct Professor, Webster University, George Herbert Walker School of Business & Technology, 2015-Present, Tinker AFB, OK
• Current on-ground adjunct instructor for MA in Leadership & Management program; certified to teach MNGT 5000 – Management, MNGT 5590 - Organizational Behavior, MNGT 5650 - Management Strategy and MNGT 5670 - Management & Leadership

Professional Experience:

Lead Field Engineer, General Electric Aviation, 2014-Present, Tinker AFB, OK
• Provide technical advice and assistance to the operation, maintenance, repair, logistic support, and installation of applicable products
• Assist customer with management, including; work scope reviews, maintenance scheduling, and staggering workloads
• Apply Six Sigma analytical tools to assist the customer with root cause analysis, issue resolution, and trend analysis
• Recommend and develop local informal training programs in support of maintenance and overhaul tasks on the assigned engine program
• Demonstrate best methods of disassembling, repairing, and assembling engines and engine components
• Deliver technical assistance in the identification of and instructions on the use of special tools and handling equipment associated with the related equipment/system
• Understand the operation of business tools to assist the customer in areas such as; spare parts ordering, issue resolution, provisioning, and other business processes
• Serve as liaison between customer and GE factory personnel related to maintenance, logistical, and operational tasks on the assigned engine program

Production Operations Manager, F119 Heavy Maintenance Center: 2009-2014, Pratt & Whitney, Tinker AFB, OK
• Supervised 30 indirect reports perform scheduled/unscheduled depot level maintenance of F119-100 modules
• Managed a $8M sales plan, $.7M EBIT target with 98% on-time delivery rate
• Collaborated with engine managers and engineering to develop work scope requirements
• Coordinated logistics and supply chain support activities of internal and external agencies
• Directed daily operations with planned work methods and production schedules
• Established maintenance priorities based on production needs and resources
• Identified improvement areas; performed monetary feasibility studies and initiated immediate action plans; utilized continuous improvement tools and Lean concepts
• Practiced and ensured compliance with EH&S safety policies and standards
• Developed CAPITAL expenditure targets and executed to plan/budget
• Provided input to senior leadership team regarding personnel, production, & budgetary concerns

Equipment Specialist: 2007-2009, Oklahoma City Air Logistics Center, Tinker AFB, OK
• Functioned as subject matter expert for F100, T700, and TF34 engine hardware
• Forecasted spares requirements based on field usage and flying hour projections
• Monitored and reviewed Material Review Board actions; conducted investigations/made dispositions
• Solved complex maintenance anomalies utilizing layout drawings, schematics, specifications, and operating characteristics of aircraft engines and equipment
• Facilitated Deep Look material reviews of hardware levels, repairs, and buys
• Developed, reviewed, and implemented technical improvements/changes

• Developed short-term and long-term schedules for aircraft depot modifications
• Networked with active duty Air Force, reserves, and guard units for streamlined flow
• Collaborated with Special Programs Office to meet objectives, timelines, and cost
• Chaired weekly production meetings and conference calls

• Supervised 200 technicians in aircraft maintenance operations
• Managed 21 aircraft and four maintenance specialties with assets totaling $785M
• Conducted performance reviews with subordinates and set performance standards and goals
• Directed daily operations of three production units with planned work methods and schedules
• Inspected, repaired, and rebuilt parts and equipment to meet production goals
• Analyzed, isolated, and supervised the repair of system malfunctions
• Performed line maintenance on C-5, C-17, C-141, F-16, and KC-135 aircraft and aircraft engines
• Performed intermediate maintenance on F100-220/229 and F110-100/129 engines and modules
• Managed F110 Borescope Program; served as Maintenance Group Borescope Certifier
• Maintained and operated aircraft engine test stands, test equipment, and test facilities
• Inspected and evaluated personnel; identified and corrected deficiencies in accordance with quality assurance standards
KENNETH JAMES WIMER, Jr.
Adjunct Faculty – Aviation Sciences Institute
1405 North 4th Avenue PMB 4236
Durant, Oklahoma 74701-0609
Home: (405) 386-3294
Cell: (405) 250-8563
Work: (405) 736-3226
Kjwimer56@dobsonteleteleco.com
Kenneth.wimer@us.af.mil

EDUCATION:

Southeastern University Durant, OK United States
MASTER’s DEGREE: 12/2008
GPA: 4 of 4
MAJOR: AEROSPACE ADMINISTRATION AND LOGISTICS

Oklahoma City University Oklahoma City, OK United States
Bachelor’s Degree: 08/2000
Credits Earned: 124 Semester hours, GPA 3.28
Major: Technical Management

Community College of the Air Force Maxwell AFB, AL United States
Associate's Degree: 10/1996
Major: Human Resource Management Minor: Personnel Administration

Community College of the Air Force Maxwell AFB, AL United States
Associate's Degree: 05/1996
Major: Avionics Systems Technology

ACADEMIC AND RELATED NON-ACADEMIC EXPERIENCE:

Branch Chief, Technical Order Management Branch 20014 – Present
Department of the Air Force Civil Service
I am the second-line supervisor of 47 personnel who manage the Technical Order support to US Air
Force and Foreign Military Sales to 79 different countries worldwide. I am responsible for Budget
oversight of funds use by personnel supporting Branch processes. I coordinate personnel requirements,
ensure training of personnel, and provide mentorship. I manage diverse teams consisting of multiple
disciplines providing varying support processes to customers worldwide using Supply Chain Logistics
principles, systems engineering and acquisition processes.

Section Supervisor, Publications Systems Specialist 2010 – 2014
Department of the Air Force Civil Service
I was the first level supervisor for personnel managing the Automated Computer Program
Identification Number System (ACPINS), the Security Assistance Technical Order Database
System, and the Joint Munitions Effectiveness Manuals (JMEMs) for the Department of Defense,
US Intelligence Agencies, and select Foreign Government Agencies to include Foreign Intelligence, Foreign Militaries, and Foreign contractors working for the DOD. I managed a diverse team consisting of multiple disciplines responsible the AF central processing systems for US Air Force and Foreign Military non-nuclear TO requests, TO metadata, requisition, distribution, and billing for all AF systems that include aircraft, engines, missiles, support equipment, calibration equipment and test stands, and munitions technical orders.

Program Analyst 2006 – 2010
Department of the Air Force Civil Service
I provided advisory services to the Plans and Programs Directorate and appropriate Oklahoma City Air Logistics Center activities on a regular basis on issues affecting Center operations. I accomplished various studies relating to procedures, policies, and practices within the Directorate; developed viable recommendations and solutions; presented finalized products to the Director, staff, other Directorates, and the Center Commander via written correspondence or briefings. I managed the Comprehensive Air Force Technical Order Program for the Center. I led representatives from each Major Weapons System in preparation of their respective program funding requirements documents and provided a single point of contact for review. I conducted one-on-one training with each program funding planner. I led the Center TO management effort to perform data cleanup in preparation for transition to the Product Lifecycle Management initiative.

Public Affairs Specialist 2005 - 2006
Department of the Air Force Civil Service
I planned, organized, and conducted community relations activities designed to promote and enhance positive relations between the 552 Air Control Wing and surrounding communities. I established and developed a thorough working knowledge of and an effective working relationship with community leaders and key local elected officials in 9 different Oklahoma City metropolitan and surrounding cities. I routinely wrote articles for publication concerning community affairs for the local wing magazine, “The Eyes of the Eagle” and the local base newspaper, “The Tinker Take-Off.”

Squadron Superintendent 2001 – 2005
US Air Force
I managed the utilization of 149 enlisted aircrew and support personnel in one of only four operational airborne air control squadrons assigned to Tinker AFB. I established procedures to analyze training requirements, ensured training was accomplished, and directed effective employment of all newly assessed squadron members. I advised organizational leadership on matters pertaining to leadership, management, training, maintenance of standards and discipline, budget, and employment matters. I monitored organizational members’ job progression utilizing performance indicators to ensure performance met prescribed standards. I initiated corrective action to include task analysis modification, manpower adjustments, technical directives, duration, and budget adjustments when required.

Superintendent of Standardization and Evaluations 2000 – 2001
US Air Force
I managed the enlisted aircrew portion of the Air Force’s largest Standardization and Evaluation Division providing inflight evaluations and standardization criteria to over 1400 aircrew. I was the
Lead enlisted member on evaluation teams responsible to plan, conduct, and evaluate exercise scenarios designed to test the mission readiness of the AWACS Wing and its ability to support world-wide contingency operations.

Operations Superintendent 1998 - 2000
US Air Force
I was responsible for the day-to-day execution of the Air Force's largest Programmed Flying Training program. I ensured qualified military and civilian contractor instructors performed combat mission readiness training for all recently qualified E-3 Sentry (AWACS) aircrew. I oversaw the annual budget requirements to ensure the issue of all basic flying equipment to new aviators.

First Sergeant 1993 – 1998
US Air Force
I was responsible to the commander for the health, morale, welfare, and discipline of personnel assigned. I ensured all personnel were properly supported to meet personal, family, training, and administrative needs.

Student Registrar 1991 – 1993
US Air Force
I was responsible for ensuring approximately 300 newly assessed aircrew member candidates annually had the proper prerequisite training prior to beginning positional classroom academic and in-flight training. If students did not have the required prerequisites, I coordinated with higher headquarters to obtain funding and scheduled student(s) as required. I managed the US Air Force’s largest Programmed Flying Training program student pipeline to ensure proper sequencing of students into various classes required to support 3 US based and 2 overseas based operational squadrons.

Superintendent of Technician Training 1989 – 1991
US Air Force
I oversaw the training development and delivery of instruction to more than 30 Instructors providing training to an average of 50 students annually. Instructors’ encompassed 4 different technical specialties utilized in an airborne environment onboard the E-3 Airborne Warning and Control Systems aircraft.

Instructor Airborne Radar Technician 1984 – 1989
US Air Force (Assigned to NATO)
I taught students in a one-on-one airborne environment in areas such as radar system operations, in-flight maintenance, crew communications, crew resource management, inflight safety, and ground and emergency procedures. I was hand-picked to stand-up the first of its kind Continuation Training Program designed to enhance the already established baseline knowledge of fully qualified crewmembers. This training utilized both academic classroom instruction as well as a ground-based simulator to provide specialized training on areas where students had a demonstrated weakness. Lesson plans were developed based on Criterion Referenced Instruction as most training was technical troubleshooting which required demonstration and performance assessments.

Instructor Airborne Radar Technician 1982 - 1984
US Air Force Instructional Systems Design certified
Taught Radar Theory of Operation in an academic environment to a class of approximately 6 to 8 students approximately every 90 days. Material included principles of Doppler radar, principles of Pulse radar, principles of Identification Friend or Foe radar, principles of high voltage transmitters, principles of Klystron Power Amplifiers, principles of Stabilized Local Oscillator frequency generation, planner array antenna and waveguide design and operations, Analog receiver and digital receiver theory of operations, Digital Range resolution and system interface using binary, octal, and hexadecimal numbering systems. Additionally, I taught students in a one-on-one airborne environment in areas such as radar system operations, in-flight maintenance, crew communications, crew resource management, inflight safety, and ground and emergency procedures. I developed syllabi, course lesson plans, student assessments such as written examinations, performance and demonstration assessments, and I provide feedback and remedial training where applicable.

PROFESSIONAL INTERESTS:

Leadership and Management, Supply Chain Management, Aerospace Operations

SELECTED COMMITTEES AND SPECIAL ASSIGNMENTS:

<table>
<thead>
<tr>
<th>Year</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>Tinker Intermediate Leadership Development Program</td>
</tr>
<tr>
<td>2010</td>
<td>Tinker Supervisory Course</td>
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<tr>
<td>2008</td>
<td>Employee Enhancement Program</td>
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<tr>
<td>2005</td>
<td>Challenge to Leadership Workshop</td>
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<tr>
<td>2005</td>
<td>Air Force Journalist Workshop</td>
</tr>
</tbody>
</table>

AWARDS AND HONORS:

Military: Defense Meritorious Service Medal, Meritorious Service Medal (with 2 devices), Air Medal (with 3 devices), Joint Service Commendation Medal, Air Force Commendation Medal

Civilian: Civilian of the Quarter (two instances, two separate organizations), OC-ALC Commander’s Excellence in Action Award, OC-ALC Science, Engineering, and Technical Management Award nominee

PROFESSIONAL MEMBERSHIPS:

Air Force Sergeants Association – Member
Tinker Air Force Base Chiefs’ Group – Member

EFFECTIVE TEACHING:

AWACS Radar Theory of Operations for airborne radar technicians
AWACS Airborne Radar Troubleshooting Techniques
AWACS Airborne radar technician Continuity Training
Airborne Radar Technician troubleshooting via ground-based simulator
(Implementation of this training was the first of its kind in NATO AWACS)
Airborne Radar Technician Instructor of the Quarter – 1982 and 1983

PUBLICATIONS OR ARTISTIC ACHIEVEMENTS:


OTHER PROFESSIONAL ACTIVITIES:

- Invited guest speaker/emcee/briefer at various functions comprised of audiences ranging from Airmen to General Officers
- Invited to brief career progression opportunities to Airmen attending the Tinker First Term Assigned Center
- Invited guest speaker at Airmen Leadership School graduation ceremonies
- Invited guest speaker at Airmen Leadership School Chief's Seminar
- Emceed Wing Annual Awards banquet
- Briefed Enlisted Professional Development at Flight Commanders Course
- Briefed Counseling Techniques and Methods at NCO Professional Development Seminar
GENERAL INFORMATION
Instructor: Kyle Thomas
Office Number: Eaker Field 101
Office Hours: MWF 1300 to 1500
Or by appointment
Contact Info: 580-745-3246
kthomas@se.edu

PREREQUISITES AND SUPPORT COURSES
Private Flying (AVIA 1041)

COURSE GOALS
This course is a fundamental study of the technical subject matter necessary to operate safely as a Private Pilot. At its completion the student will be able to demonstrate knowledge of the fundamental elements of the following:

- Basic aerodynamics
- Aircraft performance
- Small aircraft systems
- Pertinent aviation regulations,
- The national airspace system
- Cross country flight planning and basic navigation
- Basic meteorology
- Aero medical factors and aeronautical decision making

COURSE OBJECTIVES and STUDENT OUTCOMES
1. Describe the fundamental principles of basic aerodynamics
   1.1. List and describe the function of all aircraft control surfaces.
   1.2. Explain the aerodynamics of ground effect and its causal affect on aircraft performance.
   1.3. Explain the aerodynamics of stalls and spins, including factors that influence stalling speeds, and proper stall and spin recover procedures.
   1.4. List and describe the four forces acting on an airplane in flight.
   1.5. Explain basic aerodynamic terms such as Angle of Attack, Chord Line, Relative Wind and Critical Angle of Attack
   1.6. List and explain turning tendencies resulting from a turning propeller… P-Factor, Slip Stream, Precession, and Torque.
1.7. Describe and explain the concept of Longitudinal, Lateral and Vertical Stability; and the influence of aircraft loading.

1.8. Explain and describe the causal relationships between Induced and Parasite Drag.
   
1.8.1. Explain and describe the Total drag Curve

1.9. Explain and describe Load Factor and all contributory issues.

2. Describe the fundamental operating principals of small aircraft systems
   
2.1. Explain the operating principle of small aircraft fuel systems, both fuel injected and carbureted.

2.2. Explain the operating principles of the carburetor heat system.
   
2.2.1. Explain and list the factors associated with the recognition, prevention, and recovery from carburetor ice.

2.3. Explain the operating principles and the function of small aircraft cabin heat systems and the possible hazards associated with its use.

2.4. Explain the operating principals and source of operation for all flight instruments, including the magnetic compass.

2.5. Explain the operating principles of aircraft electrical systems.
   
2.5.1. List and explain the proper procedures associate with electrical system exigencies.

3. Describe and explain the fundamental concepts of Aircraft Performance
   
3.1. Define, explain, and list all Vspeeds and the factors that cause them to vary.

3.2. Demonstrate a fundamental understanding of Wt and Balance and aircraft loading.

3.3. Demonstrate a primary understand of the various types of altitude, including Density Altitude, Pressure Altitude, True Altitude, and Absolute Altitude.

3.4. Demonstrate a primary understanding or the various types of airspeeds, including True Airspeed, Groundspeed, and Indicated Airspeed.

3.5. Demonstrate a functional understanding of performance charts including, takeoff and landing charts, crosswind component charts, and density altitude charts.

4. The student will demonstrate an acceptable working knowledge of the Aeronautical Information Manual and pertinent Aviation Regulations, including:
   
4.1. 14 CFR Parts 1, 43,61,91, and NTSB 830

5. The student will demonstrate an acceptable working knowledge on the national airspace system.
   
5.1. List and explain the regulatory requirements to operate in all levels of controlled and uncontrolled airspace

5.2. List and explain the regulatory requirements to operate in Special Use Airspaces.

6. The students will demonstrate an acceptable knowledge of VFR cross country flight planning through Pilotage, Dead Reckoning, and through the use of Navigations Aids.

7. Describe and explain the fundamental concepts of Aviation Meteorology and the Flying environment.
   
7.1. Describe and explain basic weather patterns and characteristics associated with the atmosphere and atmospheric circulation.

7.2. Describe and explain basic weather patterns and characteristics associated with atmospheric stability, including clouds and cloud formation.

7.3. Describe and explain basic weather patterns and characteristics of airmasses.
7.4. Describe and explain weather hazards including thunderstorms and their associated risks, and icing.

7.5. Demonstrate knowledge of go/no-go decisions based on the interpretation of various weather data sources, including METARS, TAFs, Pireps, FAs, FDs, Airmets and Sigmets, and Surface Analysis and Weather Depiction Charts.

8. The student will demonstrate an acceptable knowledge of Aviation Physiology and Aeronautical Decision Making.

8.1. The student will explain issues associated with day and night vision while flying, including optical illusions such as auto kinesis, false horizons, and various landing illusions

8.2. The student will demonstrate knowledge of spatial disorientation and motion sickness

8.3. The student will demonstrate a primary knowledge of and be able to list the symptoms of hypoxia and carbon monoxide poisoning.

TEXT and MATERIALS
FAA Pilot’s Handbook of Aeronautical Knowledge; ASA FAR/AIM; CSG Metal Computer (E6B); Rotating Plotter; DFW Sectional Chart; Pilot’s Operating Handbooks for C-150

STYLE/MODE OF TEACHING
Lecture and Audio-Visual Presentations

DROP AND ADD POLICY
Same as University- Please review.

Attendance Policy for FAR 141 ground training courses

The Federal Aviation Administration, per 14 CFR Part 141, requires a minimum contact time as stated in the approved curriculum. Therefore, class attendance is mandatory to qualify for course completion and to maintain part 141 eligibility. All class absences must be rectified on an hour for hour basis. The method by which students account for class absences will be at the discretion of the authorized instructor but may include instructional time with a Southeastern Flight Instructor. In this case, standard ground instruction fees will apply.

Attendance is very important. Announced and unannounced quizzes will be given frequently. All absences, except those having to do with pre-approved SOSU functions, will be considered unexcused. Additionally, make-up exams will be given in extenuating circumstances only. **You must have prior permission.** Also, credit will not be given for assignments that are turned in after their due date. There will be no make-up quizzes.

Do not be late for class and do not disturb class by entering after the session has begun. You will be asked to leave.
Grading System
A. Evaluation
1. 4 exams
2. 1 comprehensive final exam. (FAA Knowledge exam may be taken in lieu of the comprehensive final. This is strongly recommended)
3. Classroom laboratory projects, homework and quizzes.
4. Attendance grade will be decreased 10% for each unexcused absence. Please review FAA attendance policy

B. Weights
1. Exams 60%
2. Final 20%
3. Homework, quizzes 10%
4. Attendance 10%

C. Grading System
A= 90-100
B= 80-89
C= 70-79
D= 60-69
F= 0-59

Notice:
Per ASI Professional Pilot graduation requirements as outlined in the SOSU Undergraduate Catalog, no grade less than a C in this course is acceptable.

General Course Policies
A. Cheating and Plagiarism: Cheating and plagiarism are practices that will not be tolerated by SOSU, the Department of Aerospace, or the FAA. The Academic Honesty Policy for the School of Business defines cheating and plagiarism as:
1. Cheating- "Using unauthorized materials or giving or receiving unauthorized assistance during an examination or other exercise."
2. Plagiarism- "The use of another's ideas or words without acknowledgement."
Cheating and plagiarism will result in those actions outlined by the School of Business Academic Honesty Policy.
Counseling Center: Any student experiencing mental or emotional issues who desires free, confidential, clinical counseling is encouraged to contact the SE Counseling Center at (580) 745-2988 to schedule an appointment during normal working hours Monday-Friday, 8:00AM to 5:00PM. For after-hours mental health emergencies, please call SE Campus Police at (580) 745-2911 or the Mental Health Crisis Hotline at 1- (800) 522-1090.

Disability Accommodations: Any student needing special accommodations due to a disability should contact the Office of Compliance and Safety, Administration Building, Suite 311 or call (580) 745-3090 (TDD# 745–2704). It is the responsibility of each student who anticipates or experiences barriers to their academic experience to make an official request for disability related accommodations in a timely manner.

Equity and Non-Discrimination Statement: Southeastern Oklahoma State University, in compliance with all applicable federal and state laws and regulations, does not discriminate on the basis of race, color, religion, national origin, sex, age, disability, sexual orientation, gender identity, or status as a veteran in any of its policies, practices, procedures, or programs. This includes, but is not limited to: admissions, employment, financial aid, and educational services. Inquiries regarding non-discrimination and equity policies may be directed to: Michael Davis, Director of Compliance and Safety & Title IX Coordinator, (580) 745-3090, or mdavis@se.edu.
Very Tentative Schedule

STAGE ONE—HOW AN AIRPLANE WORKS

August
15  Lesson No. 1  During this lesson, the student will be introduced to the private pilot privileges and responsibilities, classification of aircraft, and qualifications of a private pilot.
17  Lesson No. 2  During this lesson, the student will be introduced to aerodynamics, aircraft control and stability
19  Continue lesson No. 2
22  Continue lesson No. 2
24  Lesson No. 3  During this lesson, the student will be introduced to the power plant and airplane
29  Continue lesson No. 3.  Class will meet at the Flight Operations Building, Eaker Field
26  Continue lesson No. 3
29  Lesson No 3 and 4
31  Lesson No. 4  During this lesson, the student will be introduced to the pitot-static system, vacuum system, magnetic compass, and gyroscopic instruments.

September
2   Continue lesson No. 4
5   Continue lesson No. 4
7
9   Lesson No. 5  During this lesson, the student will be introduced to the principles of weight and balance.  Bring your C-150 and C-152 operating handbooks.
12  Continue lesson No. 5
14  Lesson No. 6  During this lesson, the student will be introduced to the source of performance data, influence of air density on performance, calculating takeoff performance, climb performance, cruise performance, and landing performance.
16  Continue lesson No. 6
19  Stage One Examination

STAGE TWO—THE FLYING ENVIRONMENT, WEATHER
21  Lesson No. 1  During this lesson, the student will be introduced to airports, airspace, and local flying
23  Continue lesson No. 1
26
28  Lesson No. 2  During this lesson, the student will be introduced to the atmosphere, aviation weather, clouds, air masses and fronts
30  Continue lesson No. 2
October

3  **Lesson No. 3** During this lesson, the student will be introduced to the sources of weather information, weather charts, weather reports and forecasts, preflight weather briefings, and weather services.
7  Continue lesson No. 3
10  **Weather Exam**
12  Lesson No. 1 FAR/AIM Part 61
14  **Lesson No. 1 Bring your ASA FAR/AIM** During this lesson, the student will be introduced to flight information publications, including Federal Aviation Regulations.
17  Continue lesson No. 2
19  **FAR Examination**

STAGE THREE—NAVIGATION, MEDICAL ASPECTS, AND EMERGENCIES

24  **Lesson No. 1** During this lesson, the student will be introduced to the basics of air navigation, Bring DFW sectional, E6B and plotter
26  Continue lesson No. 1
28  Continue lesson No. 1
31  Continue lesson No. 1

November
2  Continue lesson No. 1
4  lesson 1
7  **Lesson No. 2** During this lesson, the student will be introduced to VOR navigation, ADF navigation, area navigation, radar assistance available to pilots and flight planning with radio navaids.
9  Continue lesson No. 2
11  **Lesson No. 3**
14  Continue lesson No. 3
16  Continue lesson No. 3
18  **Lesson No. 4 and No. 5** During this lesson, the student will be introduced to physiology of flight and airborne emergencies
21  **Cross-country Examination**
28  Review for final
30  Review for final

December
2  Review for final
5  **December 7 @ 0800, FINAL COMPREHENSIVE EXAMINATION**
GENERAL INFORMATION
Instructor:    George Jacox
Office Number:   Flight Operations, Eaker Field
Office Hours:   M-F, 1330 - 1500, or by appointment
Telephone Number:   580-745-3245

PREREQUISITES AND SUPPORT COURSES
AVIA 1004 and AVIA 1041

BRIEF COURSE OUTLINE
This course exposes the student to flight and regulatory requirements and skills necessary to function as a pilot.

TEXT MATERIALS
N/A

STYLE/MODE OF TEACHING
Fifteen hours of dual flight training and successfully pass five written exams.

DROP AND ADD POLICY
Same as University. Please review.

ATTENDANCE POLICY
Arranged class

LABORATORY
N/A

READING
Reading assignments are to prepare you for that class period and should be accomplished prior to the scheduled class.

EXAMINATION
There will be five examinations. The examinations will be a combination of multiple choice, matching, fill in the blanks, and essay questions.

GRADING PROCEEDURES
Examination #1  100 points  90 - 100% = P
Examination #2  100 points  80 - 89%   = P
Examination #3  100 points  70 - 79%   = P
Examination #4  100 points  69 - 69%   = F
Examination #5  100 points  <60      = F
500 points

The grade for the fifteen hours of flight training will be average into the examination grade.

TERM PAPER/PRESENTATION
N/A

CHEATING or PLAGIARISM
Cheating may be defined as using unauthorized materials or giving or receiving unauthorized materials or receiving unauthorized assistance during an examination or other academic exercise. Examples may include:

1. Copying the work of another student during an examination OR other academic exercise (including computer exercises), or permitting another student to copy one's work;
2. Taking an examination for another student, or allowing another student to take one's examination;
3. Possessing unauthorized notes, study sheets or other materials during an examination or other academic exercise;
4. Falsifying or tampering with examination results; and
5. Completing, copying, or using the results of any other student's computer assignments.

Plagiarism may be defined as the use of another's ideas or words without acknowledgement. Examples of plagiarism may include:

1. Failing to use quotation marks when quoting from a source;
2. Failing to document distinctive ideas from a source;
3. Fabrication or inventing sources.

**DISABILITIES ACT**
Any student needing special accommodations due to a disability should contact the Coordinator of Student Disability Services, Student Union, Suite 204 or call (580) 745-2254 (TDD# 745-2704). It is the responsibility of each student to make an official request to the Coordinator for accommodations.
GENERAL INFORMATION
Instructor: George Jacox
Office Number: Flight Operations, Eaker Field
Office Hours: M - F, 1400 - 1500, or by appointment
Telephone Number: 580-745-3245

PREREQUISITES AND SUPPORT COURSES
AVIA 1004

BRIEF COURSE OUTLINE
This course exposes the career-oriented student to flight and regulatory requirements and skills necessary to function in industry as a Commercial Pilot.

COURSE OBJECTIVE
The student will be able to compare and describe the information in Title 14 Part 1, 43, 61, 67, 91, 119, 135, 141 and Title 49 NTSB 830 and Part 1552.
Each student will describe the following information:
- Basic Aerodynamics
- Owner's handbooks and Flight Manuals
- Weight and balance
- Fundamental flight training maneuvers
- Aircraft systems and instruments

TEXT MATERIALS
Instrument/Commercial Manual, Jeppesen Sanderson
Flight Training Handbook, FAA
Current FAR/AIM book
Cessna C-172R POH
Cessna C-182RG POH

STYLE/MODE OF TEACHING
Lecture/Seminar/Presentations/Demonstrations/Class Handouts.

DROP AND ADD POLICY
Same as University. Please review.

Graduation Requirements
A minimum GPA of 2.5 is required in all Professional Pilot and Aviation Management Major-Minor degree requirements including specified general education requirements. In addition, no grade less than C in Professional Pilot ground courses is acceptable.

ATTENDANCE POLICY
Attendance is very important. Students are expected to attend all classes. Entering the classroom after the start of class is very disrupting and inconsiderate of your class mates. There is a 1% point deduction for being late. If you cannot get to class before the scheduled start time DO NOT COME! If you must leave during class time, be considerate! Unannounced quizzes will be given, and added to your final grade. All absences, except those having to do with pre-approved SOSU functions, will be considered unexcused.

Make-up exams will be given in extenuating circumstances only, and only with prior permission. Credit will not be given for assignments that are turned in after the due date. There will be no make-up quizzes. In the event of an absence, the student is responsible for scheduling a makeup lesson on all material covered in class. Attendance will be taken at the beginning of each class. Make-up quizzes will not be given.

Make-up exams will be given in **extenuating circumstances only, with prior permission.**

**LABORATORY**
N/A

**READING**
Reading assignments are to prepare you for that class period and should be accomplished prior to the scheduled class.

**EXAMINATION**
There will be three examinations. The examinations will be a combination of multiple choice, matching, fill in the blanks, and essay questions.

**GRADING PROCEDURES**

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<thead>
<tr>
<th></th>
<th>Points</th>
<th>Percentage</th>
<th>Grade</th>
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<tr>
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<td>Examination #2</td>
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<td>80 - 89%</td>
<td>B</td>
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<td>100</td>
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<td>60 - 69%</td>
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<tr>
<td>Total</td>
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<td>Less than 60</td>
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**Class Attendance/Participation**
You must be in class and Participate to receive the points. If you are not in class, you cannot participate. No more than three (3) unexcused absences.

**TERM PAPER/PRESENTATION**
n/a

**CHEATING or PLAGIARISM**
Goto Academic Policies page

**DISABILITIES ACT**
Any student needing special accommodations due to a disability should contact the Coordinator of Student Disability Services, Student Union, Suite 204 or call (580) 745-
2254 (TDD# 745-2704). It is the responsibility of each student to make an official request to the Coordinator for academic accommodations.

Lecture Schedule

<table>
<thead>
<tr>
<th>Class period</th>
<th>Lecture Content</th>
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<tbody>
<tr>
<td>January 13</td>
<td>Introduction-Stage I Lesson 1/2</td>
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<tr>
<td>January 18</td>
<td>Stage I Lesson 2.</td>
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<tr>
<td>January 20</td>
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<tr>
<td>January 25</td>
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<td>January 27</td>
<td>Stage I Lesson 3</td>
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<td>February 1</td>
<td>Stage I Lesson 3</td>
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<td>February 15</td>
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<td>February 17</td>
<td>Review for Test I</td>
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<td>Stage II Lesson 1</td>
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<td>March 10</td>
<td>Stage II Lesson 1</td>
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<tr>
<td>Spring Vacation 14 - 18</td>
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<tr>
<td>March 22</td>
<td>Stage II Lesson 1</td>
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<tr>
<td>March 24</td>
<td>Stage II Lesson 2</td>
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<td>Stage II Lesson 3</td>
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<td>April 12</td>
<td>Stage II Lesson 3</td>
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</table>
April 14    Stage II Lesson 4  
April 19    Stage II Lesson 4  
April 21    Stage II Lesson 4  
April 26    Stage II Lesson 4  
April 28    Stage II Lesson 5  
May 3       Stage II Lesson 5  
May 5       Review for Final Exam  
May 10      Final Exam  

Notice

Upon completion of this course, the following information will be submitted to the FAA’s Airman Testing Standards Branch, AFS-630, in Oklahoma City, Oklahoma:

- Student’s last name, first name and middle initial
- Student’s course completion date
- Student’s social security number
- Student’s date of birth

The release of this information is in compliance with Order: 8700.1, Appendix: 3, Bulletin: HBGA 00-09.

TRAINING COURSE OUTLINE--TRAINING SYLLABUS

COMMERCIAL PILOT AIRPLANE-SINGLE ENGINE LAND

GROUND TRAINING  100:00 HOURS

1. GROUND TRAINING COURSE OBJECTIVES. The student will obtain the necessary aeronautical knowledge and meet the prerequisites specified in Part 61 and Part 141 of the FARs for the Commercial Pilot Written Examination.
2. **GROUND TRAINING COURSE COMPLETION STANDARDS.** The student will demonstrate through oral, written tests, and records that he/she meets the prerequisites specified in Part 61 and Part 141 of the FARs, and has the knowledge necessary to pass the Commercial Pilot Written Examination.

### STAGE ONE - FEDERAL AVIATION REGULATIONS: 21:00 HOURS

1. **STAGE ONE OBJECTIVE.** To develop the student's knowledge of the Federal Aviation Regulations, Accident Reporting Procedures, the privileges, limitations, and types of flight operations authorized with a commercial pilot certificate.

2. **STAGE ONE COMPLETION STANDARDS.** This stage will be successfully completed when the student passes the Stage One Final Written Examination with a grade of at least 80%, and has demonstrated a satisfactory knowledge of all areas found deficient on the written test.

3. **LESSON NO. 1 - 1:00 HOUR.**
   a. **Objective.** During this lesson the student will be instructed in the definitions and abbreviations of FAR Part 1.

   **CONTENT:**
   (1) Federal Aviation Regulations, Part 1.

   b. **Completion Standards.** The student will have successfully completed this lesson when, by oral or written examination, he displays an adequate knowledge and understanding of the definitions and abbreviations contained in Part 1 of the FARs.

4. **LESSON NO. 2 - 7:00 HOURS.**
   a. **Objective.** During this lesson the student will be instructed in the regulatory requirements of Part 61 of the Federal Aviation Regulations.

   **CONTENT:**
   (1) FAR Part 61, Subpart A--General, Subpart B--Aircraft Ratings and special certificates, Subpart E--Commercial Pilots.

   b. **Completion Standards.** The student will have successfully completed this lesson when, by oral or written examination and demonstration, he displays an adequate knowledge and
understanding of the regulatory requirements of Part 61 of the FARs.

5. **LESSON NO. 3 - 8:00 HOURS.**

   a. **Objective.** During this lesson the student will be instructed in the pertinent regulatory requirements of Parts 91 and 99, and the accident reporting rules of the NTSB Part 830 as related to commercial pilot operations.

   **CONTENT:**

   (1) FAR, Part 91; Subpart A--General, Subpart B--Flight Rules, general and visual, Subpart C--Maintenance, preventive maintenance, and alterations.

   (2) FAR, Part 99; Subpart A--General, Subpart B--Designated Air Defense Identification Zones.

   (3) NTSB, Title 14, Chapter III, Part 830.

   (4) FAR 121 and 125.

   b. **Completion Standards.** The student will have successfully completed this lesson when, by oral or written examination and demonstration, he displays an adequate knowledge and understanding of the regulatory requirements of Part 91 and 99 of the FARs and of the NTSB Part 830.

6. **LESSON NO. 4 - 4:00 HOURS.**

   **Objective.** During this lesson the student will be instructed in the pertinent regulatory requirements of Part 135 of the FARs.

   **CONTENT:**

   (1) FAR Part 135, Subpart A through E, including the privileges, limitations, and operations of a commercial pilot, and the operations for which a air taxi/commercial operator, agricultural aircraft operator, and external load operator certificate, waiver, or exemption is required.

   (2) FAR 137.

   b. **Completion Standards.** The student will have successfully completed this lesson when, by oral or written examination and demonstration, he displays an adequate knowledge,
understanding, and ability to locate and use the information contained in FARs pertaining to Air Taxi Operations and commercial operations involving the use of small aircraft.

7. **STAGE ONE WRITTEN EXAMINATION - 1:00 HOUR**.

**STAGE TWO - FLIGHT FUNDAMENTALS AND AIRPLANE SYSTEMS: 31:00 HOURS**

1. **STAGE TWO OBJECTIVE.** To introduce the student to the aircraft, its systems and components, and the basic aerodynamics involved in piloting an airplane.

2. **STAGE TWO COMPLETION STANDARDS.** This stage will be successfully completed when the student passes the Stage Two Written Examination with a minimum grade of 80%.

3. **LESSON NO. 1 - 7:00 HOURS.**

   a. **Objectives.** During this lesson the student will be instructed in the fundamentals of flight basic aerodynamics, including load factors.

   **CONTENT:**

   (1) Airfoil Terminology.

   (2) Forces acting on an airplane in flight.
      (a) Lift.
      (b) Weight.
      (c) Thrust.
      (d) Drag.

   (3) Airfoils.
      (a) Angle of incidence.
      (b) Angle of attack.
      (c) Bernoulli’s Principle.

   (4) Factors affecting lift drag.
      (a) Wing area.
      (b) Airfoil shape.
      (c) Angle of attack.
      (d) Airspeed.
      (e) Air density.
(5) Functions of the controls.
   (a) Axis of rotation - longitudinal, lateral and vertical.
   (b) Primary controls - ailerons, elevators, and rudder.
   (c) Secondary controls - trim tabs.
   (d) Flaps and other high lift devices.

(6) Stability.
   (a) Static stability.
   (b) Dynamic stability.

(7) Loads and load factors.
   (a) Effect of bank angle and stall speed.
   (b) Effect of turbulence on load factor.
   (c) Effect of speed on load factor.
   (d) Effect of load factor on stall speed.

b. Completion Standards. This lesson will be successfully completed when, by oral or written examination, the student displays a basic understanding of the fundamentals of flight, basic aerodynamics, and load factors.

4. LESSON NO. 2 - 7:00 HOURS.

a. Objective. During this lesson, the student will be instructed in the use of the owner's handbooks, flight manuals and weight and balance, and fundamental flight training maneuvers will be introduced.

CONTENT:

(1) Use of data in owner's handbook or FAA-approved Airplane Flight Manual.
   (a) Operating limitations.
   (b) High altitude operations.
   (c) Takeoff and landing distances.
   (d) Significance of the airplane performance speeds.
   (e) Computations involved in runway and obstacle clearance.
(f) Fuel consumption and related charts.
(g) Maximum range power settings; maximum endurance power settings.
(h) Crosswind component considerations.
(i) Cruise control.

(2) Weight and balance.
(a) Terms and definitions.
(b) Loading computations:
   1. Effects of abnormal balance.
   2. Effects of being over max. gross weight.
   3. Finding loaded weight.
   4. Finding center of gravity: when weight is shifted, added, or removed.

(3) Maneuvering at minimum controllable airspeed.

(4) Stalls.
(a) Theory of stalls.
(b) Imminent stalls - power on and power off.
(c) Full stalls - power on and power off.

b. Completion Standards. This lesson will be completed successfully when, by oral or
   written demonstration, the student has a basic knowledge of the owner's handbook, flight manual,
   weight and balance, and the fundamentals of basic flight training maneuvers.

5. LESSON NO. 3 - 5:00 HOURS.

a. Objective. The student will be instructed in flight training maneuvers, including an introduction to attitude instrument flying.

CONTENT:

(1) Review Lesson No. 2.
(2) Takeoffs and landings.
   (a) Normal and crosswind takeoffs and landings.
   (b) Soft-field takeoffs and landings.
   (c) Short-field takeoffs and landings.
   (d) Go-arounds or rejected landings.
(3) Introduction to basic attitude instrument flying. Maneuvering by reference to flight instruments - pitch, bank, power and trim control in the performance of basic maneuvers.

(a) Straight and level flight.
(b) Turns.
(c) Climbs.
(d) Descents.
(e) Recovery from unusual attitudes.

b. Completion Standards. This lesson will be completed successfully when, by oral or written examination and demonstration, the student displays a basic knowledge of the fundamentals of flight training maneuvers and attitude instrument flying.

6. **LESSON NO. 4 - 8:00 HOURS.**

a. **Objective.** During this lesson the student will be instructed in systems and instruments.

**CONTENT:**

(1) Airplane structures.
   (a) Construction features.
   (b) Flight control systems.
   (c) Rigging.

(2) Propellers.
   (a) Fixed pitch.
   (b) Controllable.

(3) Reciprocating airplane engines.
   (a) Construction features.
   (b) Principle of operation - four stroke cycle.
   (c) Fuel system, including carburetors and fuel injectors.
   (d) Lubrication system.
   (e) Ignition system.
   (f) Engine instruments.
   (g) Operating limitations.
   (h) Malfunctions and remedial actions.

(4) Airplane hydraulic system.
(a) Principle of hydraulics.
(b) Use of hydraulics in airplanes.
(c) Construction features of simple airplane hydraulic systems.
(d) Retractable landing gear and flaps.
(e) Malfunctions and remedial actions.

(5) Airplane electrical systems.
(a) Fundamentals of electricity.
(b) Operation of airplane electrical power system units.
(c) Electrically operated flight instruments.
(d) Retractable landing gear.
(e) Flaps.
(f) Fuses and circuit breakers.
(g) Malfunctions and remedial actions.

(6) Pitot static system and instruments.
(a) Airspeed indicator and markings.
(b) Altimeter.
(c) Vertical speed indicator.

(7) Vacuum system and instruments.
(a) Attitude indicator.
(b) Heading indicator.
(c) Turn and slip indicator.

(8) Magnetic compass.
(a) Errors in the magnetic compass.
(b) Use of the magnetic compass.

(9) Pressurization and high altitude operations.

b. Completion Standards. This lesson will be successfully completed when, by oral or written examination, the student displays a basic understanding of the aircraft systems and instruments.

7. LESSON NO. 5 - 2:00 HOURS.

a. Objective. During this lesson the student will be instructed in the fundamentals of night flying. Previous lessons will be reviewed as necessary.

CONTENT:

(1) Review Lessons 1 through 5.
(2) Night flying.
   (a) Requirements of regulations.
   (b) Preparation.
   (c) Equipment.
   (d) Night vision.
   (e) Airport lighting.
   (f) Orientation.

(3) Partial and complete power failure.
   (a) Sample situations.
   (b) Recommended courses of action.

b. Completions Standards. The lesson will be completed successfully when the student, by oral or written examination and demonstration, displays a working knowledge of the fundamentals of night flying.

8. STAGE TWO WRITTEN EXAMINATION - 1:00 HOUR.
   END OF COMMERCIAL PERFORMANCE AND REGULATIONS.

STAGE THREE - NAVIGATION: 20:00 HOURS

1. STAGE THREE OBJECTIVE. To develop the student's ability to plan and plot a VFR cross-country flight using pilotage, dead reckoning and radio navigation.

2. STAGE THREE COMPLETION STANDARDS. This stage will be successfully completed when the student passes the Stage Three Written Examination with a grade of at least 80%.

3. LESSON NO. 1 - 4:00 HOURS.

   a. Objective. During this lesson, the student will be instructed in the operation of aircraft radios and the use of radio phraseology with respect to air traffic control facilities. The flight computer will be introduced along with the basic use of aeronautical charts.

   CONTENT:
   (1) Radio communications. (Descriptions and procedures for operating within the National Airspace System)
       (a) Operation of the communications radio equipment.
       (b) Ground control.
(c) Tower.
(d) ATIS.
(e) Flight service station.
(f) UNICOM.
(g) Technique and phraseology.
(h) ATC light signals.

(2) Flight computer - slide rule face.
(a) Time.
(b) Speed.
(c) Distance.
(d) Fuel consumption.

(3) VFR navigation.
(a) Aeronautical charts.
(b) Measurement of courses.
(c) Pilotage.

b. **Completion Standards.** The student will have successfully completed the lesson when, by oral or written examination and demonstration, he has a basic knowledge of navigation and the use of radio aids. He will be able to solve fundamental and advanced problems on the flight computer.

4. **LESSON NO. 2 - 5:00 HOURS.**

a. **Objective.** During this lesson, the student will be instructed in the fundamentals of navigation, the operation of navigational radio equipment, and advanced problems on the flight computer.

**CONTENT:**

(1) VFR navigation.
   (a) Pilotage.
   (b) Dead reckoning.

(2) Operation of the navigational radio equipment.
   (a) VOR.
   (b) ADF.
   (c) Use of radio aids.

(3) Flight computer - wind face.
   (a) Determination of wind correction angle and true heading.
   (b) Determination of ground speed.
   (c) Review time, speed, distance, and fuel consumption problems on the computer.

b. **Completion Standards.** The student will have successfully completed the lesson when, by oral or written examination and demonstration, he has a basic knowledge of navigation and the use of radio aids. He will be able to solve fundamental and advanced problems on the flight computer.
5. **LESSON NO. 3 - 5:00 HOURS.**

   a. **Objective.** Lesson Two will be reviewed. Advanced radio navigational problems, emergency procedures with respect to cross-country flying and flight planning will be introduced.

   **CONTENT:**
   (1) Review Lesson 2.
   (2) Use of ADF.
   (3) Radar.
   (4) Use of VOR, intercepting radials.
   (5) Emergency procedures.
      (a) Diversion to an alternate.
      (b) Lost procedures, including use of radar and DF instructions.
      (c) In-flight emergencies, including forced landings.
   (6) Transponder.
   (7) DME.
   (8) Review flight planning.
   (9) Review computer.

   b. **Completion Standards.** This lesson will be completed when, by oral or written examination and demonstration, the student has a working knowledge of advanced radio navigation procedures, emergency procedures and solving flight computer problems.

6. **LESSON NO. 4 - 5:00 HOURS.**

   a. **Objective.** During this lesson, the student will be instructed in advanced flight planning, review of flight computer problems, and will be introduced to the medical factors related to flight and general safety precautions. At this time, the school procedures for cross-country training flights will be introduced.

   **CONTENT:**

   (1) Flight planning.
   (2) Review computer.
   (3) Medical factors related to flight (physiological considerations).
      (a) Fatigue, hypoxia, hyperventilation, alcohol, drugs, vertigo, carbon monoxide, high altitude operations and night operations.
(4) General safety.
   (a) Safe and efficient operation of airplanes.
   (b) Preflight inspection.
   (c) Inspection and certification requirements.
   (d) Collision avoidance precautions.
   (e) Wake turbulence avoidance.
   (f) Fire - in the air and on the ground.
   (g) Use of fire extinguishers.
   (h) Ground handling of aircraft.
   (i) Aeronautical decision making and judgement

(5) School procedures for dispatching flights after unscheduled stops.
(6) Obtaining maintenance away from the home base.

b. Completion Standards. This lesson will be completed when, by oral or written examination and demonstration, the student displays knowledge of medical factors related to flight, general safety procedures, and school policy and procedures for cross-country training flights.

7. STAGE THREE WRITTEN EXAMINATION - 1:00 HOUR.

STAGE FOUR - WEATHER: 20:00 HOURS

1. STAGE FOUR OBJECTIVE. To develop the ability to recognize critical weather situations from both the ground and in-flight, procedures and use of appropriate aeronautical weather reports and forecasts.

2. STAGE FOUR COMPLETION STANDARDS. The student will have successfully completed this stage when he passes the Stage Four Written Examination with a grade of at least 80%.

3. LESSON NO. 1 - 6:00 HOURS.

a. Objective. During this lesson, the student will be instructed in the fundamentals of weather with the operation of aircraft.

CONTENT:

(1) Aviation weather basics.
   (a) Atmospheric layers.
   (b) Pressure.
   (c) Circulation.
(d) Temperature and moisture.
(e) Stability and lapse rates.
(f) Turbulence.
(g) Clouds.
(2) Air masses.
(3) Fronts.
(4) Aircraft icing.
(5) Thunderstorms.
(6) Windshear

b. Completion Standards. This lesson will be completed when, by oral or written examination, the student demonstrates fundamental knowledge of aviation weather.

4. LESSON NO. 2 - 7:00 HOURS.

a. Objective. Lesson One will be reviewed. The interpretation and use of weather reports, forecasts, aviation broadcasts and the obtaining of weather briefings will be introduced.

CONTENT:

(1) Review Lesson No. 1.
(2) Aviation weather reports.
   (a) METARs.
   (b) Special surface reports.
   (c) Pilot reports.
   (d) Radar reports.
(3) Aviation weather broadcasts.
   (a) Transcribed weather broadcasts.
   (b) In-flight weather advisories.
(4) Weather briefings.
(5) Review requirements of regulations for VFR flight.
(6) Aviation Weather forecasts.
   (a) Area forecasts.
   (b) TAFs.
   (c) Wind-aloft forecasts and reports.

b. Completion Standards. The lesson will be completed when, by oral or written examination and demonstration, the student can interpret and use aviation weather reports, forecasts, and can obtain a weather briefing.

5. LESSON NO. 3 - 6:00 HOURS.
a. **Objective.** This lesson will consist of a review of the previous two lessons and instruction in the use of Zulu time, in-flight weather advisories and weather recognition.

**CONTENT:**

1. Review Lessons No. 1 and 2.
2. Zulu time.
3. In-flight weather advisories.

b. **Completion Standards.** This lesson will be completed when, by oral or written examination, the student has a working knowledge of Zulu time and in-flight aviation weather advisories.

6. **STAGE FOUR WRITTEN EXAMINATION - 1:00 HOUR.**

STAGE FIVE - REVIEW AND FINAL PREPARATION: 8:00 HOURS

1. **STAGE FIVE OBJECTIVE.** To ensure that the student meets at least the minimum knowledge requirements for the FAA Commercial Pilot Written Examination and to introduce the oral portion of the Commercial Pilot-Airplane Flight Examination in accordance with FARs Part 61 and Part 141, and the standards set by the school.

2. **STAGE FIVE COMPLETION STANDARDS.** The student will have successfully completed this stage when he passes the Stage Five Final Written Examination (final course examination) with a grade of at least 80%.

3. **LESSON NO. 1 - 4:00 HOURS.**
   a. **Objective.** During this lesson, the student will be reviewed in the basic knowledge requirements for the Commercial Pilot Written Examination.

**CONTENT:**

1. Rules and Publications.
   a. The Federal Aviation Regulations applicable to commercial pilot privileges, limitations, and flight operations.
   b. The rules of the National Transportation Safety Board pertaining to accident reporting.
(d) The FAA Advisory Circular System.

(2) VFR Navigation.
   (a) Pilotage and dead reckoning.
   (b) Radio aids.

(3) Meteorology.
   (a) The recognition of critical weather situations from the ground and in flight.
   (b) The procurement and use of aeronautical weather reports and forecasts.

(4) Aircraft operations.
   (a) High density airports.
   (b) Collision avoidance precautions.
   (c) Radio communication procedures.

b. Completion Standards. The lesson will be completed when, by oral or written examination and demonstration, the student displays at least the minimum knowledge requirements to pass the Commercial Pilot-Airplane Written Examination in accordance with the minimum standards of both the Federal Aviation Regulations and the standards set by the school.

4. LESSON NO. 2 - 3:00 HOURS.

a. Objective. During this lesson, the student will be introduced to the minimum basic knowledge requirements for the oral portion of the Commercial Pilot-Airplane Flight Examination.

CONTENT:

(1) Preflight Operations.
   (a) Preflight line inspection.
   (b) Weight and balance determination.
   (c) Starting and run-ups.
   (d) Airplane servicing.

(2) Airport Operations.
   (a) Airport and traffic pattern operations.
   (b) Operations at controlled airports.
   (c) Operations at uncontrolled airports.
   (d) Radio communications.

(3) Flight Maneuvering by Reference to Ground Objects.
(4) Slow Flight and Stalls.
   (a) Flight at critically slow airspeeds.
   (b) Recognition of imminent stalls.
   (c) Recovery from imminent and full stalls.

(5) Normal and crosswind takeoff and landing procedures.

(6) Instrument reference procedures.
   (a) Control and maneuvering an airplane solely by reference to instruments.
   (b) Emergency descents and climbs using radio aids or radar directives.

(7) Cross-country flying.
   (a) Pilotage and dead reckoning.
   (b) Radio aids.

(8) Maximum performance takeoffs and landings.

(9) Night flying.
   (a) Basic flying and emergency procedures.
   (b) VFR navigation.

(10) Emergency Operations.
     (a) Simulated equipment and aircraft malfunctions.
     (b) Lost Procedures.
     (c) Emergency go-arounds.

b. Completion Standards. This lesson will be completed when, by oral or written examination and demonstration, the student will be found to have been properly introduced to the basic knowledge requirements of the FARs for the oral portion of the Commercial Pilot-Airplane Flight Examination.

5. **STAGE FIVE AND COURSE FINAL COMPREHENSIVE WRITTEN EXAM - 1:00 HOUR.**
AVIA 2113
Aviation Management - Fall 2015
MWF 10:00 - 10:50    Russell Building, Room 220 (R-220)

GENERAL INFORMATION
Instructor: Dr. Stan Alluisi (salluisi@sosu.edu)
Office: Eaker Field - Room 103
Office Hours: M/W: 13:00 - 16:00; Tu/Th: 13:00 - 15:00; and by appointment.
Phone: 580-745-3241 (Office) or 580-924-8385 (Home)

PREREQUISITES: None

COURSE OBJECTIVES
Generally: To change the way you think! More specifically, for you to gain a better understanding of the application of general management principles and their unique application to the airline industry with specific focus on the creation, functioning and operation of airports. Specifically, see pages 9 & 10.

TEXT
1. The Prince by Nicolo Machiavelli (Do not buy this book! It will be distributed in class)
3. Case Studies and handouts distributed in class

STYLE OF TEACHING
Lecture and research paper

DROP POLICY
Same as University policy, so look it up!

ATTENDANCE POLICY
Attendance is very strongly suggested because lively class discussions will most certainly abound! In addition, not all of the material on the examinations will be out of the book. Material from the lectures, any guest lecturers, movies and handouts may all be on the exams. The student is responsible for all of the material covered during any absence from class even if the absence is excused. Be there or be square.

ACCESS & ADA Compliance
Any student needing special accommodations due to a disability should contact the Coordinator for Disability Services, GDJ Student Union, Room 328 or call (580) 745–2392 (TDD# 745–2704). It is the responsibility of each student to make an official request for accommodations to the Coordinator.

Please note, Faculty members are not permitted to accommodate students without being instructed to do so by the ODS. All students requiring assistance must contact the Office of Disability Services first!

Mental & Emotional health Assistance
Any student experiencing mental or emotional issues who desires free, confidential, clinical counseling is encouraged to contact the SE Counseling Center at (580) 745-2988 to schedule an appointment during normal working hours Monday – Friday, 8:00 AM to 5:00 PM. For after hours mental health emergencies, please call SE Campus Police at (580) 745-2911 or the Mental Health Crisis Hotline at 1-(800) 522-1090.
Research Papers (200 Points)

**Topic:** The topic will be agreed on by the student and the instructor in advance. Typically, the topic will examine some aspect of aviation management focusing on the airline or related industry. While the topic should certainly be aviation related, *the primary focus should be on the management aspects of the situation!*

**Length:** Ten (10) full type written pages, double spaced, 12 point type, and 1 inch margins all around. In addition, a cover page and a list of references must be included and DO NOT count toward the ten required pages. *Hand written and late drafts and final papers will not be accepted!*  

**Content:** The paper should start with an introduction and include a brief account of the management issues involved. *(Hint: The final statement in your introduction had better be your thesis statement.)* Follow with a detailed account of the situation and explain the management aspects in excruciating detail from each side of the issue. After the detailed account, present your analysis of the management aspects of the situation. Explain if you agree with or disagree with the issue at hand or with a particular party and explain *WHY.* Finally, conclude with a summary of what you just told me and restate your thesis showing that you have proved your point. ALL term papers will be due no later than the end of class on the date due as shown in the schedule. No whining!

**References:** You must use at least three references and you cannot use textbook, class notes or the professor as one of the references. Reference sources MUST include at least one actual book, one journal, and one web site. Other sources may be books, journals, magazines, newspaper articles, and personal interviews with experts and/or affected parties. You must document where you obtained all of your information. *Cite every fact and opinion that did not originate in your brain.* You must cite your sources using the *APA Publications Manual, Fifth Edition.* If you choose a topic that is discussed in the textbook you must cover it in far more depth or breadth than is covered in the text. *Do not just restate what the textbook says! I have already read it!*  

**NOTE:** The length of these papers is at least TEN FULL PAGES. I do not wish to read a pamphlet nor do I wish to read *War and Peace.* Whatever the length, I will grade your paper and then *for each page less than ten pages, 12.5% (one eighth) of the final grade will be deducted from your paper.* In addition, copious points will be deducted for papers filled with long, rambling passages designed to inflate the work up to the minimum ten pages but containing no pertinent information germane to the issue at hand.

**Grading:** Please review the Term Paper Grading Sheet and make sure you follow all the criteria! The form can be found here:  
http://aviation.se.edu/References/term%20paper%20grading%20sheet.pdf

Draft Papers (50 Points)

Your paper will first be due in draft form via e-mail on the date specified in this syllabus. You will receive 50 points for turning in your draft paper on time if the following minimum criteria are met:

- Introductory paragraph(s)
- Thesis statement
  - Body (as much as you care to provide - the more you give me the better I can critique you!)
- Concluding paragraph(s)
- Three references cited as per the APA Publications Manual, Sixth Edition
  - (1 book, 1 journal, 1 web site, and other optional sources)

I will critique all of the draft papers I receive and return them to you. However, if ALL of the required items are not contained in the draft paper you will not receive the 50 points. I will simply critique what you have written and return your paper. You must include an introduction, thesis statement, partial body, conclusion and four sources properly cited in order to receive the 50 points. Late draft editions will not receive 50 points. The corrected drafts are to help you write better papers. Honest. You can resubmit drafts as many times as you like prior to the final due date. If you do not submit a draft edition of your paper the grade you receive on the final draft is final. No whining.
Plagiarism

DO NOT DO IT! You may work in groups to research topics and I encourage you to have other students or friends proof read your papers, but write your own papers!

If you turn in a plagiarized paper or otherwise cheat, you are lying to me. You are telling me that the work is yours. If I discover that it is not your work you will receive a grade of ZERO for the assignment and I have the option of failing you for the class. It is far better to earn a poor grade and work to improve it than to cheat and receive a zero.

Even a bad grade is better than no grade at all.

See the ASI Policy page for full details: http://homepages.se.edu/aviation/files/2012/02/academic_honesty_policy.pdf

Turning In Your Draft Paper & Final Paper

Submit your paper via e-mail attachment to salluisi@se.edu. The subject of the e-mail should be:

Subject: Your last name-Draft Paper or
Subject: Your last name-Final Paper
For example: Subject: Alluisi-Final Paper

Failure to e-mail the paper to the correct address or use the correct subject will result in the email being deleted.

HANDY DANDY TERM PAPER OUTLINE

I. Introduction (A few paragraphs to 1 page.)

(Briefly tell me what you are going to tell me about. Remember: The final statement in your introduction had better be your thesis statement.)

II. Detailed account of the event you are describing (5 to 6 pages.)

(Who, what, where, when, why. Answer all of these questions especially the WHAT & WHY of the law.)

III. Describe the legal problems that are involved (3 to 5 pages.)

(Give details of what happened and how it changed the world. Remember - focus on the LAW!)

IV. Conclusion (A few paragraphs to 1 page.)

(Summarize the legal issues and conclude with why your view is correct.)

V. Bibliography/Works Cited as per APA Publications Manual, Fifth Edition (One or more pages, as needed.)

Remember, the works cited page does not count toward the 10 page minimum!
VI. Grading Sheet

The term paper grading sheet can be found at: http://homepages.se.edu/aviation/files/2012/02/term-paper-grading-sheet.pdf

GRADING PROCEDURES

There will be one exam about every four weeks during the semester. Each exam will be worth 200 points. In addition, there will be a research paper due which is worth 200 points. Your presence and active participation in classroom discussions is worth 100 points.

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<td>Draft Research Paper</td>
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Grading

90-100% = A  
80 - 89% = B  
70 - 79% = C  
60 - 69% = D  
00 - 59% = F

BOTTOM LINE

Read the book or assigned readings, come to class prepared, ask questions, get involved in discussions, and have some fun learning about aviation management. After all, this is your career, learn how the system works!

OUTCOMES

This class should change the way you think. Specifically, by the end of the course you should understand the following concepts:

Definition of an airport  
Characteristics of an airport  
The NPIAS  
Government agencies that regulate airports  
Ownership of airports  
PR aspects of airport management  
History of airports  
Component parts of the airport  
Airspace and ATC
<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Work Due/Activities/Exams/Information</th>
<th>Book &amp; Chapter to Read</th>
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<td>Exam 1 (Machiavelli)</td>
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Page 5 of 8
AVIA 2113
Aviation Management - Fall 2015
Class Contract

I ______________________________ have read the syllabus for this class and understand the grading policy, the schedule and the requirements for the written assignment. I understand that I will earn 3.5 points for every day I attend class. I understand that I must turn in my term paper in draft form via e-mail on time and meeting all criteria in order to obtain the 50 points noted in the grading procedures and that the final edition of my paper accounts for **14% of my final grade** for this course. In addition, I understand that I alone am responsible for any material that I miss when I am not able to attend class and that should I miss an examination, a quiz or a due date for the paper without giving prior notice and a reasonable explanation, that I will receive a ZERO (0) for attendance as well as that examination, quiz or paper, with very limited exceptions for truly unavoidable or tragic situations. Finally, If I ever have any questions concerning the content of this class, the grading procedures or the requirements for any assignment and cannot find the answer in the syllabus, I understand that Dr. Alluisi is available via office hours, email, and telephone for consultation. There is no excuse for my questions, however trivial, to go unanswered.

I understand that my paper must be written using APA style and all references cited as per the *Publications Manual of the APA (6th Edition)* and that I have read and understand the ASI Academic Honesty Policy and agree to abide by it.

(ASI Academic Honesty Policy is available at: http://aviation.se.edu/policies/academic_honesty.html)

**RETAI**N **THIS** COPY FOR YOUR RECORDS

signature  date
AVIA 2113
Aviation Management - Fall 2015
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(ASI Academic Honesty Policy is available at: http://aviation.se.edu/policies/academic_honesty.html)

GIVE THIS COPY TO DR. ALLUISI

signature

date
Course Objectives
AVIA 2113 - Aviation Management

- Understand the ownership characteristics of airports in the United States and Internationally
- Describe the National Plan of Integrated Airport Systems (NPIAS) and its application to categorizing Public Use airports in the United States
- Describe the governmental administrative organizations in the United States that oversee airports
- Identify Federal Regulations and Advisory Circulars that influence airport operations
- Discuss the ownership structures of airports
- Identify the various jobs that exist at airports
- Understand an airport organizational chart
- Discuss airport management as a potential career
- Understand the public relations issues that are associated with airport management
- Discuss the various acts of legislation that have influenced the development and operation of airports since the early days of civil aviation.
- Highlight several important political events that have influenced civil aviation.
- Describe the development of national administrations that have regulated civil aviation throughout its history.
- Describe the various funding programs that have existed to support airports over the course of history.
- Discuss some of the current and future issues concerning airports and how the U.S. government might address these issues.
- Identify the various facilities located on an airport’s airfield
- Discuss the specifications and types of airport runways
- Understand the importance of runway orientation
- Identify an airport’s reference code
- Be familiar with airfield lighting, signage, and markings
- Describe the various navigational aids that exist on airfields
- Describe the infrastructure existing to increase the security of the airfield
- Discuss the history of the United States Air Traffic Control System
- Identify the various classes of U.S. Airspace
- Discuss the hierarchical Air Traffic Control Management Structure
- Discuss the goals of National Airspace System Modernization
- Describe some of the technologies used to modernize air traffic control
- Understand how Air Traffic Control affects airport management
- Understand the requirements under 14 CFR Part 139 to operate airports serving commercial air carrier operations.
- Describe the different types of airfield pavements, their potential failures, and various types of maintenance programs.
- Describe the major items included in a snow and ice control plan
- Identify the areas of concern with respect to safety inspection programs.
- Understand the Aircraft Rescue and Firefighting requirements for a given airport.
- Discuss approaches to mitigating bird and wildlife hazards.
- Be aware of safety management systems
· Understand the development of airport terminals from the early days of commercial aviation to present-day terminal design concepts.
· Identify the facilities within an airport terminal that facilitate the transfer of passengers and baggage to and from aircraft
· Describe the essential and ancillary processing facilities, including terminal concessions, located within airport terminals
· Be familiar with the various modes of transportation that comprise airport ground access systems
· Describe various technologies that are being implemented to improve ground access to airports

· Be familiar with the history of airport security threats and associated legislative action.
· Describe the organizational structure of the Transportation Security Administration
· Define the various security sensitive areas around airports
· Describe the facilities located at airports that are part of the Post-September 11th, 2001 security environment
· Understand the differences in security procedures between commercial service and general aviation airport.
· Be familiar with the various technologies that are being developed to enhance airport security.

· Understand the difference between O&M and Capital Improvement Expenses
· Be familiar with the process of airport financial accounting
· Explain the need for liability insurance at airports
· Describe the various operating and non-operating revenues at airports
· Be familiar with planning and operating budget
· Recognize the differences between the various forms of airport-airline financial agreements
· Describe the concept of a Majority in Interest clause
· Describes the different types of funding programs available to airports
· Distinguish between the different types of financial bonds available to airports
· Identify the different levels of privatization that may exist at airports
AVIA 3003: Aviation Meteorology  
Course Syllabus

Russell Bldg: R-218: MWF 11:00am-11:50am

GENERAL INFORMATION
Instructor: John G. Van Bebber, Jr.
Office: Eaker Field: EF-105
Office Hours: M-F: 1pm-4pm
Telephone Number: Office (580) 745-3242
Cell (903) 815-1068
E-mail: jvanbebber@se.edu

Classroom Protocol
1. Electronic devices: All cell phones, lap top computers, pagers, or PDAs shall be off and silenced when class starts.
2. No recording devices are allowed in the classroom except as permitted by SOSU policy.
3. Tardiness is not tolerated, so the class will start on time with the door closed and subsequent entry is not allowed.
4. If you need to leave class early, please notify me before class. Subsequent reentry is not allowed.

Prerequisites
AVIA 1004

Course Outline
Part I - Aviation Weather Basics
1. The Atmosphere
2. Atmospheric Energy and Temperature
3. Pressure, Altitude, and Density
4. Wind
5. Vertical Motion and Stability
6. Atmospheric Moisture
Part II - Atmospheric Circulation Systems
7. Scales of Atmospheric Circulations
8. Airmasses, Fronts, and Cyclones
9. Thunderstorms
10. Local Winds
Part III - Aviation Weather Hazards
11. Wind Shear
12. Turbulence
13. Icing
14. Instrument Meteorological Conditions
15. Additional Weather Hazards
Part IV—Weather and Flight Planning
16. Aviation Weather Forecasting
17. Self-briefing and Weather Flight Planning
Course Goals

1. The student will demonstrate knowledge of the atmospheric environment of airplane flight. The student will apply that knowledge to maximize aircraft performance while minimizing exposure to weather hazards. The student must be fully aware of weather phenomena and its influences on aviation.
2. The student will develop a vocabulary of all necessary aviation weather terms.
3. The student will demonstrate knowledge of the essential properties of weather-producing processes of the atmosphere.
4. The student will demonstrate knowledge of how circulation systems of all sizes develop, move, and dissipate. This includes how circulation systems produce their global, regional, and local climate patterns.
5. The student will demonstrate knowledge aviation weather hazards; this includes anticipation and avoidance of such hazards as thunderstorms, windshear, turbulence, icing, and IMC conditions when flying VFR.
6. The student will demonstrate knowledge of how to interpret aviation weather information obtained in briefings, printed reports, graphic weather products, and other electronic formats. The student will demonstrate the interpretation of weather information so as to evaluate and plan a safe flight.

Course Objectives and Student Outcomes

The student will demonstrate competent knowledge of the following aviation weather subjects by a minimum examination score of 70%.

1. Aviation Weather Basics
   1.1. Describe the essential properties and weather-producing processes of the atmosphere.
   1.1.1. Describe the composition, dimensions, and average vertical structure of the atmosphere using proper technical vocabulary.
   1.1.2. Describe the standard atmosphere.
   1.2. Describe atmospheric energy and temperature.
   1.2.1. Describe the sun-earth relationships: their seasonal and daily variations, the modes of energy transfer between the sun and the earth, and the modes of energy transfer between the earth and the atmosphere.
   1.3. Describe the physical nature of atmospheric pressure, altimetry, and density altitude.
   1.3.1. Describe the global patterns of atmospheric pressure.
   1.4. Describe wind and the processes of air movement that produce weather phenomena.
   1.4.1. Describe the causes and characteristics of horizontal air motion.
   1.4.2. Describe the relationships between the wind, atmospheric pressure, and the earth’s rotation.
   1.4.3. Describe the influences of friction between the wind and the earth’s surface.
   1.4.4. Describe how wind is measured.
   1.4.5. Describe general wind conditions by study of weather charts depicting isobars and contours.
   1.5. Describe the causes and characteristics of vertical air motion.
   1.5.1. Describe the effects of vertical air motion on atmospheric stability.
   1.6. Describe the characteristics of atmospheric moisture.
   1.6.1. Describe the causes and effects of moisture changes of state.
   1.6.2. Describe how clouds form and dissipate.
   1.6.3. Describe how precipitation is produced.
   1.6.4. List and describe the classifications of clouds and how observed.
   1.6.5. List and describe the classifications of precipitation and how observed.

2. Atmospheric Circulation Systems
   2.1. Describe the concept of scales of atmospheric circulation.
   2.1.1. Describe the general atmospheric circulation and the monsoon circulation (macroscale circulations)
   2.1.2. Describe the global circulation system.
3. Aviation Weather Hazards
   3.1. Describe how and when circulation systems produce Thunderstorms.
      3.1.1. List and describe the various types of thunderstorms.
      3.1.2. Describe and explain thunderstorm structure and behavior.
      3.1.3. Describe and explain thunderstorm organization—lines and clusters.
   3.2. Describe how and when circulation systems produce Wind Shear.
      3.2.1. Describe how wind shear develops.
      3.2.2. Describe how to anticipate and avoid wind shear.
      3.2.3. Describe what wind shear is and what its critical values are.
      3.2.4. Describe why and where wind shear develops relative to thunderstorms, inversions, fronts, and jet streams.
   3.3. Describe how and when circulation systems produce Turbulence.
      3.3.1. Describe the basic types of turbulence and their causes.
      3.3.2. Describe the large-scale conditions under which turbulence occurs.
      3.3.3. List the guidance rules that help to anticipate and mitigate turbulence encounters.
   3.4. Describe how and when atmospheric conditions produce Icing hazards.
      3.4.1. Explain the aviation icing hazards during ground operations.
      3.4.2. Explain the aviation icing hazards in flight operations.

4. Application of Weather Knowledge
   4.1. Interpret aviation weather forecast products in text format and graphic format.
      4.1.1. Plan a flight according to FAA practical test standards using official weather data and graphics to develop a self-briefing that integrates weather information into a comprehensive picture of current and forecast weather.
      4.1.2. Describe the sources of aviation weather reports and how to obtain weather information for preflight and enroute planning.

Textbooks
   Required
      ISBN: 978-0-88487-446-1
      Oklahoma City, OK: National Weather Service and Federal Aviation Administration. (also found on FAA’s web site in pdf files)

   Supplemental References
   3. Blackboard will have several documents from internet sources that will be assigned reading. Find these in the specific lecture folders under Course Documents. Several good general references for aviation weather subjects are found in the External Links folder.

Style and Mode of Class Instruction
   Each class session will primarily be a lecture with student interaction and discussion. Blackboard will contain course documents, course information, announcements, helpful internet references, assignments, and other relevant information to read and study. Most assignments will be submitted on Blackboard only.
**Course Assessment**

**Evaluations**

A. Exams
   - Exams (2 @ 180 pts) 360 points
   - Final Exam 240 points
B. Aircraft Accident Analyses (1 @ 120pts) 120 points
C. Exercises (6 @ 40 pts) 240 points
D. Attendance 40 points

Total = 1000 points

E. Grading System
   A = \( > 900 \); B = 800-899.9; C = 700-799.9; D = 600-699.9; F = < 600

**Exams (600 pts)**

Exams will be multiple-choice, true/false, fill-in-the-blank, and essay. The course requires 2 exams and a final exam. Make-up exams will be given for an excused absence only. Absences are governed according to the attendance policy in this syllabus.

**Exercises (240 pts)**

Homework exercises and due dates will be listed on the Course Schedule and are to be completed by 5pm on the due date. Homework exercises are found in the Assignments folder on blackboard.

Submission of homework exercises is as follows. The exercise document is downloaded from Blackboard's Assignments folder and saved to your computer. The exercise will be completed using MS Word. You will rename the file (student last name.docx) and submit via the blackboard. For example, a file named Chapter 3 Exercise.doc will be resubmitted with a file name of Exercise 3_Jones.docx.

In-class exercises will require preparation before class and those will be submitted at the end of a class session as well as a Blackboard Assignment.

**Aircraft Accident Analysis (120 pts)**

One aircraft accident analysis is required. The report is to explain and analyze an accident where weather is a significant factor. Refer to the grading criteria in this syllabus for content requirements.

General Requirements:
- First submission (on Blackboard) will be the title of the accident—date, airplane type, operator, etc.
- The report will be a minimum of 600 words of text
- Other required pages: title page and references page
- Bibliography is required for references:
  - A bibliography cites references for background information or further reading and may include descriptive notes.
  - Minimum of 3 references with at least one book reference or one research journal
  - All online encyclopedias are not allowed as a reference.
- Appendix pages are encouraged. Illustrations, graphs, and pictures are optional but can be very helpful.

**Attendance (40 pts)**

Class attendance is expected and deductions are 5 points for each unexcused absence. See the Attendance Policy below for the rules explaining an excused absence. Everybody's attendance grade starts with 40 points.
Course Requirements for Grade
A. Completion of all exercises
B. Completion of one Aircraft Accident Analysis
C. Completion of all semester exams and final exam

Cheating and Plagiarism
1) Cheating may be defined as using unauthorized materials, giving or receiving unauthorized materials, or receiving unauthorized assistance during an examination or other academic exercise. Examples may include:
   a) Copying the work of another student during an examination OR other academic exercise (including computer exercises on Blackboard), or permitting another student to copy one's work;
   b) Taking an examination for another student, or allowing another student to take one's examination;
   c) Possessing unauthorized notes, study sheets, electronics (phones or computers), or other materials during an examination or other academic exercise;
   d) Falsifying or tampering with examination results.
   e) Completing, copying, or using the results of any other student's computer assignments, written assignments, or presentations. Representing any of these as your own work is cheating.
2) Plagiarism may be defined as the use of another's ideas or words (written or verbal) without acknowledgement. The work of published authors is their intellectual property, regardless if it is copyrighted or not. Examples of plagiarism may include:
   a) Failing to use quotation marks when quoting from a source
   b) Failing to document distinctive ideas from a source
   c) Fabrication or inventing sources
   d) Cheating and plagiarism will result in those actions outlined by the School of Business Academic Honesty Policy.
3) I suggest every student read the university's Academic Honesty Policies. Cheating or plagiarism penalties can be severe; expulsion is not worth the risk.

Attendance Policy
Attendance is required for all exam classes unless other arrangements have been approved (minimum of 24 hours notice) in advance by the instructor. A make-up exam should be scheduled prior to the excused absence if possible. Please note the methods of communication to the instructor at the beginning of the syllabus. The student is responsible for contacting the instructor when absent on exam day. Absence on exam or quiz day without prior instructor notification will result in a grade of zero, unless it is an emergency absence as described by Southeastern University policies. Excusal and make up would require a serious conflict, official excusal (see below), or family emergency.
Excused absences are covered by official department policy: (a) medical illness or doctor’s appointment, (b) adverse weather, or (c) approved school functions. Flight training will not qualify as a reason for an excused absence. If serious personal issues require that you miss class, contact Southeastern’s Dean of Students for assistance.

Drop and Add Policy
Refer to Southeastern’s standard university policies and academic calendar.

Policy for Inclement Weather
Refer to Southeastern’s standard university policies.
Students with Disabilities

Any student needing special accommodations due to a disability should contact the Coordinator of Student Disability Services, Student Union Suite 204 or call (580) 745-2254. It is the responsibility of each student to make an official request to the Coordinator for academic accommodations.“

Any student who discloses a disability and/or inquires about accommodations or services should be referred to the Coordinator of Student Disability Services, Student Union, Suite 204, (580) 745-2254.

After a student self-identifies, the University employee has a duty to direct that student to the appropriate office for services. Every effort will be made to be in full compliance with Sec. 504 and 508 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act. No qualified individual with a disability can be excluded from, denied the benefits of, or otherwise subjected to discrimination under any program or activity on campus.

If you have questions or concerns, please contact the Office for Student Affairs (X2368) or the Coordinator of Student Disability Services (X2254) for further information.
Accident Report Grading Criteria

Name:  Date:  

**Title Page:**  
- Title of paper, author, institution name, course title, and date

**Introduction:**  
- Introduce the accident
  - Planning and weather analysis
  - Pilot, controller, and maintenance analysis as needed
  - Airplane equipment and/or certification

**Body Text Style and Format**  
- 8.5” x 11” white paper; 1” margins (all four sides)
- Times Roman, 12-point font; double-spaced
- Page headers (last name) and page numbers (upper right corner all pages)
- All quotes used must total less than 6 lines
- Headings: at least Level 1 required

**Body Content:**  
- Facts: research of the literature  
  - Explain the pertinent facts of the accident
  - Weather must be a significant cause
  - Reasoning: discuss how and why weather was a factor and the pilot’s decision-making issues.
- Logical flow: background thru the accident

**Technical Format:**  
Grammar>G   Punctuation>P   Spelling>Sp  
(Deduction of 0.5 points per error)

**Conclusion:**  
- Summarize your results; support your conclusions, and recommendations.

**Bibliography**  
- A bibliography cites references for background information or further reading and may include descriptive notes.
- List by author in APA format
- Minimum number of required references: 3

**Overall Deductions:**
Penalty for LESS than required word count (body text only): 10 pts / 100 words.
Late penalty: (10 pts / day) (until 48 hours past deadline)

**TOTAL:** 100%
Aircraft Accident Analysis

The report is required to explain and analyze an accident where weather is a significant factor. Refer to the grading criteria for content requirements.

General Requirements:
- The report will be a minimum of 600 words in the text (title, references, and bibliography pages do not count).
- Other required pages: title page and references page
- Bibliography is required for references:
  - A bibliography cites references for background information or further reading and may include descriptive notes. A minimum of 3 references with at least one book reference or one research journal is required. No online encyclopedias are allowed as a reference.
- Appendix pages are encouraged. These illustrations, graphs, and pictures are optional but can be very helpful.
- Follow the grading criteria for construction of the report.
GENERAL INFORMATION
Instructor: Dr. Stan Alluisi
Office: Eaker Field - Room 103
Hours: M-W: 13:00 - 16:00 PM
Tu-Th: 13:00 - 15:00 PM
Or by appointment
Phone: 580-745-3241 (Office)
580-230-9422 (Cell)

PREREQUISITES
AVIA 3284 - Instrument Ground or with permission

COURSE OBJECTIVES (SEE PAGE 6)
To gain a better understanding of the history, functioning and use of the U.S. Air Traffic Control system.

BRIEF COURSE OUTLINE
History of ATC
Navigation Systems
Air Traffic Control System Structure
Airport ATC Communications: Procedures and Phraseology
ATC Procedures and Organization
Control Tower Procedures
Non-Radar Enroute and Terminal Separation
Theory and Fundamentals of Radar Operation
Radar Separation
Operation in the National Airspace System
Oceanic and International ATC
The Future of the National Airspace System

TEXT
FAA Order JO 7110.65W (Effective Date: December 10, 2015) (PDF file available under Course Content)
Fundamentals of Air Traffic Control by Michael S. Nolan (Fifth Edition) (Optional)

STYLE OF TEACHING
Lecture with at least one field trip to Fort Worth Air Route Traffic Control Center.

DROP POLICY
Same as University policy, so look it up!

ATTENDANCE POLICY
Attendance is very strongly suggested because lively class discussions will most certainly abound! In addition, not all of the material on the examinations will be out of the book. Material from the lectures, guest lecturers, movies and handouts will all be on the exams. The student is responsible for all of the material covered during class even if the student is absence, excused or not. You will also earn five points per class, so be there or be square.
ACCESS
Any student needing special accommodations due to a disability should contact the Coordinator for Disability Services, GDJ Student Union, Room 328 or call (580) 745–2392 (TDD# 745–2704). It is the responsibility of each student to make an official request for accommodations to the Coordinator.

Please note, Faculty members are not permitted to accommodate students. All students requiring assistance must contact the Office of Disability Services.

MENTAL & EMOTIONAL HEALTH
Any student experiencing mental or emotional issues who desires free, confidential, clinical counseling is encouraged to contact the SE Counseling Center at (580) 745-2988 to schedule an appointment during normal working hours Monday – Friday, 8:00 AM to 5:00 PM. For after hours mental health emergencies, please call SE Campus Police at (580) 745-2911 or the Mental Health Crisis Hotline at 1-(800) 522-1090.

GRADUATION REQUIREMENTS
A minimum GPA of 2.5 is required in all Professional Pilot and Aviation Management Major-Minor degree requirements including specified general education requirements. In addition, no grade less than C in Professional Pilot ground courses is acceptable. (For more details see: 2011-2013 SOSU Undergraduate & Graduate Catalog - page 102)

GRADING PROCEDURES
There will typicall be one exam every other week during the fall semester. Each exam is worth 100 points. In addition, attendance on the field trip to Fort Worth Center is mandatory and is worth 100 points. You also get 5 points just for showing up to every class! What a deal.

Exam 1 100 points
Exam 2 100 points
Exam 3 100 points
Exam 4 100 points
Exam 5 100 points
Exam 6 100 points
Exam 7 100 points
Exam 8 100 points
Field Trip to Ft. Worth Center 100 points (Attend or write a 5 pg paper on an ATC topic. Your call!)
Attendance 150 points (5 points/day X 30 class days = 150 points)

Total Points Available 1050 points

GRADING
90-100% = A ( 945 - 1050 points)
80 - 89% = B ( 840 - 944 points)
70 - 79% = C ( 735 - 839 points)
60 - 69% = D ( 630 - 734 points)
00 - 59% = F ( 000 - 629 points)

PLAISM & CHEATING **DO NOT DO IT!**
Any plagiarism or academic misconduct will result in a grade of ZERO! Even a bad grade is better than no grade at all.

BOTTOM LINE
Read the book or assigned readings, come to class prepared, ask questions, get involved in discussions, and...
<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Work Due/Activities/Exams/Information</th>
<th>Chapter to Read</th>
</tr>
</thead>
</table>
| 1    | 16 August  | Introductions and History of Air Traffic Control  
(22 Aug: Last day to drop: No pay/No grade)                                                     | Chapter 1 & Handout     |
|      | 18 August  |                                                                                                     |                          |
|      | 23 August  |                                                                                                     |                          |
|      | 25 August  |                                                                                                     |                          |
| 2    | 30 August  | Navigation Systems                                                                                   | Chapter 2                |
|      | 1 September|                                                                                                     |                          |
|      | 6 September|                                                                                                     |                          |
|      | 8 September|                                                                                                     |                          |
| 3    | 13 September| Air Traffic Control System Structure                                                                  | Chapter 3                |
|      | 15 September|                                                                                                     |                          |
| 4    | 20 September| Airport ATC Communications Procedures & Phraseology                                                   | Chapter 4                |
|      | 22 September|                                                                                                     |                          |
| 5    | 27 September| Air Traffic Control Procedures and Organization                                                       | Chapter 5                |
|      | 29 September|                                                                                                     |                          |
| 6    | 4 October  |                                                                                                     |                          |
|      | 6 October  |                                                                                                     |                          |
| 7    | 11 October  | Control Tower Procedures  
(15 Oct: Last day to drop w/auto W)                                                                       | Chapter 6                |
|      | 13 October  |                                                                                                     |                          |
|      | 18 October  |                                                                                                     |                          |
| 8    | 20 October  | 20-21 Oct: Fall Break                                                                                 |                          |
|      | 25 October  |                                                                                                     |                          |
|      | 27 October  |                                                                                                     |                          |
| 9    | 1 November  |                                                                                                     |                          |
|      | 3 November  |                                                                                                     |                          |
| 10   | 8 November  | Theory and Fundamentals of Radar Operation  
(14 Nov: Last day to drop - period.)                                                                   | Chapter 8                |
|      | 10 November |                                                                                                     |                          |
|      | 15 November |                                                                                                     |                          |
|      | 17 November |                                                                                                     |                          |
| 11   | 22 November |                                                                                                     |                          |
|      | 24 November | Future of the National Airspace System                                                              | Chapter 11               |
|      | 29 November |                                                                                                     |                          |
| 12   | 1 December  | Last day of classes                                                                                   |                          |
|      | 5 December  |                                                                                                     |                          |
|      | Finals Week |                                                                                                     |                          |
|      | 9 December  |                                                                                                     |                          |
|      | 10 December | Commencement!                                                                                         |                          |
I. History of ATC

A. 1903 - 1925: Early aviation developments
   1. Development of Air Mail (1911)
   2. Kelly Act of 1925 - Made carrying the mail profitable!
   3. The Morrow Report

B. 1925 - 1935
   1. Air Commerce Act
   2. Evolution of ATC

C. 1934 - 1945
   1. Establishment of Bureau of Air Commerce
   2. Enroute ATC
   3. Copeland Committee
   4. Civil Aeronautics Act of 1938
   5. 1940 Reorganization of the CAA
   6. The War Years (1941-1945)
   7. Civilian vs. Military ATC - Who’s in charge?

D. 1945 - 1955
   1. RTCA Special Committee 31 Report
   2. Air Traffic Congestion

E. 1955 - 1965
   1. Implementation of RADAR
   2. Budget Cutbacks
   3. The Question of Airway Safety
   4. Creation of the Federal Aviation Agency
   5. The New York City Disaster
   6. Project Beacon
   7. Controller Unionization

F. 1965 to Present
   1. Department of Transportation
   2. Continued Labor Unrest
   3. Airline Deregulation (1978)
   4. PATCO controllers Strike (1981)

II Navigation Systems

A. Visual Navigation
B. Aircraft Instrumentation
C. VFR Navigation
D. Instrument Flying
E. Electronic Navigation
F. Aircraft Positioning Methods  
G. Area Navigation  
H. Instrument Approach Procedures  
I. Approach Navigation Aid Classification  
J. Runway and Approach Lighting  

III Air Traffic Control System Structure  (Chapter 3)  
   A. Airspace Categorization  
   B. Designation of Controlled Airspace  
   C. Additional Airspace Categories  

IV Airport ATC Communications: Procedures and Phraseology  
   A. Radio Communication  
   B. ATC Communications Procedures  
   C. Additional Communications Phraseology  

V. ATC Procedures and Organization  (Chapter 5)  
   A. Separation Responsibilities in Controlled Airspace  
   B. ATC Procedures  
   C. Delegation of Responsibility  
   D. Controller Duties in ARTCC  
   E. ATC Tower Responsibilities  

VI. Control Tower Procedures  (Chapter 6)  
   A. Control Towers  
   B. Flight Data Controller Duties  
   C. Clearance Delivery Controller Duties  
   D. Local Controller Duties  
   E. Helicopter Operations  
   F. Wake Turbulence  

VII. Non-Radar Enroute and Terminal Separation  (Chapter 7)  
   A. Design of Separation Procedures  
   B. Airspace Dimensions  
   C. Separation Procedures  

VIII. Theory and Fundamentals of Radar Operation  (Chapter 8)  
   A. Development of Pulse Radar  
   B. Receiver Controls  
   C. Transmitter Controls  
   D. Display Controls  
   E. Types of ATC radar  
   F. ATC Radar Beacon System  
   G. Computerized Radar Systems
IX. Radar Separation  (Chapter 9)

A. Aircraft identification
B. Transfer of Radar Identification
C. Basic Radar Separation
D. Radar-Assisted Navigation
E. Radar Arrivals and Approaches
F. Radar Traffic Information
G. Minimum Safe Altitude Warning (MSAW)

X. Operation in the National Airspace System  (Chapter 10)

A. Overview of an IFR Flight
B. Example of an IFR Flight
C. Example of a VFR Flight

XI. Oceanic and International ATC(Chapter 11)

A. International ATC
B. Canadian ATC
C. International Airspace
D. Atlantic Ocean ATC

XII. The Future of the National Airspace System  (Chapter 12)

A. National Airspace System Plan
B. Automated ATC
C. Preparation for AERA Systems
D. Advanced Automation Systems

Learning Objectives:

Describe the development of the ATC system over time
Describe the basic functioning of various NAVAIDS
Explain the US ATC system & structure
Explain ATC procedures
Use proper ATC communication phraseology
Explain the size, shape, uses and limits of all airspace types
Describe ATC Enroute & Terminal procedures
Explain basic RADAR theory
Describe Radar & Non-Radar separation procedures
Describe Performance Based Navigation
AVIA 3023
Air Traffic Control - Fall 2016
Class Contract

I ______________________________ have read the syllabus for this class and understand

the grading policy, the schedule and the requirements. I understand that I alone am responsible

for any material that I miss when I am not able to attend class and that should I miss an exam-

ination without giving prior notice and a reasonable explanation, that I will receive a zero (0)

for that examination, with very limited exceptions for truly unavoidable or tragic situations. I

also understand that I must attend the field trip to Fort Worth Center in order to earn the 100

points noted in the syllabus or turn in a five page paper on an ATC topic approved in advance

by the professor. I also understand that I will earn five points for each day I attend class. Finally,

if I ever have any questions concerning the content of this class, the grading procedures or the

requirements for any assignment and cannot find the answer in the syllabus, I understand that Dr.

Alluisi is available via office hours and telephone for consultation. There is no excuse for any of

my questions, however trivial, to go unanswered

_________________________________________   ______________________
print your name here                          signature             date

KEEP THIS COPY FOR YOUR RECORDS
Counseling Center: Any student experiencing mental or emotional issues who desires free, confidential, clinical counseling is encouraged to contact the SE Counseling Center at (580) 745-2988 to schedule an appointment during normal working hours Monday-Friday, 8:00AM to 5:00PM. For after-hours mental health emergencies, please call SE Campus Police at (580) 745-2911 or the Mental Health Crisis Hotline at 1- (800) 522-1090.

Disability Accommodations: Any student needing special accommodations due to a disability should contact the Office of Compliance and Safety, Administration Building, Suite 311 or call (580) 745-3090 (TDD# 745–2704). It is the responsibility of each student who anticipates or experiences barriers to their academic experience to make an official request for disability related accommodations in a timely manner.

Equity and Non-Discrimination Statement: Southeastern Oklahoma State University, in compliance with all applicable federal and state laws and regulations, does not discriminate on the basis of race, color, religion, national origin, sex, age, disability, sexual orientation, gender identity, or status as a veteran in any of its policies, practices, procedures, or programs. This includes, but is not limited to: admissions, employment, financial aid, and educational services. Inquiries regarding non-discrimination and equity policies may be directed to: Michael Davis, Director of Compliance and Safety & Title IX Coordinator, (580) 745-3090, or mdavis@se.edu.
AVIA 3023
Air Traffic Control - Fall 2016
Class Contract

I __________________________________ have read the syllabus for this class and understand

the grading policy, the schedule and the requirements. I understand that I alone am responsible

for any material that I miss when I am not able to attend class and that should I miss an exam-

ination without giving prior notice and a reasonable explanation, that I will receive a zero (0)

for that examination, with very limited exceptions for truly unavoidable or tragic situations. I

also understand that I must attend the field trip to Fort Worth Center in order to earn the 100

points noted in the syllabus or turn in a five page paper on an ATC topic approved in advance

by the professor. I also understand that I will earn five points for each day I attend class. Finally,

if I ever have any questions concerning the content of this class, the grading procedures or the

requirements for any assignment and cannot find the answer in the syllabus, I understand that Dr.

Alluisi is available via office hours and telephone for consultation. There is no excuse for any of

my questions, however trivial, to go unanswered


SIGN THIS COPY AND GIVE IT TO DR. ALLUISI

_________________________________________   ______________________
AVIA 3113
Aviation Legal Problems - Spring 2016
TT 8:00 - 9:15 Russell Building, Room 218 (R-218)

GENERAL INFORMATION
Instructor: Dr. Stan Alluisi (salluisi@se.edu)
Office: Eaker Field - Room 103
Office Hours: M-Tu 1:00 - 4:00 PM; W-Th 1:00 - 3:00 PM; & by appointment.
Phone: 580-745-3241 (Office) or 580-924-8385 (Home)

PREREQUISITES None

COURSE OBJECTIVES
To change the way you think! By gaining a basic knowledge and understanding of administrative and civil law, FAA enforcement procedures, issues of liability, insurance and international aviation laws, the student should be better able to deal with these legal situations should they ever confront them.

BRIEF COURSE OUTLINE
U.S. Constitution Principles of Liability Exculpatory Contracts Airports & Airspace
Regulatory Agencies Civil Proceedings Airline Liability Labor Law
FAA Enforcement Organizing to Limit Liability Government Liability
Aviation Medical Cases Aviation Insurance Accident Notification

TEXT
Required: Practical Aviation Law by J. Scott Hamilton (Fifth Edition) & Class Handouts
Suggested: Practical Aviation Law Workbook
Handouts: Blackboard under the “Course Content” section

STYLE OF TEACHING Mostly lecture with class discussion and self study through researching one 10 page paper on an aviation legal topic.

DROP POLICY Same as University policy, so look it up!

ATTENDANCE POLICY
Attendance is very strongly suggested and it is each student’s responsibility to sign in during each class period. If you do not sign in then in you are not present for attendance purposes which is worth 5 points for a total of 155 points. Note: Not all of the material on the quizzes & examinations will be out of the text book. Material from lectures, guest lecturers, movies & handouts may all be on the exams. You, the student, are responsible for all of the material covered during any absence from class even if the absence is excused.

MENTAL & EMOTIONAL HEALTH
Any student experiencing mental or emotional issues who desires free, confidential, clinical counseling is encouraged to contact the SE Counseling Center at (580) 745-2988 to schedule an appointment during normal working hours Monday – Friday, 8:00 AM to 5:00 PM. For after hours mental health emergencies, please call SE Campus Police at (580) 745-2911 or the Mental Health Crisis Hotline at 1-(800) 522-1090.

ACCESS
Any student needing special accommodations due to a disability should contact the Coordinator of Student Disability Services, Student Union, Suite 328 or call (580) 745-2392 (TDD# 745-2704). It is the responsibility of each student to make an official request for accommodations to the Coordinator.
GRADUATION REQUIREMENTS
A minimum GPA of 2.5 is required in all Professional Pilot & Aviation Management Major-Minor degree programs including specified general education requirements. In addition, no grade less than C in Professional Pilot ground courses is acceptable (For details see: 2013-2015 Undergraduate & Graduate Catalog - pg. 102).

GRADING PROCEDURES

<table>
<thead>
<tr>
<th>GRADING</th>
<th>POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exam I</td>
<td>100</td>
</tr>
<tr>
<td>Exam II</td>
<td>100</td>
</tr>
<tr>
<td>Exam III</td>
<td>100</td>
</tr>
<tr>
<td>Final Exam</td>
<td>100</td>
</tr>
<tr>
<td>Quizzes &amp; Assign</td>
<td>160</td>
</tr>
<tr>
<td>Term Paper - Sources &amp; Outline</td>
<td>50</td>
</tr>
<tr>
<td>Term Paper - Intro &amp; Conclusion</td>
<td>50</td>
</tr>
<tr>
<td>Term Paper - Complete</td>
<td>185</td>
</tr>
<tr>
<td>Attendance</td>
<td>155</td>
</tr>
<tr>
<td>Total Points Available</td>
<td>1000</td>
</tr>
</tbody>
</table>

RESEARCH PAPER

Topic: The topic will be agreed on by the student and the instructor in advance. The topic MUST examine some aspect of aviation law and lend itself to an in-depth discussion of the law or application of law. The topic should certainly be aviation related but the primary focus should be on the legal aspects of the situation.

Length: 10 full type written pages, double spaced, 12 point type, with a 1 inch margin all around. In addition, a cover page and a references page in APA format must be included & DO NOT count toward the 10 required pages. If any picture, figures or graphs are included they must be pertinent to the topic and must be included in an appendix which DOES NOT count toward the 10 required pages.

ALL submissions will only be accepted electronically!
NO Hand written materials - drafts, papers or parts of paper - will be accepted!

Email to: salluisi@se.edu
Subject: <Your Last Name> AVIA 3113 <Draft1 or Draft 2 or Final Paper>
Example---> Subject: Alluisi AVIA 3113 Draft 2

Content: The paper should start with an introduction and include a brief account of the legal issues involved. (Hint: The final statement in your introduction had better be your thesis statement.) Follow with a detailed account of the situation and explain the legal aspects in excruciating detail from each side of the issue. After the detailed account, present your ANALYSIS of the legal aspects of the situation. Explain if you agree with or disagree with the law or ruling in question or with a particular party and explain WHY. Finally, conclude with a summary of what you just told me and restate your thesis showing that you have proved your point. ALL term papers and drafts will be due via email no later than the beginning of class on the date due as shown in the schedule. No whining!

References: You must use at least FOUR references and you cannot use the text book for the class, Wikipedia or me as a reference at all! Reference sources MUST include at least one book, one scholarly journal, and one web site. Other sources may be books, journals, magazines, newspaper articles, and personal interviews with experts and/or affected parties. You must document where you obtained all of your information. Cite every fact and opinion that did not originate in your brain or is not common knowledge! You must cite your sources using the Publications Manual of the APA, Sixth Edition. If you choose a topic that is discussed in the textbook you must cover it in far more depth or breadth than is covered in the text. Do not just restate what the textbook says (I have already read it!) or what I have said in class! Also - papers full of “cut & paste” quotations will not be accepted!
NOTE: The length of these papers is TEN FULL PAGES. I do not wish to read a pamphlet nor do I wish to read War and Peace. Whatever the length, I will grade your paper and then for each page less than ten pages, 10% of the final grade will be deducted from your paper. In addition, copious points will be deducted for papers filled with long, rambling passages designed to inflate the work up to the minimum ten pages but containing no pertinent information germane to the issue at hand.


Draft & Final Papers
Your paper will be due in 3 different forms during the semester in class on the date specified in this syllabus.
1. You will receive 50 points for turning in your 4 required reference sources and a complete outline of your paper.
   (Note: You must cite the four references in accordance with the Publications Manual of the APA, Sixth Edition)
2. You will receive 50 points for turning in a complete introduction and conclusion based upon your outline.
   (Note: Your introduction must contain a thesis statement and your conclusion must restate this thesis.)
3. You will receive 185 points for turning in your complete paper to include: A cover page; a copy of the your outline, the 10 page paper and one or more references page.
   (Note: the final version of the paper must substantially follow the outline previously turned in!)

Plagiarism
DO NOT DO IT! You may work in groups to research topics and I encourage you to have other students or friends proof read your papers, but write your own papers! At the very minimum all plagiarized papers will receive a grade of ZERO! Repeat offenders and egregious cases of plagiarism may result in dismissal from the ASI or even expulsion from the university, in accordance with the procedures in the Student Code of Conduct which can be found in the Student Handbook (http://homepages.se.edu/student-life/student-handbook/) and the ASI Policies page (http://aviation.se.edu/policies/policy.html)

Hey! Even a bad grade is better than no grade at all!

HANDY DANDY GENERIC TERM PAPER OUTLINE

I. Cover Page (Must include: Title of Paper; Class Name; Date; Student Name.)
   NOTE: Review the Term paper Grading Sheet here found:

II. Introduction (A few paragraphs to 1 page.)
   (Briefly tell me what you are going to tell me about. Remember: The final statement in your introduction had better be your thesis statement.)

III. Detailed account of the event you are describing (5 to 6 pages.)
   (Who, what, where, when, why. Answer all of these questions especially the WHAT & WHY of the law.)

IV. Describe the legal problems that are involved (3 to 5 pages.)
   (Give details of what happened and how it changed the world. Remember - focus on the LAW!)

V. Conclusion (A few paragraphs to 1 page.)
   (Summarize the legal issues and conclude with why your view is correct.)

VI. Bibliography/Works Cited as per APA Publications Manual, Fifth Edition
   (One or more pages, as needed.)
   Remember, the works cited page does not count toward the 10 page minimum!
# AVIA 3113 Spring 2016
## Aviation Legal Problems Schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Work Due/Activities/Exams/Information</th>
<th>Chapter to Read</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>12 January</td>
<td>Let The Classes Begin!</td>
<td></td>
</tr>
<tr>
<td></td>
<td>14 January</td>
<td>16 January: Last day to drop or add a class</td>
<td>Introductions &amp; U.S. Constitution</td>
</tr>
<tr>
<td>2</td>
<td>19 January</td>
<td>Class Contracts signed and returned</td>
<td>U.S. Constitution</td>
</tr>
<tr>
<td></td>
<td>21 January</td>
<td>Q1: Constitution Quiz</td>
<td>1 Regulatory Agencies...</td>
</tr>
<tr>
<td>3</td>
<td>26 January</td>
<td>Topic for Paper Due</td>
<td>1 Regulatory Agencies...</td>
</tr>
<tr>
<td></td>
<td>28 January</td>
<td>Q2: Chapter 1</td>
<td>2 FAA Enforcement</td>
</tr>
<tr>
<td>4</td>
<td>2 February</td>
<td>Q3: Enforcement Quiz</td>
<td>2 FAA Enforcement</td>
</tr>
<tr>
<td></td>
<td>4 February</td>
<td></td>
<td>2 FAA Enforcement</td>
</tr>
<tr>
<td>5</td>
<td>9 February</td>
<td>1st Draft Paper Due (Outline &amp; 4 references)</td>
<td>2 FAA Enforcement</td>
</tr>
<tr>
<td></td>
<td>11 February</td>
<td>Exam I</td>
<td>3 Aviation Medical Cases</td>
</tr>
<tr>
<td>6</td>
<td>16 February</td>
<td></td>
<td>3 Aviation Medical Cases</td>
</tr>
<tr>
<td></td>
<td>18 February</td>
<td>Q4: Medical Quiz</td>
<td>4 Principles of Liability</td>
</tr>
<tr>
<td>7</td>
<td>23 February</td>
<td>2nd Draft Paper Due (Intro &amp; Conclusion)</td>
<td>4 Principles of Liability</td>
</tr>
<tr>
<td></td>
<td>25 February</td>
<td></td>
<td>4 Principles of Liability</td>
</tr>
<tr>
<td>8</td>
<td>1 March</td>
<td>Q5: Liability Quiz</td>
<td>4 Principles of Liability</td>
</tr>
<tr>
<td></td>
<td>3 March</td>
<td>6 March: Last day to drop a class with an auto “W”</td>
<td>Civil Litigation Handout</td>
</tr>
<tr>
<td>9</td>
<td>8 March</td>
<td>Q6: Civil Litigation Quiz</td>
<td>Civil Litigation Handout</td>
</tr>
<tr>
<td></td>
<td>10 March</td>
<td>Exam II</td>
<td>5 Org to Limit Liability</td>
</tr>
<tr>
<td>10</td>
<td>22 March</td>
<td>Final Edition of Paper</td>
<td>5 Org to Limit Liability</td>
</tr>
<tr>
<td></td>
<td>24 March</td>
<td>Q7: Limiting Liability Quiz</td>
<td>6 Aviation Insurance</td>
</tr>
<tr>
<td>11</td>
<td>29 March</td>
<td>1 April: Last day to apply for graduation</td>
<td>6 Aviation Insurance</td>
</tr>
<tr>
<td></td>
<td>31 March</td>
<td>Q8: Insurance Quiz</td>
<td>6 Aviation Insurance</td>
</tr>
<tr>
<td>12</td>
<td>5 April</td>
<td></td>
<td>7 Exculpatory Contracts</td>
</tr>
<tr>
<td></td>
<td>7 April</td>
<td>10 April: Last day to drop with a “P” or “F”</td>
<td>8 Airline Liability</td>
</tr>
<tr>
<td>13</td>
<td>12 April</td>
<td>Exam III (Proctored - I will be in Stillwater!)</td>
<td>8 Airline Liability</td>
</tr>
<tr>
<td></td>
<td>14 April</td>
<td></td>
<td>9 Government Liability</td>
</tr>
<tr>
<td>14</td>
<td>19 April</td>
<td></td>
<td>10 Accident Notification</td>
</tr>
<tr>
<td></td>
<td>21 April</td>
<td>Q9: Liability Quiz</td>
<td>10 Accident Notification</td>
</tr>
<tr>
<td>15</td>
<td>26 April</td>
<td></td>
<td>13 Airports &amp; Airspace</td>
</tr>
<tr>
<td></td>
<td>28 April</td>
<td>Q10: Airports &amp; Airspace Quiz</td>
<td>13 Airports &amp; Airspace</td>
</tr>
<tr>
<td>16</td>
<td>2 May</td>
<td>Aviation Legal Problems Final Exam</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Finals Week</td>
<td>Tuesday - 3 May from 8:00 - 10:00 AM</td>
<td></td>
</tr>
</tbody>
</table>
AVIA 3113  
Aviation Legal Problems - Spring 2016 
Class Contract

I ___________________________ have read the syllabus for this class and understand the attendance and grading policy, the schedule and the requirements for the written assignment. I understand that I must first turn in my term paper sources and outline, then turn in my term paper introduction and conclusion in draft form and on time and meeting all criteria in order to obtain the 50 points for each, as noted in the grading procedures. Finally, I must electronically turn in all editions of my paper and the final edition must substantially follow the outline I previously turned in. In addition, I understand that I alone am responsible for any material that I miss when I am not able to attend class and that should I miss an examination, a quiz or a due date for the paper without giving prior notice and a reasonable explanation, that I will receive a zero (0) for that examination, quiz or paper, with very limited exceptions for truly unavoidable or tragic situations. I understand that I will earn five points for attending each class and that it is my responsibility to sign in during each and every class. Should I not be able to attend class I can earn attendance credit for up to three excused absences.

I understand that my paper must be written using APA style and all references cited as per the Publications Manual of the APA (6th Edition) and that I have read and understand the ASI Academic Honesty Policy and agree to abide by it (The ASI Academic Honesty Policy is available at: http://homepages.se.edu/aviation/files/2012/02/academic_honesty_policy.pdf).

Finally, If I ever have any questions concerning the content of this class, the grading procedures or the requirements for any assignment and cannot find the answer in the syllabus, I understand that Dr. Alluisi is available via office hours, email, and telephone for consultation. There is no excuse for my questions, however trivial, to go unanswered.

_________________________________________   ______________________
print your name here
signature             date

KEEP THIS COPY FOR YOUR RECORDS

_______________________________________   ______________________
signature             date
AVIA 3113
Aviation Legal Problems - Spring 2016
Class Contract

I ____________________________ have read the syllabus for this class and understand the attendance and grading policy, the schedule and the requirements for the written assignment. I understand that I must first turn in my term paper sources and outline, then turn in my term paper introduction and conclusion in draft form and on time and meeting all criteria in order to obtain the 50 points for each, as noted in the grading procedures. Finally, I must electronically turn in all editions of my paper and the final edition must substantially follow the outline I previously turned in. In addition, I understand that I alone am responsible for any material that I miss when I am not able to attend class and that should I miss an examination, a quiz or a due date for the paper without giving prior notice and a reasonable explanation, that I will receive a zero (0) for that examination, quiz or paper, with very limited exceptions for truly unavoidable or tragic situations. I understand that I will earn five points for attending each class and that it is my responsibility to sign in during each and every class. Should I not be able to attend class I can earn attendance credit for up to three excused absences.

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Finally, If I ever have any questions concerning the content of this class, the grading procedures or the requirements for any assignment and cannot find the answer in the syllabus, I understand that Dr. Alluisi is available via office hours, email, and telephone for consultation. There is no excuse for my questions, however trivial, to go unanswered.

_________________________________________   ______________________
print your name here                  signature             date

TURN THIS COPY IN TO DR. ALLUISI

_________________________________________   ______________________

signature             date
Southeastern Oklahoma State University  
AVIA 3123 – Commercial Operations

GENERAL INFORMATION

Instructor: George Jacox
Office Number: Flight Operations, Eaker Field
Office Hours: M - F, 1300-1500, or by appointment
Telephone Number: 580-745-3256

PREREQUISITES AND SUPPORT COURSES

AVIA 1004

BRIEF COURSE OUTLINE

This course exposes the career-oriented student to flight and regulatory requirements and skills necessary to function in industry as a Commercial Pilot. Upon completion of this course the student will be expected to pass the FAA Commercial Pilot Knowledge Exam.

COURSE OBJECTIVES

The student will be able to describe and list the fundamentals and elements of the following:

- Operation of aircraft radios and the use of radio phraseology with respect to ATC facilities
- VFR navigation
  - Pilotage
  - Dead reckoning
  - Radio navigation
- Use of the E6-B flight computer
- VFR cross-country flight planning
- VFR cross-country emergency procedures
- Medical factors related to flight and general safety precautions
- Fundamentals of weather related to aviation operations
- Interpretation and use of weather reports, forecasts, aviation broadcasts and the obtaining of weather briefings.
- Use of Zulu time, in-flight weather advisories, and weather recognition
- FAR’s applicable to Commercial operations
TEXT MATERIALS

Instrument/Commercial Manual, Jeppesen Sanderson
Flight Training Handbook, FAA
Current Title 14 CFR ie FAR/AIM book
Cessna 182RG POH

STYLE/MODE OF TEACHING

Lecture/Seminar/Presentations/Demonstrations/Class Handouts.

DROP AND ADD POLICY

Same as University. Please review.

ATTENDANCE POLICY

The Federal Aviation Administration, per 14 CFR Part 141, requires minimum contact time as stated in the approved curriculum. Therefore, all class absences must be completed on an hour for hour basis. This must be accomplished by an approved ASI Staff Flight instructor at the student’s expense. Scheduling and completion of this requirement is the responsibility of the student.

Attendance is very important. Students are expected to attend all classes. Entering the classroom after the start of class is very disrupting and inconsiderate of your class mates. There is a 1% point deduction for being late. If you must leave during class time, be considerate! Unannounced quizzes will be given, and added to your final grade. All absences, except those having to do with pre-approved SOSU functions, will be considered unexcused.

Make-up exams will be given in extenuating circumstances only, and only with prior permission. Credit will not be given for assignments that are turned in after the due date. There will be no make-up quizzes. In the event of an absence, the student is responsible for scheduling a makeup lesson on all material covered in class. Attendance will be taken at the beginning of each class. Make-up quizzes will not be given.

Make-up exams will be given in extenuating circumstances only, with prior permission.
LABORATORY

N/A

READING

Reading assignments are to prepare you for that class period and should be accomplished prior to the scheduled class.

EXAMINATION

There will be three examinations. The examinations will be a combination of multiple choice, matching, fill in the blanks, and essay questions.

GRADING PROCEDURES

<table>
<thead>
<tr>
<th>Examination</th>
<th>Points</th>
<th>Range</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Examination #1</td>
<td>100</td>
<td>90 - 100%</td>
<td>A</td>
</tr>
<tr>
<td>Examination #2</td>
<td>100</td>
<td>80 - 89%</td>
<td>B</td>
</tr>
<tr>
<td>Examination #3</td>
<td>100</td>
<td>70 - 79%</td>
<td>C</td>
</tr>
<tr>
<td>Paper</td>
<td>100</td>
<td>69 - 69%</td>
<td>D</td>
</tr>
<tr>
<td>Final</td>
<td>100</td>
<td>Less than 60</td>
<td>F</td>
</tr>
<tr>
<td>Total</td>
<td>500</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

CHEATING or PLAGIARISM

Cheating may be defined as using unauthorized materials or giving or receiving unauthorized materials or receiving unauthorized assistance during an examination or other academic exercise. Examples may include:

1. Copying the work of another student during an examination OR other academic exercise (including computer exercises), or permitting another student to copy one's work;
2. Taking an examination for another student, or allowing another student to take one's examination;

3. Possessing unauthorized notes, study sheets or other materials during an examination or other academic exercise;

4. Falsifying or tampering with examination results;

5. Completing, copying, or using the results of any other student's computer assignments.

Plagiarism may be defined as the use of another's ideas or words without acknowledgement.

Examples of plagiarism may include:

1. Failing to use quotation marks when quoting from a source;

2. Failing to document distinctive ideas from a source;

3. Fabrication or inventing sources.

DISABILITIES ACT

Any student needing special accommodations due to a disability should contact the Coordinator of Student Disability Services, Student Union, Suite 204 or call (580) 745-2254 (TDD# 745-2704). It is the responsibility of each student to make an official request for accommodations to the Coordinator.
Lecture Schedule  MWF, 10:00-10:50, Fall 2009

Class period

Aug. 16  Introduction – Navigation Stage 3-I.

Aug. 18  Navigation Stage 3-I.

Aug. 20  Navigation Stage 3-I.

Aug. 23  Navigation Stage 3-II.

Aug. 25  Navigation Stage 3-II

Aug. 27  Navigation Stage 3-II.

Aug. 30  Navigation Stage 3-II.

Sep.  1   Navigation Stage 3-III

Sep.  3   Navigation Stage 3-III

Sep.  8   Navigation Stage 3-III

Sep. 10  Navigation Stage 3-IV

Sep. 13  Navigation Stage 3-IV

Sep. 15  Review

Sep. 17  Test I

Sep. 20  Weather/ Stage 4-I

Sep. 22  Weather/ Stage 4-I

Sep. 24  Weather/ Stage 4-I

Sept 27  Weather/ Stage 4-I, Draft of papers due

Sept 29  Weather/ Stage 4-I

Oct.  1  Weather/ Stage 4-I
Oct. 11  Weather/ Stage 4-II
Oct. 13  Weather/ Stage 4-II
Oct. 15  Weather/ Stage 4-II
Oct. 18  Weather/ Stage 4-II
Oct. 20  Weather/ Stage 4-II
Oct. 25  Weather/ Stage 4-III
Oct. 27  Weather/ Stage 4-III
Oct. 29  Weather/ Stage 4-III
Nov.  1  Weather/ Stage 4-III
Nov.  3  Weather/ Stage 4-III
Nov.  5  Weather/ Stage 4-III
Nov.  8  Test II
Nov. 10  FAR’s Stage 5-I
Nov. 12  FAR’s Stage 5-I
Nov. 15  FAR’s Stage 5-I
Nov. 17  FAR’s Stage 5-I
Nov. 19  FAR’s Stage 5-II
Nov. 22  FAR’s Stage 5-II
Nov 29   Test #3, Paper Due
Dec.  1  Review for Final
Dec.  3  Review for Final
Dec 6 – 10 FAA Commercial Knowledge Exam due by 15:00 Dec. 10
Notice

Upon completion of this course, the following information will be submitted to the FAA’s Airman Testing Standards Branch, AFS-630, in Oklahoma City, Oklahoma:

* Student’s last name, first name and middle initial
* Student’s course completion date
* Student’s social security number
* Student’s date of birth

The release of this information is in compliance with Order: 8700.1, Appendix: 3, Bulletin: HBGA 00-09.

Dress Code

Each Student will dress like a professional pilot. This includes khaki pants or khaki shorts (no cargo style), pullover shirt or “like new” blue jeans. This DOES NOT include, Hats, cut off shorts/pants, shirts that were just pulled out of a pile.

TRAINING COURSE OUTLINE--TRAINING SYLLABUS

COMMERCIAL PILOT  AIRPLANE-SINGLE ENGINE LAND

GROUND TRAINING   100:00 HOURS

1. GROUND TRAINING COURSE OBJECTIVES. The student will obtain the necessary aeronautical knowledge and meet the prerequisites specified in Part 61 and Part 141 of the FARs for the FAA Commercial Pilot Knowledge Examination.

2. GROUND TRAINING COURSE COMPLETION STANDARDS. The student will demonstrated through oral, written tests, and records that he/she meets the prerequisites specified in Part 61 and Part 141 of the FARs, and has the knowledge necessary to pass the FAA Commercial Pilot Knowledge Examination.
STAGE THREE - NAVIGATION: 20:00 HOURS

1. STAGE THREE OBJECTIVE. To develop the student's ability to plan and plot a VFR cross-country flight using pilotage, dead reckoning and radio navigation.

2. STAGE THREE COMPLETION STANDARDS. This stage will be successfully completed when the student passes the Stage Three Written Examination with a grade of at least 80%.

3. LESSON NO. 1 - 4:00 HOURS.

   a. Objective. During this lesson, the student will be instructed in the operation of aircraft radios and the use of radio phraseology with respect to air traffic control facilities. The flight computer will be introduced along with the basic use of aeronautical charts.

   CONTENT:

   (1) Radio communications. (Descriptions and procedures for operating within the National Airspace System)

      (a) Operation of the communications radio equipment.

      (b) Ground control.

      (c) Tower.

      (d) ATIS.

      (e) Flight service station.

      (f) UNICOM.

      (g) Technique and phraseology.

      (h) ATC light signals.

   (2) Flight computer - slide rule face.

      (a) Time.

      (b) Speed.

      (c) Distance.

      (d) Fuel consumption.
b. Completion Standards. The student will have successfully completed the lesson when, by oral or written examination and demonstration, he has a basic knowledge of navigation and the use of radio aids. He will be able to solve fundamental and advanced problems on the flight computer.

4. LESSON NO. 2 - 5:00 HOURS.

a. Objective. During this lesson, the student will be instructed in the fundamentals of navigation, the operation of navigational radio equipment, and advanced problems on the flight computer.

CONTENT:
(1) VFR navigation.
   (a) Pilotage.
   (b) Dead reckoning.

(2) Operation of the navigational radio equipment.
   (a) VOR.
   (b) ADF.
   (c) Use of radio aids.

(3) Flight computer - wind face.
   (a) Determination of wind correction angle and true heading.
   (b) Determination of ground speed.
   (c) Review time, speed, distance, and fuel consumption problems on the computer.
b. Completion Standards. The student will have successfully completed the lesson when, by oral or written examination and demonstration, he has a basic knowledge of navigation and the use of radio aids. He will be able to solve fundamental and advanced problems on the flight computer.

5. LESSON NO. 3 - 5:00 HOURS.

a. Objective. Lesson Two will be reviewed. Advanced radio navigational problems, emergency procedures with respect to cross-country flying and flight planning will be introduced.

CONTENT:

(1) Review Lesson 2.

(2) Use of ADF.

(3) Radar.

(4) Use of VOR, intercepting radials.

(5) Emergency procedures.

   (a) Diversion to an alternate.

   (b) Lost procedures, including use of radar and DF instructions.

   (c) In-flight emergencies, including forced landings.

(6) Transponder.

(7) DME.

(8) Review flight planning.

(9) Review computer.

b. Completion Standards. This lesson will be completed when, by oral or written examination and demonstration, the student has a working knowledge of advanced radio navigation procedures, emergency procedures and solving flight computer problems.
6. LESSON NO. 4 - 5:00 HOURS.

a. Objective. During this lesson, the student will be instructed in advanced flight planning, review of flight computer problems, and will be introduced to the medical factors related to flight and general safety precautions. At this time, the school procedures for cross-country training flights will be introduced.

CONTENT:

(1) Flight planning.

(2) Review computer.

(3) Medical factors related to flight (physiological considerations).
   
   (a) Fatigue, hypoxia, hyperventilation, alcohol, drugs, vertigo, carbon monoxide, high altitude operations and night operations.

(4) General safety.
   
   (a) Safe and efficient operation of airplanes.
   (b) Preflight inspection.
   (c) Inspection and certification requirements.
   (d) Collision avoidance precautions.
   (e) Wake turbulence avoidance.
   (f) Fire - in the air and on the ground.
   (g) Use of fire extinguishers.
   (h) Ground handling of aircraft.
   (i) Aeronautical decision making and judgement

(5) School procedures for dispatching flights after unscheduled stops.

(6) Obtaining maintenance away from the home base.
b. Completion Standards. This lesson will be completed when, by oral or written examination and demonstration, the student displays knowledge of medical factors related to flight, general safety procedures, and school policy and procedures for cross-country training flights.

7. STAGE THREE WRITTEN EXAMINATION - 1:00 HOUR.

STAGE FOUR - WEATHER: 20:00 HOURS

1. STAGE FOUR OBJECTIVE. To develop the ability to recognize critical weather situations from both the ground and in-flight, procedures and use of appropriate aeronautical weather reports and forecasts.

2. STAGE FOUR COMPLETION STANDARDS. The student will have successfully completed this stage when he passes the Stage Four Written Examination with a grade of at least 80%.

3. LESSON NO. 1 - 6:00 HOURS.

a. Objective. During this lesson, the student will be instructed in the fundamentals of weather with the operation of aircraft.

CONTENT:

(1) Aviation weather basics.
   (a) Atmospheric layers.
   (b) Pressure.
   (c) Circulation.
   (d) Temperature and moisture.
   (e) Stability and lapse rates.
   (f) Turbulence.
   (g) Clouds.
Completion Standards. This lesson will be completed when, by oral or written examination, the student demonstrates fundamental knowledge of aviation weather.

4. LESSON NO. 2 - 7:00 HOURS.

a. Objective. Lesson One will be reviewed. The interpretation and use of weather reports, forecasts, aviation broadcasts and the obtaining of weather briefings will be introduced.

CONTENT:

(1) Review Lesson No. 1.

(2) Aviation weather reports.
   (a) METARs.
   (b) Special surface reports.
   (c) Pilot reports.
   (d) Radar reports.

(3) Aviation weather broadcasts.
   (a) Transcribed weather broadcasts.
   (b) In-flight weather advisories.

(4) Weather briefings.

(5) Review requirements of regulations for VFR flight.

(6) Aviation Weather forecasts.
(a) Area forecasts.

(b) TAFs.

(c) Wind-aloft forecasts and reports.

b. Completion Standards. The lesson will be completed when, by oral or written examination and demonstration, the student can interpret and use aviation weather reports, forecasts, and can obtain a weather briefing.

5. LESSON NO. 3 - 6:00 HOURS.

a. Objective. This lesson will consist of a review of the previous two lessons and instruction in the use of Zulu time, in-flight weather advisories and weather recognition.

CONTENT:

(1) Review Lessons No. 1 and 2.

(2) Zulu time.

(3) In-flight weather advisories.

(4) Hazardous weather recognition.

b. Completion Standards. This lesson will be completed when, by oral or written examination, the student has a working knowledge of Zulu time and in-flight aviation weather advisories.

6. STAGE FOUR WRITTEN EXAMINATION - 1:00 HOUR.

STAGE FIVE - REVIEW AND FINAL PREPARATION: 8:00 HOURS

1. STAGE FIVE OBJECTIVE. To ensure that the student meets at least the minimum knowledge requirements for the FAA Commercial Pilot Written Examination and to introduce the oral portion of the Commercial Pilot-Airplane Flight Examination in accordance with FARs Part 61 and Part 141, and the standards set by the school.
2. STAGE FIVE COMPLETION STANDARDS. The student will have successfully completed this stage when he passes the Stage Five Final Written Examination (final course examination) with a grade of at least 80%.

3. LESSON NO. 1 - 4:00 HOURS.

a. Objective. During this lesson, the student will be reviewed in the basic knowledge requirements for the Commercial Pilot Written Examination.

CONTENT:

(1) Rules and Publications.

   (a) The Federal Aviation Regulations applicable to commercial pilot privileges, limitations, and flight operations.

   (b) The rules of the National Transportation Safety Board pertaining to accident reporting.

   (c) The use of the Airman's Information Manual.

   (d) The FAA Advisory Circular System.

(2) VFR Navigation.

   (a) Pilotage and dead reckoning.

   (b) Radio aids.

(3) Meteorology.

   (a) The recognition of critical weather situations from the ground and in flight.

   (b) The procurement and use of aeronautical weather reports and forecasts.

(4) Aircraft operations.

   (a) High density airports.

   (b) Collision avoidance precautions.

   (c) Radio communication procedures.
b. Completion Standards. The lesson will be completed when, by oral or written examination and demonstration, the student displays at least the minimum knowledge requirements to pass the Commercial Pilot-Airplane Written Examination in accordance with the minimum standards of both the Federal Aviation Regulations and the standards set by the school.

4. LESSON NO. 2 - 3:00 HOURS.

a. Objective. During this lesson, the student will be introduced to the minimum basic knowledge requirements for the oral portion of the Commercial Pilot-Airplane Flight Examination.

CONTENT:

(1) Preflight Operations.
   (a) Preflight line inspection.
   (b) Weight and balance determination.
   (c) Starting and run-ups.
   (d) Airplane servicing.

(2) Airport Operations.
   (a) Airport and traffic pattern operations.
   (b) Operations at controlled airports.
   (c) Operations at uncontrolled airports.
   (d) Radio communications.

(3) Flight Maneuvering by Reference to Ground Objects.

(4) Slow Flight and Stalls.
   (a) Flight at critically slow airspeeds.
   (b) Recognition of imminent stalls.
   (c) Recovery from imminent and full stalls.

(5) Normal and crosswind takeoff and landing procedures.
(6) Instrument reference procedures.
   (a) Control and maneuvering an airplane solely by reference to instruments.
   (b) Emergency descents and climbs using radio aids or radar directives.

(7) Cross-country flying.
   (a) Pilotage and dead reckoning.
   (b) Radio aids.

(8) Maximum performance takeoffs and landings.

(9) Night flying.
   (a) Basic flying and emergency procedures.
   (b) VFR navigation.

(10) Emergency Operations.
    (a) Simulated equipment and aircraft malfunctions.
    (b) Lost Procedures.
    (c) Emergency go-arounds.

b. Completion Standards. This lesson will be completed when, by oral or written examination and demonstration, the student will be found to have been properly introduced to the basic knowledge requirements of the FARs for the oral portion of the Commercial Pilot-Airplane Flight Examination.

5. STAGE FIVE AND COURSE FINAL COMPREHENSIVE WRITTEN EXAM - 1:00 HOUR.
AVIA 3133
Aviation Administration - Fall 2016
MWF 10:00 - 10:50    Russell Building, Room 220 (R-220)

GENERAL INFORMATION
Instructor:    Dr. Stan Alluisi (salluisi@se.edu)
Office:      Eaker Field - Room 103
Office Hours:  M-W 13:00 - 16:00; T-T 13:00 - 15:00; and by appointment.
Phone:        580-745-3241 (Office) or 580-230-9422 (Cell)

PREREQUISITES
None

COURSE OBJECTIVES
To change the way you think. By gaining a basic knowledge and understanding of how FBO’s function and the role of the FBO and General Aviation as part of the nation’s transportation infrastructure the student should be better able to understand and deal with this unique facility during their aviation careers.

BRIEF COURSE OUTLINE
Role of the GA Fixed Base Operator           Management Information Systems
Management Functions                      Operations: Flight Line & Front Desk
Marketing                                   Aviation Maintenance
Profits, Cash Flow and Financing          Safety, Security and Liability
Human Resources                            Physical Facilities
Organization & Administration             Future Trends for FBO’s

TEXT
Essentials of Aviation Management (7th Edition) by J.F. Rodwell, et al

STYLE OF TEACHING
Lecture with class discussion and one or two field trips.

DROP POLICY
Same as University policy, so look it up!

ATTENDANCE POLICY
Attendance is very strongly suggested and will be recorded because lively class discussions will most certainly abound! In addition, not all of the material on the examinations will be out of the book. Material from the lectures, guest lecturers, movies and handouts may all be on the exams. The student is responsible for all of the material covered during any absence from class even if the absence is excused. It is also each student’s responsibility to sign in during each class period. If you do not sign in then in you are not present for attendance purposes. Presence in each class earns 3 points for a total of 135 points (45 classes X 3 points = 135). Up to three properly excused absences will earn attendance credit. Absences beyond three, including excused absences, will not earn credit for attendance. Bottom line: Be there or be square.

ACCESS
Any student needing special accommodations due to a disability should contact the Coordinator of Student Disability Services, Student Union, Suite 204 or call (580) 745-2254 (TDD# 745-2704). It is the responsibility of each student to make an official request for accommodations to the Coordinator.
GRADING PROCEDURES

Exam 1  100 points
Exam 2  100 points
Exam 3  100 points
Exam 4  100 points
Final Exam  100 points
Term Paper - Outline  50 points  (Complete outline and 3 references in APA style)
Term Paper - Intro-Conclusion  50 points  (Introduction & conclusion with thesis statement)
Term Paper - Final Edition  165 points
Quizzes  100 points
Attendance  (45 X 3 points)  135 points  Just show up!
Total Points Available  1000 points

Grading

90-100% = A  (900 - 1000)
80 - 89% = B  (800 - 899)
70 - 79% = C  (700 - 799)
60 - 69% = D  (600 - 699)
00 - 59% = F  (000 - 599)

RESEARCH PAPER

Topic: The topic will be agreed on by the student and the instructor in advance. Typically, the topic will examine some aspect or function of an FBO or an issue confronting FBO’s. The topic should certainly be aviation related but the primary focus should be on the administrative or management aspects of the situation.

Length: 8-10 full type written pages, double spaced, 12 point type, and 1 inch margins all around. In addition, a cover page and a references page must be included and these do NOT count toward the 5 - 8 required pages. Hand written papers will not be accepted!

Content: The paper should start with an introduction and include a brief account of the issues involved. (Hint: The final statement in your introduction had better be your thesis statement.) Follow with a detailed account of the situation explain the aspects in excruciating detail from each side of the issue. After the detailed account, present your analysis of the important aspects of the situation. Explain if you agree with or disagree with the issue in question or with a particular party and explain WHY. Finally, conclude with a summary of what you just told me and restate your thesis showing that you have proved your point. ALL term papers will be due NLT the end of class on the date due as shown in the schedule.

References: You must use at least THREE references and you cannot use the text book for the class, Wikipedia, or me as a reference AT ALL! Reference sources MUST include at least one book, one scholarly journal, and one web site. Other sources may be books, journals, magazines, newspaper articles, and personal interviews with experts and/or affected parties. You must document where you obtained all of your information. Cite every fact and opinion that did not originate in your brain. You must cite your sources using the Publications Manual of the APA, Fifth Edition. If you choose a topic that is discussed in the textbook you must cover it in far more depth or breadth than is covered in the text. Do not just restate what the textbook says (I have already read it!) or what I have said in class!

NOTE: The length of these papers is 8-10 PAGES. I do not wish to read a pamphlet nor do I wish to read War and Peace. For each page less than eight pages, 1/8 of the final grade will be deducted from your paper. In addition, copious points will be deducted for papers filled with long, rambling passages designed to inflate the work up to the minimum ten pages but containing no pertinent information germane to the issue at hand.
**Grading:** Use the Term Paper Grading Sheet (found at: http://homepages.se.edu/aviation/files/2012/02/term-paper-grading-sheet.pdf) to critique your own paper.

**Draft & Final Papers**
Your paper will be due in **THREE** different forms during the semester in class on the date specified in this syllabus.

1. You will receive **50 points** for turning in your 3 required reference sources and a complete outline of your paper.
   (Note: You must cite the four references in accordance with the *Publications Manual of the APA, Fifth Edition*.)

2. You will receive **50 points** for turning in a complete introduction and conclusion based upon your outline.
   (Note: Your introduction must contain a thesis statement and your conclusion must restate this thesis.)

3. You will receive **145 points** for turning in your complete paper to include: A cover page; the 8-10 page paper; and one or more references page - **IN ONE FILE**. I do not want to receive two or three separate files!
   (Note: the final version of the paper must substantially follow the outline previously turned in!)

I will grade, critique and then return your: 1.) references and outline; and 2.) your introduction and conclusion.

**Plagiarism**
**DO NOT DO IT!** You may work in groups to research topics and I encourage you to have other students or friends proof read your papers, but **write your own papers!** All plagiarized papers will receive a grade of ZERO!

*Even a bad grade is better than no grade at all.*

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**Access - Disability Accommodations - Counseling - Equity & Non-Discrimination Statements**

**Counseling Center:** Any student experiencing mental or emotional issues who desires free, confidential, clinical counseling is encouraged to contact the SE Counseling Center at (580) 745-2988 to schedule an appointment during normal working hours Monday-Friday, 8:00AM to 5:00PM. For after-hours mental health emergencies, please call SE Campus Police at (580) 745-2911 or the Mental Health Crisis Hotline at 1- (800) 522-1090.

**Disability Accommodations:** Any student needing special accommodations due to a disability should contact the Office of Compliance and Safety, Administration Building, Suite 311 or call (580) 745-3090 (TDD# 745–2704). It is the responsibility of each student who anticipates or experiences barriers to their academic experience to make an official request for disability related accommodations in a timely manner.

**Equity and Non-Discrimination Statement:** Southeastern Oklahoma State University, in compliance with all applicable federal and state laws and regulations, does not discriminate on the basis of race, color, religion, national origin, sex, age, disability, sexual orientation, gender identity, or status as a veteran in any of its policies, practices, procedures, or programs. This includes, but is not limited to: admissions, employment, financial aid, and educational services. Inquiries regarding non-discrimination and equity policies may be directed to: Michael Davis, Director of Compliance and Safety & Title IX Coordinator, (580) 745-3090, or mdavis@se.edu.
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<tr>
<th>Week</th>
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<th>Topic to Read</th>
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<td>Introductions &amp; Bureaucratic stuff</td>
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**Finals**
AVIA 3133
Aviation Administration - Fall 2016
Class Contract

I __________________________ have read the syllabus for this class and understand

the attendance and grading policy, the schedule and the requirements for the written assignment. I understand that I must first turn in my term paper sources and outline, then turn in my term paper introduction and conclusion in draft form and on time and meeting all criteria in order to obtain the 50 points for each as noted in the grading procedures. Finally, I must turn in the final edition of my paper and it must substantially follow the outline I previously turned in. In addition, I understand that I alone am responsible for any material that I miss when I am not able to attend class and that should I miss an examination, a quiz or a due date for the paper without giving prior notice and a reasonable explanation, that I will receive a zero (0) for that examination, quiz or paper, with very limited exceptions for truly unavoidable or tragic situations. I understand that I will earn three points for attending each class and that it is my responsibility to sign in during each and every class. Should I not be able to attend class I can earn attendance credit for up to three properly excused absences.

I understand that my paper must be written using APA style and all references cited as per the Publications Manual of the APA (5th Edition) and that I have read and understand the ASI Academic Honesty Policy and agree to abide by it.

(The ASI Academic Honesty Policy is available at:
http://homepages.se.edu/aviation/files/2012/02/academic_honesty_policy.pdf)

Finally, If I ever have any questions concerning the content of this class, the grading procedures or the requirements for any assignment and cannot find the answer in the syllabus, I understand that Dr. Alluisi is available via office hours, email, and telephone for consultation. There is no excuse for my questions, however trivial, to go unanswered.

**KEEP THIS COPY FOR YOUR RECORDS**

signature

date
HANDY DANDY GENERIC TERM PAPER OUTLINE

I. **Cover Page** (Must include: Title of Paper; Class Name; Date; Student Name.)

II. **Introduction** (A few paragraphs to 1 page.)
   (Briefly tell me what you are going to tell me about. Remember: The final statement in your introduction had better be your thesis statement.)

III. **Detailed account of the event you are describing** (3 to 5 pages.)
   (Who, what, where, when, why. Answer all of these questions especially the WHAT & WHY.)

IV. **Describe the Administrative/Management problems that are involved** (2 to 4 pages.)
   (Give details of what happened and how it changed the world. Remember - focus on the management aspects!)

V. **Conclusion** (A few paragraphs to 1 page.)
   (Summarize the management issues and conclude with why your view is correct.)

VI. **Bibliography/Works Cited as per APA Publications Manual, 5th Edition** (One or more pages, as needed.)
   Remember, the works cited page does not count toward the 10 page minimum!)
I ___________________________ have read the syllabus for this class and understand the attendance and grading policy, the schedule and the requirements for the written assignment. I understand that I must first turn in my term paper sources and outline, then turn in my term paper introduction and conclusion in draft form and on time and meeting all criteria in order to obtain the 50 points for each as noted in the grading procedures. Finally, I must turn in the final edition of my paper and it must substantially follow the outline I previously turned in. In addition, I understand that I alone am responsible for any material that I miss when I am not able to attend class and that should I miss an examination, a quiz or a due date for the paper without giving prior notice and a reasonable explanation, that I will receive a zero (0) for that examination, quiz or paper, with very limited exceptions for truly unavoidable or tragic situations. I understand that I will earn three points for attending each class and that it is my responsibility to sign in during each and every class. Should I not be able to attend class I can earn attendance credit for up to three properly excused absences.

I understand that my paper must be written using APA style and all references cited as per the Publications Manual of the APA (5th Edition) and that I have read and understand the ASI Academic Honesty Policy and agree to abide by it.

(The ASI Academic Honesty Policy is available at:

http://homepages.se.edu/aviation/files/2012/02/academic_honesty_policy.pdf)

Finally, if I ever have any questions concerning the content of this class, the grading procedures or the requirements for any assignment and cannot find the answer in the syllabus, I understand that Dr. Alluisi is available via office hours, email, and telephone for consultation. There is no excuse for my questions, however trivial, to go unanswered.

SIGN AND RETURN THIS COPY

signature                                      date
AVIA 3143
Aviation History - Spring 2016
MWF 9:00 - 9:50   Russell Building, Room 219 (R219)

GENERAL INFORMATION
Instructor:  Dr. Stan Alluisi (salluisi@se.edu)
Office: Eaker Field - Room 103
Office Hours: M-Tu 1:00 - 4:00; W-Th 1:00 - 3:00; and by appointment.
Phone: 580-745-3241 (Office) or 580-924-8385 (Home)

PREREQUISITES  None

COURSE OBJECTIVES
To change the way you think! By gaining a basic knowledge and understanding of the beginnings of manned flight, the development of aviation and space technology, and the legacy left to us by our predecessors, your mind will change. If this occurs you will see the world in a different manner than when you began this course.

BRIEF COURSE OUTLINE
This course will study the history of aviation beginning with humanity’s insatiable desire to fly. The origins of aviation will be studied beginning with flight in mythology and covering several early aviation pioneers around the world. The course will then follow the development of practical aviation, emphasizing American contributions, and conclude with a look at future aviation technologies and policies and how aviation has changed the world for better or worse.

TEXT  Flight in America by Roger Bilstein (Third Edition)

STYLE OF TEACHING    Lecture with class discussion as well as self-study through researching at least one eight page research paper and at least ten “Significant Dates.”

DROP POLICY    Same as University policy, so look it up!

ATTENDANCE POLICY
Attendance is very strongly suggested because lively class discussions will most certainly abound! In addition, there will be ten weekly quizzes and not all of the material on the examinations will be out of the book! Material from the lectures, movies and handouts may all be on the exams. NOTE: The student is responsible for all of the material covered during any absence from class even if the absence is excused. Finally, your appearance in class is worth 2.5 points per class for a total of 100 points. Be there or be square.

ACCESS
Any student needing special accommodations due to a disability should contact the Coordinator of Student Disability Services, Student Union, Suite 328 or call (580) 745-2392 (TDD# 745-2704). It is the responsibility of each student to make an official request for accommodations to the Coordinator.

MENTAL & EMOTIONAL HEALTH
Any student experiencing mental or emotional issues who desires free, confidential, clinical counseling is encouraged to contact the SE Counseling Center at (580) 745-2988 to schedule an appointment during normal working hours Monday – Friday, 8:00 AM to 5:00 PM. For after hours mental health emergencies, please call SE Campus Police at (580) 745-2911 or the Mental Health Crisis Hotline at 1-(800) 522-1090.
GRADUATION REQUIREMENTS
A minimum GPA of 2.5 is required in all Professional Pilot and Aviation Management Major-Minor degree requirements including specified general education requirements. In addition, no grade less than C in Professional Pilot ground courses is acceptable. (2013-2015 SOSU Undergraduate & Graduate Catalog - page 102)

GRADING PROCEDURES

Required Work
- Significant Dates (10 @ 20 points each) 200 points (You MUST turn in at least 10 significant dates on time)
- Exam I 100 points
- Exam II 100 points
- Exam III 100 points
- Final Exam 100 points
- Quizzes & Assignments (10@10 points each) 100 points
- Famous Names (10 @ 10 points each) 100 points
- Term Paper - Draft Version 1 25 points
- Term Paper - Draft Version 2 25 points
- Term Paper - Final Version 150 points
- Attendance (40 days @ 2.5 points/day) 100 points

Required Points Available 1100 points

Optional Work
- Significant Dates (10 @ 20 points each) 200 points (Up to 10 additional SD’s may be turned in)
- Term Paper II & III 150 points (Note: Credit will be given for optional term papers
- Term Paper III 150 points and significant dates ONLY if the required paper and

Optional Points Available 500 points dates were turned in on time.)

Total Points (Required + Optional): 1500 points

90-100% = A (1080 - 1200) NOTE: Grades are based on 1200 points.
80 - 89% = B ( 960 - 1079)
70 - 79% = C ( 840 - 959)
60 - 69% = D ( 720 - 839)
00 - 59% = F ( 000 - 719)

If you just do the required work, attend every class and ace every test and paper you will end up with 1100 points and an “A.” If you really want to earn an “A” you must do at least some of the optional work. If you want to improve your chances for an “A” you may do ALL of the optional work. If you complete the optional work it is possible to earn a grade of “A” before the final exam is even administered. All tests, papers, and significant dates can only count FOR you and never against you. The only thing that can count against you is NOT TURNING IN REQUIRED WORK and NOT ATTENDING CLASS! All grades are based on 1200 points so every extra paper or significant date you turn in can only add to your score even if you do not score well on any one individual piece of required work. Do the math.

RESEARCH PAPER

Topic: “A Significant Milestone in Aviation or Space History” or “The Aviator I Most Admire”
Length: 8 full type written pages, double spaced, 12 point type, and 1 inch margins all around. In addition, a cover page and a references page must be included and do NOT count toward the 8 required pages.

All draft papers & final papers must be turned in in electronic form via email.

Email to: salluisi@se.edu
Subject: <Last Name> AVIA 3143 <Draft1> or <Draft2> or <Final Paper>
Example: Alluisi AVIA 3143 Draft1
Content: The paper should start with an introductory paragraph or two and include a brief account of the event or person being described. (Hint: The final statement in your introduction had better be your thesis statement.) Follow with a detailed account of this person or exploit in aviation or space history and explain why this person or event was significant and represented a milestone. Finally, conclude with a specific explanation of why you feel this person or event was so damned important. Generally, about one page of introduction, followed by five or six pages covering the details of the exploit is sufficient. Complete the paper by explaining how this event has impacted our lives today and then end with a good closing paragraph. ALL term papers will be due via email no later than the beginning of class on the date due as shown in the schedule. No whining!

NOTE: The length of these papers is **EIGHT FULL PAGES**. I do not wish to read a pamphlet nor do I wish to read *War and Peace*. For each page less than 8 pages, **10% of the final grade will be deducted from your grade**. In addition, copious points will be deducted for papers filled with long, rambling passages designed to inflate the work up to the minimum eight pages but containing no pertinent information germane to the issue at hand.

Draft & Final Papers
Your paper will be due in THREE different forms during the semester in class on the date specified in this syllabus.

1. You will receive 25 points for turning in your 3 required references and a complete outline of your paper. (Note: You must cite the three references in accordance with the *Publications Manual of the APA, Fifth Edition*).
2. You will receive 25 points for turning in a complete introduction and conclusion based upon your outline. (Note: Your introduction must contain a thesis statement and your conclusion must restate this thesis.)
3. You will receive 150 points for turning in your complete paper to include: A cover page; the 8 page paper; one or more references page; and the ASI Paper Grading Sheet. (Note: the final version of the paper must substantially follow the outline previously turned in!)

I will critique all of the draft papers I receive and return them to you. However, if **ALL** of the required items are not contained in either of the draft papers you will not receive the 25 points. I will simply critique what you have written and return your paper.

Make sure you FOLLOW DIRECTIONS! I will grade your paper using the ASI term paper Grading Criteria which can be found here: [http://aviation.se.edu/References/references.html](http://aviation.se.edu/References/references.html)

References: You must use at least three references and you **CANNOT** use the text book, Wikipedia, me or my lecture notes! References must include one book, one hard copy journal, magazine or newspaper article, and one web site. Personal interviews with experts and/or interested parties may also be used as an additional source. You must document where you obtained all of your information. Cite every fact and opinion that did not originate in your own brain. You must cite your sources IAW the Publications Manual of the American Psychological Association (APA), 6th Edition. The Style Guide of the APA is available in the library and the book store. There is also an on-line APA style reference for electronic documents [http://www.apastyle.org/index.aspx](http://www.apastyle.org/index.aspx). If you choose any topic that is discussed in the textbook you must cover it in far more depth or breadth than is covered in the text.

**Do not just restate what the textbook says!**

**PLAGIARISM - DO NOT DO IT!** You may work in groups to research topics and I encourage you to have other students or friends proof read your papers, but **write your own papers!** All plagiarized papers will receive a grade of **ZERO**!

**Even a bad grade is better than no grade at all!**

See the ASI Policy page for full details: [http://aviation.se.edu/policies/policy.html](http://aviation.se.edu/policies/policy.html)
BOTTOM LINE

Read the book or assigned readings, come to class prepared, ask questions, get involved in discussions, and have some fun learning about airplanes, rockets, pilots, and the legacy these aviators left to you!

*If you love aviation this is YOUR story.*

HANDY DANDY TERM PAPER OUTLINE

I. **Introduction** (A few paragraphs to 1 page.)
   (Briefly tell me what you are going to tell me about. Remember: The final statement in your introduction had better be your thesis statement.)

II. **Detailed account of the event you are describing** (2 to 3 pages.)
   (Who, what, where, when, why. Answer all of these questions especially the WHAT & WHY it was so damned important!)

III. **Describe how the event affected aviation and society at the time** (2 to 3 pages.)
   (Give details of what happened and how it changed the world. Also note what the long term impact has been)

VI. **Conclusion** (About a page.)

**Significant Dates**

*(Dates on the left with an * are required. All others are optional.)*

<table>
<thead>
<tr>
<th>Required Date</th>
<th>Optional Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 7 October, 1903*</td>
<td></td>
<td>Langley’s first attempt to fly</td>
</tr>
<tr>
<td>2. 8 December, 1903</td>
<td></td>
<td>Langley’s second and last attempt to fly</td>
</tr>
<tr>
<td>3. 17 December, 1903*</td>
<td></td>
<td>Wright Brothers Fly!</td>
</tr>
<tr>
<td>4. 25 July, 1909</td>
<td></td>
<td>Louis Bleriot crosses the English Channel</td>
</tr>
<tr>
<td>5. 5 November, 1911</td>
<td></td>
<td>Calbraith Rodgers crosses the USA</td>
</tr>
<tr>
<td>6. 16 April, 1912*</td>
<td></td>
<td>Harriet Quimby crosses English Channel</td>
</tr>
<tr>
<td>7. 3 May, 1923</td>
<td></td>
<td>First non-stop coast to coast flight</td>
</tr>
<tr>
<td>8. 21 May, 1927*</td>
<td></td>
<td>Charles Lindbergh crosses Atlantic solo</td>
</tr>
<tr>
<td>9. 1 July, 1931</td>
<td></td>
<td>Wiley Post flies around the world with Harold Gatty</td>
</tr>
<tr>
<td>10. 21 May, 1932</td>
<td></td>
<td>Amelia Earhart crosses Atlantic solo</td>
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<tr>
<td>11. 23 July, 1933</td>
<td></td>
<td>Wiley Post flies around the world solo</td>
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<tr>
<td>12. 6 May, 1937*</td>
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<td>Hindenburg “burns and crashes”</td>
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<tr>
<td>13. 1 September, 1939</td>
<td></td>
<td>Germans “blitzkrieg” Poland - WW II begins</td>
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<tr>
<td>14. 7 December, 1941*</td>
<td></td>
<td>Japanese attack Pearl Harbor</td>
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<td>15. 6 &amp; 9 August, 1945*</td>
<td></td>
<td>Hiroshima &amp; Nagasaki destroyed with A-bombs</td>
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<tr>
<td>16. 14 October, 1947</td>
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<td>Chuck Yeager achieves Mach 1.06</td>
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<td>17. 4 October, 1957*</td>
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<td>Sputnik I launched</td>
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<tr>
<td>18. 31 January, 1958</td>
<td></td>
<td>Explorer I launched</td>
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<tr>
<td>19. 12 April, 1961*</td>
<td></td>
<td>Yuri Gagarin orbits Earth three times</td>
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<tr>
<td>20. 6 May, 1961</td>
<td></td>
<td>Alan Shepard - Freedom-7 in a sub-orbital flight</td>
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<tr>
<td>21. 20 February, 1962</td>
<td></td>
<td>John Glenn - Friendship-7 makes three orbits</td>
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<tr>
<td>22. 20 July, 1969*</td>
<td></td>
<td>Apollo XI - Neil &amp; Buzz walk on moon!</td>
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<tr>
<td>23. 20 July, 1976</td>
<td></td>
<td>Viking I lands on Mars</td>
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<tr>
<td>24. 12 April, 1981</td>
<td></td>
<td>First Space Shuttle flight</td>
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<tr>
<td>25. 28 January, 1986</td>
<td></td>
<td>Space Shuttle Challenger explodes</td>
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</tbody>
</table>

Note: August 6 & 9: Do BOTH dates on two separate sheets! They will count as one date for grading purposes
SIGNIFICANT DATES WORK SHEET

Significant Date in History: ___________________________  Your Name: ___________________________

Source of Information: ________________________________________________________________

Headline Story: _____________________________________________________________________

Foreign Headline: ___________________________________________________________________

Domestic Headline: __________________________________________________________________

Price of Food: _____________________________________________________________________

Price of Clothing: ___________________________________________________________________

Price of Housing: ___________________________________________________________________

Musical and Arts Events of the time: ___________________________________________________

Major Events: _____________________________________________________________________

_________________________________________________________________________________

Major Events the day BEFORE: _______________________________________________________

_________________________________________________________________________________

_________________________________________________________________________________

Major Events the day AFTER: _______________________________________________________

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_________________________________________________________________________________

_________________________________________________________________________________

Other Comments: __________________________________________________________________

MAKE 20 COPIES OF THIS PAGE!

Don't write in here!
<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Work Due/Activities/Exams/Information</th>
<th>Chapter to Read</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>11 January</td>
<td>Introductions &amp; Bureaucratic Stuff - Pre-History of Flight Pre-History of Flight</td>
<td><strong>Flight in America</strong></td>
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<td>13 January</td>
<td>16 January: Last day to Drop &amp; Add</td>
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<td>15 January</td>
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<td>2</td>
<td>18 January</td>
<td>MLK Birthday - No Class</td>
<td>Chapter 1</td>
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<td>20 January</td>
<td>Return Signed Class Contracts</td>
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<td>22 January</td>
<td>Library Visit - Class will meet in the Library Lobby</td>
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<td>25 January</td>
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<td>Chapter 2</td>
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<td>EXAM 1</td>
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<td>15 February</td>
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<td>Chapter 3</td>
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<td>17 February</td>
<td>AABI Week - Movie</td>
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<td>19 February</td>
<td>AABI Week - Movie</td>
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<td>29 February</td>
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<td>Chapter 4</td>
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<td>Chapter 5</td>
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<td>16 March</td>
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<td>11 April</td>
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<td>Chapter 7</td>
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<td>16</td>
<td>2 May</td>
<td>Optional Term Papers 2 and 3 Due</td>
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<td></td>
<td>6 May</td>
<td>Final: Wednesday - 4 May 8:00 - 10:00</td>
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AVIA 3143
Aviation History - Spring 2016
Class Contract

I ___________________________________________ have read the syllabus for this class and understand
the grading policy, the schedule and the requirements for the written assignment. I understand
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copies will NOT be accepted. Further, I understand that the draft and final versions of my paper
are due on time and must meet ALL specified requirements in order to obtain the points noted
in the grading procedures. I also understand that in order to obtain any credit for the optional
work (Term Paper II & III and the 10 optional Significant Dates) that I must first turn in all of my
required work on time. In addition, I understand that I alone am responsible for any material that
I miss when I am not able or choose not to attend class and that should I miss an examination
or a due date for a Term Paper or Significant Date without giving prior notice and a reasonable
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http://homepages.se.edu/aviation/files/2012/02/academic_honesty_policy.pdf

_________________________________________  ______________________
print your name here
signature             date

KEEP THIS COPY FOR YOUR RECORDS
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Aviation History - Spring 2016
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GIVE THIS COPY TO DR. ALLUISI

________________________  ______________________
signature                      date
Southeastern Oklahoma State University
AVIA 3152- Fundamentals of Flight Instruction

Back

General Information
Instructor: George Jacox
Office Number: Flight Operations, Eaker Field
Office Hours: M-F, 1330 - 1500, or by appointment
Telephone Number: 580-745-3245

Prerequisites and Support Courses
AVIA 1041

Brief Course Outline
This course exposes the career oriented student to requirements and skills necessary to function as a Certified Flight Instructor.

Course Objectives
The student will be able to describe and list the fundamentals elements of the following:

• The Learning Process
• Human Behavior
• Effective Communication
• The Teaching Process
• Teaching Methods
• Critique and Evaluation
• Instructional Aids
• Instructor Responsibilities and Professionalism
• Techniques of Flight Instruction
• Planning Instructional Activity
• Professional Development

Text Materials
AC 60-14, Aviation Instructor's Handbook
Instrument/Commercial Manual, Jeppesen Sanderson
Flight Training Handbook, FAA
Title 14 CFR

Style/Mode of Teaching
Lecture/Seminar/Presentations/Demonstrations/Class Handouts.

DROP AND ADD POLICY
Same as University. Please review.
ATTENDANCE POLICY
The Federal Aviation Administration, per 14 CFR Part 141, requires minimum contact time as stated in the approved curriculum. Therefore, all class absences must be completed on an hour for hour basis. This must be accomplished by an approved ASI Staff Flight instructor at the student’s expense. Scheduling and completion of this requirement is the responsibility of the student.

Attendance is very important. Students are expected to attend all classes. Entering the classroom after the start of class is very disrupting and inconsiderate of your class mates. There is a 1% point deduction for being late. If you must leave during class time, be considerate! Unannounced quizzes will be given, and added to your final grade. All absences, except those having to do with pre-approved SOSU functions, will be considered unexcused. You get three unexcused absences, on the fourth you will get 75 points, and on the fifth you get 0 points for attendance.

Make-up exams will be given in extenuating circumstances only, and only with prior permission. Credit will not be given for assignments that are turned in after the due date. There will be no make-up quizzes. In the event of an absence, the student is responsible for scheduling a makeup lesson on all material covered in class. Attendance will be taken at the beginning of each class. Make-up quizzes will not be given.

Make-up exams will be given in **extenuating circumstances only, with prior permission.**

LABORATORY
N/A

READING
Reading assignments are to prepare you for that class period and should be accomplished prior to the scheduled class.

EXAMINATION
There will be four examinations. The examinations will be a combination of multiple choice, matching, fill in the blanks, and essay questions.

**GRADING PROCEDURES**

<table>
<thead>
<tr>
<th>Examination</th>
<th>Points</th>
<th>Grade Range</th>
<th>Grade</th>
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<tr>
<td>Examination #1</td>
<td>100</td>
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<td>A</td>
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<tr>
<td>Examination #2</td>
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<td>Examination #3</td>
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<td>70 - 79%</td>
<td>C</td>
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<td>Final Test</td>
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<td>69 - 69%</td>
<td>D</td>
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<tr>
<td>Class Attendance</td>
<td>100</td>
<td>Less than 60</td>
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</table>

Total 600 points

TERM PAPER/PRESENTATION
N/A
CHEATING or PLAGIARISM
Cheating may be defined as using unauthorized materials or giving or receiving unauthorized materials or receiving unauthorized assistance during an examination or other academic exercise. Examples may include:

1. Copying the work of another student during an examination OR other academic exercise (including computer exercises), or permitting another student to copy one's work;

2. Taking an examination for another student, or allowing another student to take one's examination;

3. Possessing unauthorized notes, study sheets or other materials during an examination or other academic exercise;

4. Falsifying or tampering with examination results; and

5. Completing, copying, or using the results of any other student's computer assignments.

Plagiarism may be defined as the use of another's ideas or words without acknowledgement. Examples of plagiarism may include:

1. Failing to use quotation marks when quoting from a source;

2. Failing to document distinctive ideas from a source;

3. Fabrication or inventing sources.

DISABILITIES ACT
Any student needing special accommodations due to a disability should contact the Coordinator of Student Disability Services, Student Union, Suite 204 or call (580) 745-2254 (TDD# 745-2704). It is the responsibility of each student to make an official request for accommodations to the Coordinator.
<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
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</thead>
<tbody>
<tr>
<td>Aug. 16</td>
<td>Introduction/Principles of Human Behavior</td>
</tr>
<tr>
<td>Aug. 18</td>
<td>Principles of Human Behavior</td>
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<tr>
<td>Aug. 20</td>
<td>The Learning Process</td>
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<tr>
<td>Aug. 23</td>
<td>The Learning Process/Effective communication</td>
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<tr>
<td>Aug. 25</td>
<td>Test 1</td>
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<tr>
<td>Aug. 27</td>
<td>Analysis of the Teaching Process</td>
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<tr>
<td>Aug. 30</td>
<td>Analysis of the Teaching Process</td>
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<td>Analysis of Assessment</td>
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<tr>
<td>Sep. 3</td>
<td>Planning Instructional Activities</td>
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<td>Sep. 8</td>
<td>Planning Instructional Activities</td>
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<tr>
<td>Sep. 10</td>
<td>Planning Instructional Activities</td>
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<tr>
<td>Sep. 13</td>
<td>Test 2</td>
</tr>
<tr>
<td>Sep. 15</td>
<td>Instructor Responsibilities and Professionalism</td>
</tr>
<tr>
<td>Sep. 17</td>
<td>Techniques of flight Instruction</td>
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<td>Sep. 20</td>
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<td>Sep. 22</td>
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<td>Sep. 24</td>
<td>Risk Management</td>
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<td>Sept 27</td>
<td>Risk Management</td>
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<tr>
<td>Sept 29</td>
<td>Test 3</td>
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<tr>
<td>Oct. 1</td>
<td>Review</td>
</tr>
<tr>
<td>Oct. 11</td>
<td>Final</td>
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</table>

**Notice**

Upon completion of this course, the following information will be submitted to the FAA’s Airman Testing Standards Branch, AFS-630, in Oklahoma City, Oklahoma:

- Student’s last name, first name and middle initial
- Student’s course completion date
- Student’s social security number
• Student’s date of birth

The release of this information is in compliance with Order: 8700.1, Appendix: 3, Bulletin: HBGA 00-09.

Dress Code
Each Student will dress like a professional flight instructor. This includes khakis, pullover shirt or “like new” blue jeans. This DOES NOT include, Hats, T-shirts, cut off shorts/pants, shirts that were just pulled out of a pile.

Ground Training Course Objectives
The student will obtain the necessary aeronautical knowledge and meet the prerequisites for the Flight Instructor - Airplane - written examination.

Ground Training Course Completion Standards
The student has demonstrated through oral examination, written tests, and records that he meets the prerequisites for the Flight Instructor - Airplane - written examination.

Stage One
A Presentation Of The Fundamentals Of Instruction
15:00 Hours

Stage One Objective
To ensure the student possesses an adequate knowledge of the fundamentals of flight instruction to instruct in flight training.

Stage One Completion Standards
This stage will be successfully completed when the student passes the Stage One final written examination with a minimum grade of 80 percent and has been reviewed in all areas found deficient.

Lesson I-1 - 02:00 Hours

Objectives
During this lesson, the student will be instructed in the principles of Human Behavior.

Content
Definitions
Personality types
Instructor and Student Relationship
Human Needs and Motivation
Murray
Maslow Hierarchy of needs
Physiological
Security
Belonging
Esteem
Cognitive and Aesthetic
Self-Actualization

Human Nature and Motivation
Theory X
Theory Y

Human Factors that inhibit learning
Defense Mechanisms
Repression
Denial
Compensation
Projection
Rationalization
Reaction Formation
Fantasy
Displacement

Student Emotional Reactions
Anxiety
Normal Reactions to Stress
Abnormal Reactions to Stress

Teaching the Adult Student

Completion Standards
This lesson will be successfully completed when, by examination, the student displays a basic understanding of the principles of Human Behavior.

Lesson 1-2 - 2:30 Hours

Objectives
During this lesson, the student will be instructed in the principles of the Learning Process.

Content
Learning Theory
Behaviorism
Cognitive Theory
Information Processing Theory
Constructivism

Perceptions
Factors that affect perception
Physical organism
Goals and Values
Self-Concept
Time and Opportunity
Element of Threat

Insight
Acquiring Knowledge
Memorization
Understanding
Concept Learning
Laws of learning
   Readiness
   Effect
   Exercise
   Primacy
   Intensity
   Regency

Domains of Learning
   Cognitive Domain
   Affective Domain
   Psychomotor domain

Characteristics of Learning
   Purposeful
   Result of Experience
   Multifaceted
   Active Process

Learning Styles
   Right Brain/Left Brain
   Holistic/Serialist Theory
   Index of Learning Styles
   Visual, Auditory, Kinesthetic Learners
   Super links

Acquiring Skill Knowledge
   Stages of Skill Acquisition
      Cognitive Stage
      Associative Stage
      Automatic Response Stage
   Knowledge of Results
   How to develop skills
   Learning Plateaus

Types of Practice
   Deliberate
   Blocked
   Random

Evaluation Versus Critique
   Over learning of Knowledge
   Application of skill
   Summary of instructor actions

Putting it all together
   Multitasking
      Attention switching
      Simultaneous performance
   Learning to multitask
   Distractions and interruptions
   Fixation and Inattention
   How to identify fixation of inattention problems

Scenario-Based Training
   The Learning Route to Expertise
      Cognitive Strategies
      Problem-Solving Tactics
   Awareness of existence of unknowns

Errors
   Kinds of Error
      Slip
Mistake
Reducing error
Learning and Practicing
Taking time
Checking for Errors
Using Reminders
Developing routines
Raising awareness
Error recovery
Learning from error

Motivation
Where does the motivation to learn come from?

Maintaining Motivation
Rewarding success
Presenting New challenges
Drops in Motivation

Memory
Sensory Memory
Short-term memory
Long-term memory
Remembering what has been learned
How usage affects memory
Forgetting
Retrieval failure
Fading
Interference
Repression or Suppression

Retention of Learning
Praise Stimulates Remembering
Recall
Favorable Attitudes Aid Retention
Learning with all senses
Meaningful repetition aids recall
Mnemonics

Transfer of Learning
Habit formation

Completion Standards
This lesson will be successfully completed when, by examination, the student displays a basic understanding of the principles of the Learning Process.
Lesson 1-3 - 30 min

Objectives
During this lesson, the student will be instructed in the analysis of effective Communication.

Content
- Basic Elements of Communication
  - Source
  - Symbols
  - Feedback
  - Receiver
- Barriers to Effective communication
  - Lack of Common Experience
  - Confusion between the symbol and the symbolized object
  - Overuse of abstractions
  - Interference
- Developing communication skills
  - Role playing
  - Instructional communication
  - Listening
  - Questioning

Completion Standards
This lesson will be successfully completed when, by examination, the student displays a basic understanding of the analysis of effective Communication.
Lesson I-4 - 2:00 Hours

Objectives
During this lesson, the student will be instructed in the analysis of the Teaching Process.

Content

What is teaching?

Essential teaching skills
- People skills
- Subject matter expertise
- Management skills
- Assessment skills

Instructor’s code of conduct

Course of training

Preparation of a lesson
- Training objectives and standards
- Performance-based objectives
  - Description of the skill
  - Conditions
  - Criteria
- PTS
- Decision-Based objectives

Presentation of a lesson

Organization of material
- Introduction
  - Attention
  - Motivation
  - Overview
- Development
  - Past to present
  - Simple to complex
  - Known to unknown
  - Most frequently used to least used
  - Conclusion

Training delivery methods

Lecture method
- Teaching lecture
- Preparing the teaching lecture
- Suitable language
- Types of delivery
- Use of notes
- Formal versus informal lectures
- Advantages and disadvantages of the lecture

Discussion method
- Guided discussion method
  - Use of questions in a guided discussion
  - Planning a guided discussion
  - Student preparation for a guided discussion
  - Instructor technique

Problem-based learning
- Teaching higher order thinking skills (HOTS)
- Types of problem-based instruction
Scenario based
Collaborative problem solving
Case study
Electronic learning
  Computer assisted
  Simulation
Cooperative or group learning method
Demonstration performance method
Drill and practice method
Application of the lesson
Assessment of the lesson
Instructional aides and training technologies
  Theory
  Reasons
  Guidelines
  Types
    Chalk or marker
    Supplemental print material
  Test preparation material
Future developments

Completion Standards
This lesson will be successfully completed when, by examination, the student displays a basic understanding of the Teaching Process.
Lesson I-5 - 1:30 Hours

Objectives
During this lesson, the student will be instructed in the analysis of Assessment.

Content
Assessment terminology
- Purpose of assessment
- General characteristics of effective assessment
  - Objective
  - Flexible
  - Acceptable
  - Comprehensive
  - Constructive
  - Organized
  - Thoughtful
  - Specific
- Traditional assessment
  - Characteristics of a good written assessment
- Authentic assessment
- Choosing an effective assessment method
  - Determine level of learning objectives
  - List indicators/samples of behaviors
  - Establish criterion objectives
  - Develop criterion referenced assessment items
- Critiques and oral assessments
  - Instructor student critique
  - Student led
  - Small group
  - Individual student
  - Self critique
  - Written
  - Oral assessment
- Characteristics of effective questions
- Types of question to avoid

Completion Standards
This lesson will be successfully completed when, by examination, the student displays a basic understanding of Assessment.
Lesson I-6 - 1:00 Hour

Objectives
During this lesson, the student will be instructed in the principles of Planning Instructional Activities.

Content
- Course of training
  - Blacks of learning
  - Training syllabus
    - Syllabus format and content
    - How to use a syllabus
- Lesson plans
  - Purpose
  - Characteristics
  - How to use a lesson plan
  - Formats
- Scenario based training
  - Lesson plan
  - Prescenario planning
- Single pilot resource management

Completion Standards
This lesson will be successfully completed when, by examination, the student displays a basic understanding of Planning Instructional Activities.

Lesson I-7 - 1:00 Hour

Objectives
During this lesson, the student will be instructed in the principles of the Instructor Responsibilities and Professionalism.

Content
- Aviation instructor responsibilities
  - Helping students learn
  - Providing adequate instruction
  - Standard of performance
  - Emphasizing the positive
  - Minimizing student frustrations
- Flight instructor responsibilities
  - Physiological obstacles for students
  - Ensuring student skill set
- Aviator’s model code of conduct
- Safety practices and accident prevention
- Professionalism
  - Sincerity
  - Acceptance of the student
  - Personal appearance and habits
  - Demeanor
  - Proper language
- Evaluation of student ability
  - Demonstrated ability
Keeping the student informed
Correction of student errors
Aviation instructors and exams
  Knowledge test
  Practical test
Professional development

Completion Standards
This lesson will be successfully completed when, by examination, the student displays a basic understanding of the Instructor Responsibilities and Professionalism.

Lesson I-8 - 2:30 Hour

Objectives
During this lesson, the student will be instructed in the Techniques of Flight Instruction.

Content

Flight instructor Qualifications
  Aircraft Characteristics
  Flight Instruments
  Avionics
  Training environment to be used
Flight Instructor Strategies
  Tips from Veteran Flight Instructors
  Good Aviation sense
  Role of PTS’s
Obstacles to learning during flight instruction
  Unfair
  Impatience
  Lack of interest
  Discomfort, Illness, fatigue and dehydration
  Apathy
  Anxiety
Demonstration-Performance Training
  Explanation
  Demonstration
  Student Performance with Supervision
  Evaluation
Positive Exchange of Flight Controls
Sterile Cockpit Rule
Use of Distractions
Integrated Flight Instruction
  Habit Patterns
  Efficiency
  Procedures
  See and Avoid
Assessment of Piloting Ability
  Demonstrated Ability
  Post-flight Evaluation
  Student Errors
  Pilot Supervision

-N-
Aeronautical decision-Making
   Definitions
   Hazardous Attitudes
   Stressors
   Use of Resources
   Workload Management

Completion Standards
This lesson will be successfully completed when, by examination, the student displays a basic understanding of the Techniques of Flight Instruction.

Lesson I-9 - 1:00 Hour

Objectives
During this lesson, the student will be instructed in principles of Risk Management.

Content

Defining Risk Management
   Principles
   Process
   Implementing
Level of Risk
   Assessing
Mitigating Risk
Three-P Model
Pilot Self-Assessment
Situational Awareness
Single-Pilot Resource Management
Pitfalls
Teaching decision-Making skills

Completion Standards
This lesson will be successfully completed when, by examination, the student displays a basic understanding of Risk Management.

Stage One Final Written Examination - 1:00 Hour
This stage will be successfully completed when the student passes the written exam with a minimum grade of 80 percent and has reviewed all areas found deficient.
Stage Two
Analysis Of Flight Training Maneuvers
25:00 Hours

Stage Two Objective
To ensure the student possesses an adequate knowledge and understanding of the performance and analysis of flight training maneuvers as required to instruct in the principles of flight.

Stage Two Completion Standards
This stage will be successfully completed when the student passes the Stage Two written examination with a minimum grade of 80 percent, and has been reviewed in all areas found deficient.

Lesson II-1 - 4:00 Hours

Objectives
During this lesson, the student will be instructed in the basic aerodynamics required to flight instruction.

Content
Aerodynamic terms and definitions
Recommended terms
Other terms often used by pilots
Airplane loading
Weight and balance and flight performance
Effects of load on the aircraft structure
Effects of loading on stability and controllability
Forces acting on an airplane in flight
Explanation of forces
How forces are applied to the aircraft
The airplanes axes of rotation
Explanation of these axes
Location of these axes on the airplane
Functions of the control surfaces and trim tabs
How they operate
Their primary purposes
Use of flaps
Effects on flight performance
Effects on stability
Angle of attack
In stalls
As an index of performance
Airspeed
Control effectiveness
Maximum performance airspeeds
Slow flight
Cruise
Best rate-of-climb (Vy)
Best angle-of-climb (Vx)

Relationship between speed, angle of bank, and rate of turn

**Turns**
- Forces acting on an aircraft in a normal turn
- Changes of lift in a turn
- Changes of drag in a turn

**Ground effect**
- As a factor in takeoffs
- As a factor in landings
- Its use in emergencies

**Torque and "P" factor**
- Aircraft rigging
- Asymmetrical loading of the propeller
- Action of the spiral slipstream
- Gyroscopic action of the propeller
- Torque action

**Controllable propellers**
- How a propeller works
- Purpose of controllable propellers
- Operation of controllable propellers--the relationship between manifold pressure, RPM, and BMEP (Brake Mean Effective Pressure)

**Completion Standards**
This lesson will be successfully completed when, by oral examination, the student displays an understanding and can correctly analyze the basic aerodynamics required for flight instruction as set forth in the current FAA Practical Test Standards.
Lesson II-2 - 4:00 Hours

Objective
During this lesson, the student will be instructed in the analysis of basic flight maneuvers and procedures.

Content
How and when to introduce maneuvers and procedures
Preflight (including check of airplane documents and records), starting, warm-up, taxi, before takeoff, in-flight, and postflight checks and procedure
Use of radio for voice communications
Straight and level flight, turns, (including slips and skids), and confidence maneuvers
Climbs and glides (including powered descents)
Ground track maneuvers
"S" turns across a road
Turns about a point, including 720 degree steep turns
Rectangular patterns
Traffic patterns
Stalls, stall recoveries, and flight at minimum controllable airspeeds
Takeoffs and landings
Normal
Crosswind
Short, soft, and rough field landings
Slips, and slips to a landing
Downwind landings
Power approaches
Touch-and-go landings
Wheel landings (tailwheel type airplanes), stall landings, (nosewheel landings)
Go-arounds
Emergencies, including those applicable to multiengine aircraft
Solo flight
Pattern eights (along, across, and around)
Chandelles and lazy eights
Steep turns (including 720 degree power turns)
Constant radius power off spirals
Spins
Post solo emergencies
Knowing the correct technique for the maneuvers and procedures
Recognition and analysis of common student errors
Familiarization of effective methods of correcting student errors
Required maneuvers and procedures
Cross-country flying
Planning
Pilotage
Dead reckoning
Use of radio aids
Cross-country emergencies

Completion Standards
This lesson will be successfully completed when, by oral examination, the student displays an understanding, and can correctly analyze basic flight training maneuvers and procedures as set forth in the current FAA Practical Test Standards.
Lesson II-3 - 4:00 Hours

Objectives
During this lesson, the student will be instructed in the integration of instruction in visual and instrument flying, and the fundamentals of instrument flight.

Content
Objectives of integrated flight instruction
- Development of habit patterns
- Accuracy of flight control
- Operating efficiency
- Emergency capability
Other factors of integrated flight instruction
- Procedures
- Safety precautions
- Flight instructor qualifications
The three major components of attitude instrument flight
- Instrument coverage (cross check)
- Instrument interpretation
- Aircraft control
Instrument characteristics
- Attitude indicator
- Heading indicator
- Vertical speed indicator
- Turn and slip indicator
- Airspeed indicator
- Altimeter
- Magnetic compass
Other important factors in instrument training
- How to determine attitude by instrument indications
- Recognition of incorrect use of controls by flight instrument references
- The relationship between rate of turn, radius of turn, true airspeed, and angle of bank
- Standard rate turns
- Physiological reactions and sensory illusions
Required maneuvers for a private pilot certificate with an airplane rating

Completion Standards
This lesson will be successfully completed when, by oral examination, the student displays an understanding, and can correctly analyze both integrated flying and attitude instrument flying for training purposes as set forth in the current FAA Practical Test Standards.
Lesson II-4 - 4:00 Hours

Objectives
During this lesson, the student will be instructed in the use of radio for both communication and navigation.

Content
VHF communication equipment
   The "line-of-sight" range of transmissions
   Understanding how to use UHF/DF service and radar assistance from ground stations
VOR equipment
   H, L, T, VOR's
   The components of the VOR system
   VOR radials and their relation to the station
   Determining the instrument indications and their relation to position from the station
   Time to station and off course navigation
   VOR checks
ADF equipment
   Determining magnetic directions and relative positions
   Determining bearing information
   ADF time and distance checks
   ADF tracking (both inbound and outbound)
   Operational characteristics and precautions to observe in use of L/F radio equipment

Completion Standards
This lesson will be successfully completed when, by oral examination, the student displays an understanding, and can correctly explain the use of radio equipment for flight training purposes as set forth in the current FAA Practical Test Standards.
Lesson II-5 - 4:00 Hours

Objectives
During this lesson, the student will be instructed in the use of pilot information publications.

Content

Airman's Information Manual
NAVAIDS
Airport and air navigation lighting and marking aids
Altimetry
Good operating practices
Radar
Radiotelephone phraseology and techniques
Safety of flight
Weather
ATC operations and procedures
Flight data and special operations
NOTAMS
Airport directory
Airport facility directory
Airplane flight and owner's manuals

Know how to consult the weight and balance data to determine that the aircraft is properly loaded.
Know how to compute empty weight, useful load, and gross weight. Know how to compute moments from weight and center of gravity arms.
The grade and quantity of fuel and oil required
Flight load factor limitations and airspeed limitations
Use of performance charts as required for:
  Takeoff data
    Climb data
    Landing distance data
    Cruise performance data (cruise power settings, approximate true airspeeds, fuel consumption rate)

Use tables such as:
  Stall speed versus angle-of-bank table
  Airspeed calibration or correction table

NTSB Part 830, Rules pertaining to the Notification and Reporting of Aircraft Accidents, Incidents, and Overdue Aircraft, and preservation of Aircraft Wreckage, Mail, and Records

Federal Aviation Regulations
  Part 1, Definitions and Abbreviations
  Part 61, Certification: Pilots and Flight Instructors
  Part 91, General Operating and Flight Rules

Completion Standards
This lesson will be successfully completed when, by oral examination, the student displays an understanding, and can correctly teach the use of airman information publications as set forth in the current FAA Practical Test Standards.
Lesson II-6 - 4:00 Hours

Objectives
During this lesson, the student will be instructed in other areas of importance to flight instruction.

Content
Airframe and powerplant operation
Aircraft structures
Airframe components and control surfaces
Fuel and fuel systems
Oil and oil systems
Electrical system fundamentals
Reciprocating engine principles and components
Carburetor and fuel injection
Propellers
Engine instruments
Altimeters (A review of Lesson 3 as required)
Airspeed indicators
Aircraft stability
Static
Dynamic
Airport lighting
Special procedures for multi-engine instruction
Charts (density altitude, load factor, and oxygen)
Safe flying practices
Density altitude
Carburetor icing
Snow, ice, and frost
Wake turbulence
Fuel contamination

Completion Standards
This lesson will be completed successfully when, by oral examination, the student displays an understanding and can correctly teach in all other major areas of importance to flight instruction as set forth in the current FAA Practical Test Standards.

Stage Two Final Written Examination - 1:00 Hour
This stage will be successfully completed when the student passes the written exam with a minimum grade of 80 percent and has reviewed all areas found deficient.
AVIA 3173: Aviation Safety
Course Syllabus

Russell Bldg: R-218: MWF: 11:00a—11:50a

GENERAL INFORMATION
Instructor: John G. Van Bebber, Jr.
Office: Eaker Field (EF) 105
Office Hours: M-F: 1pm-4pm. Call for appointment at other times.
Telephone No.: Office: (580) 745-3242
Cell: (903) 815-1068
E-mail: jvanbebber@se.edu

CLASSROOM PROTOCOL
1. Electronic devices: All cell phones, lap top computers, pagers, or PDAs shall be off and silenced when class starts.
2. No recording devices are allowed in the classroom except as permitted by SOSU policy.
3. Tardiness is not tolerated, so the class will start on time with the door closed and subsequent entry is not allowed.
4. If you need to leave class early, please notify me before class. Subsequent reentry is not allowed.

PREREQUISITES AND SUPPORT COURSES
1. None required

BRIEF COURSE OUTLINE
1. Basics of Aviation Safety
   1.1. Economics of aviation safety
   1.2. Aviation safety terminology, taxonomies, and statistics
   1.3. Aviation safety concepts
   1.4. Evolution of aviation safety
2. Safety Management Systems (SMS) in Aviation
   2.1. Policy
   2.2. Safety Risk Management
   2.3. Safety Assurance
   2.4. Safety Promotion
4. Aviation Safety Program Elements
5. Human factors in aviation safety
   5.1. Human Factors
   5.2. Accident causation models: explanation and their use
      5.2.1. Dr. James Reason
      5.2.2. Human Factors Analysis and Classification System (HFACS)
6. Risk Management
   6.1. Risk management for Pilots
7. Airport Safety
   7.1. Airport certification and operational safety
   7.2. Ramp and Ground Operations Safety
   7.3. Runway Safety
8. Flight Operation's Safety Systems
   8.1. Aircraft Safety
   8.2. Occupational Safety and Health & Environmental Safety
   8.3. Maintenance Safety
COURSE GOALS
1) The student will demonstrate fundamental knowledge of aviation safety related to:
   a) Regulatory agencies of safety: FAA, NTSB, ICAO, OSHA, and EPA
   b) Airline and small operator flight operations safety
   c) Overall airport safety
   d) Airport ramp and ground operations safety
   e) Runway incursion and excursion safety
2) The student will demonstrate fundamental knowledge of aviation human factors and management of human error.
3) The student will demonstrate fundamental knowledge of safety management concepts based on FAA best practices and ICAO Standards and Recommended Practices (SARPs) that are necessary in Safety Management Systems.
4) The student will be fundamentally prepared for employment in any aviation safety related field with a good understanding of safety processes in commercial aviation.

COURSE OBJECTIVES
Upon completion of the course, the student will demonstrate a satisfactory level of knowledge by examination of the following objectives with a minimum score of 70%.

Each lecture lists the course objectives at the beginning of the presentation. The following is a summary of those objectives:

1. Describe and explain the economics of aviation safety.
   1.1. Explain the costs of aviation safety risk.
   1.2. Explain the costs of an accident.
   1.3. Explain why a safety program can: increase revenues, decrease direct costs, and decrease indirect costs
   2.1. Define aviation safety terms used by: NTSB, FAA, and ICAO.
   2.2. Explain the use of aviation safety statistics.
   2.3. Summarize and explain the trends in aviation accident statistics from the current Boeing Statistical Summary and the current AOPA Nall Report.
   2.4. Explain the aviation safety professional’s use of statistical data.
   2.5. Describe the most common types of aviation accident statistics.
   2.6. Explain some of the issues when analyzing and comparing aviation accident statistics.
3. Explain aviation safety concepts as follows:
   3.1. Define aviation safety and the objectives of a safety program.
   3.2. Explain safety concept of mission.
   3.3. Explain how safety priorities are developed.
   3.4. Explain the concept of random damage/injury.
   3.5. Define accident causes.
   3.6. Explain the myth of “Primary Cause” and/or “Probable Cause.”
   3.7. Explain the strengths and weaknesses of traditional methods to manage safety.
   3.8. List and describe the new perspectives and methods for managing safety.
4. Describe and explain the history and evolution of aviation safety as follows:
   4.1. Describe early federal legislation that helped shape commercial aviation.
   4.2. Explain the factors leading to the passage of the Federal Aviation Act of 1958.
   4.3. Identify and describe the primary safety functions of the FAA.
   4.4. List and define the terms of aviation safety use by the FAA, NTSB, and ICAO.
   4.5. Explain the government’s role in aviation safety—reactive progressing to proactive.
   4.7. Describe and explain proactive safety.
   4.8. Explain the importance of sharing aviation safety data.
5. Explain and describe the systematic processes integrated in a Safety Management System as follows:
   5.1. Explain the need for a safety management system.
   5.2. List and describe the reactive, proactive, and predictive strategies of safety management.
   5.3. List and describe the eight key building blocks of safety management.
   5.4. Explain and describe the application of the fundamental processes of hazard understanding, hazard identification, hazard analysis, and hazard mitigation through an actual case study.
   5.5. Define and explain the five fundamentals of managing risk: (a) risk management, (b) risk probability, (c) risk severity, (d) risk assessment and tolerability, and (d) risk control/mitigation.
   5.6. Describe and explain the SMS fundamental of System Description.
   5.7. Describe and explain the SMS fundamental of a Gap Analysis.
   5.9. Explain what is meant by systems integration in safety management.
   5.10. List and explain the four ICAO and FAA elements of a Safety Management System.

6. Explain and describe the various elements in an aviation safety program as follows:
   6.1. List and describe the regulatory agencies and professional associations that will determine the standards of a company’s operation.
   6.2. Explain why minimum standards are not going to keep the operation safe.
   6.3. Explain the basic four-step process of accident prevention.
   6.4. Define the mission of the NTSB.
   6.5. Describe the structure of the NTSB.
   6.6. Explain the steps involved in a major commercial aviation accident investigation.
   6.7. Explain the composition and function of the NTSB Go-Team.
   6.8. Explain the working functions of the “party process” in an NTSB accident investigation.
   6.9. List the typical air transport incidents that should be reported.
   6.10. Describe the proper hazard reporting process in a good safety program.
   6.11. Describe the accident/incident reporting systems of the FAA and the NTSB.
   6.12. Describe the concept and mission of NASA’s ASRS reporting system.
   6.13. Define and explain Dr. James Reason’s term of “safety culture.”
   6.15. List and describe the various distribution systems of aviation safety information.
   6.16. Explain why an integrated safety distribution system is essential.
   6.17. List and describe the education and training involved to promote safety in a flying operation.
   6.18. List the people that must be trained to utilize an SMS system.
   6.20. List the various criteria that will make an aviation safety award obtain the safe behavior objective.
   6.21. Explain who investigates civil and military aircraft accidents in the U.S.
   6.22. Explain who investigates civil and military aircraft accidents in other countries.
   6.23. Explain why a Pre-accident Plan and Emergency Response Plan are vital and required of an airline.
   6.24. Explain the initial response actions of an airline to a major aircraft accident.
   6.25. List and describe several passenger safety issues that should be part of an airline safety program.
   6.26. List and describe several contractor safety issues that should be part of an airline safety program.
   6.27. Describe why a contractor must be held to the same safety standards and procedures as the contracting airline.
   6.28. Explain the Aviation Safety Action Program.
   6.29. Explain the predictive safety function of a FOQA program at the major airlines.
7. Describe and explain the human factors in aviation safety as follows:
   7.1. List the hazardous attitudes that are associated with risky behavior.
   7.2. Explain what punishment does for aviation safety.
   7.3. Explain why human errors are the results of an accident, not the causes.
   7.4. Define human error.
   7.5. Describe and explain the following two methods to classify human error: Dr. James Reason’s Model and the Human Factors Analysis & Classification System.
   7.6. Explain why human errors need to be classified.
   7.7. List and describe the HFCAS sub-classifications of: (a) Organizational Influences, (b) Unsafe Supervision (i.e. middle management), (c) Preconditions for Unsafe Acts, and (d) Unsafe Acts of Operators.
   7.8. List examples of each classification in number 7.7.
   7.9. List and explain the top three accident classification causes in General Aviation according to Wiegmann & Shappell.
   7.10. Explain why accident causation models are used in aviation safety.

8. Describe and explain the fundamentals of pilot risk management as follows:
   8.1. Describe and explain the elements of the PAVE checklist of risk management.
   8.2. List and explain the environmental hazards, that are not airplane related, over which the pilot has no control, but must evaluate their risks.
   8.3. Explain the theory behind a personal minimums checklist.
   8.4. Describe and explain the FAA pre-flight risk assessment tools.

9. Describe and explain the airport’s safety hazards and risks to include the following:
   9.1. List and explain the required elements to certificate an airport under CFR 14 FAR Part 139 included in the Airport Certification Manual (ACM)
   9.2. List and explain five required elements of an Airport Emergency Plan.
   9.3. Explain the safety hazards and mitigation strategies used in the following airport areas: roadways and taxiways.
   9.4. List and explain the applicable regulatory requirements of the following airport ground operations: (a) ramp movement and non-movement areas, (b) deicing aircraft
   9.5. Define a movement area and a non-movement area on the airport.
   9.6. Identify and define the signs and markings in the ramp movement area.
   9.7. Identify and define the hand signals used by ground personnel to pilots
   9.8. Identify the new runway and taxiway markings designed to mitigate runway incursions by pilots.
   9.9. Define and explain the following terms related to runway safety: runway incursion, runway excursion, hot spot, and runway incursion severity categories A, B, C, D.
   9.10. Define and explain the following terms of runway safety related to runway incursions: Pilot deviation, Operational error, and Vehicle/Pedestrian deviation
   9.11. Explain the safety strategies being used to minimize runway incursions and excursions.

10. List and describe the many safety improvements to commercial aircraft as follows:
    10.1. Describe the early evolution of aircraft safety development.
    10.2. Describe the safety improvements during jet engine development.
    10.3. Describe the aircraft systems that have made commercial transports extremely safe.
    10.4. Define and describe the issue of airframe fatigue.
    10.5. List and describe the safety advantages of the new composite structures in airplanes.

11. List and describe various OSHA and EPA safety issues found in aviation as follows:
    11.1. List and explain major OSHA standards that are important to the following aviation operations: Airport operations, Airline Maintenance operations, and Ramp operations on the flight line.
    11.2. Describe and explain how the FAA exercises jurisdiction of OSHA standards in the aircraft cabin for commercial airlines.
11.3. List and explain major EPA standards that are important to the following aviation operations: Airport operations, Airline Maintenance operations, Ramp operations on the flight line

12. Describe and explain the maintenance safety issues as follows:
   12.1. Explain the latent nature of maintenance errors in aviation.
   12.2. List and describe some of the human error defenses incorporated into a good maintenance safety program.

TEXTBOOKS (Required)
   2. Risk Management: FAA H-8083-2 (Federal Aviation Administration, 2009)

Additional book references:

Supplemental References
   Several documents from the internet and other sources will be assigned reading listed on the Course Lecture Schedule. They are to be found on Blackboard under External Links or with each lecture presentation in the Course Documents folder.
   Each student will also be attached to the Blackboard portal for SE Aviation Safety Reports. This contains our online Safety Management System for Southeastern Aviation Sciences Institute.

Web Site References
   1. FAA Safety Team (FAAST): http://www.faasafety.gov/
   2. AOPA Safety: http://www.aopa.org/asf/
   5. SE Aviation Safety Reports (Blackboard login)

BLACKBOARD GUIDELINES
   1. Always put your name and a date on the document submitted.
   2. If you make an error in submission of an assignment, notify the instructor immediately. You cannot resubmit until the erroneous submission is cleared by the instructor.
   3. The student is responsible for checking blackboard often to see the updates put on the course calendar, course lecture schedule, and announcements. Normally, the Sunday evening before the week begins, I will have updates posted.
   4. Grades are generally posted in a timely manner so that exam review may be accomplished in the next class session. The student is responsible to check My Grades on blackboard and notify the instructor immediately of any discrepancy or problem.

STYLE / MODE OF TEACHING
   Class will primarily be a lecture with class interaction and discussion. SE Blackboard will contain course documents, course information, announcements, helpful internet references, homework assignments, and other relevant information to read and study. Class lecture presentations will be posted under the Course Documents link.
COURSE REQUIREMENTS FOR GRADE
A. Completion of all three exams
B. Completion of the Aviation Safety Risk Management Report
C. Completion of six homework exercises

EVALUATIONS
A. Exams
• Exams (2 @ 200 pts each)  400 points
• Final Exam  240 points
B. Safety Risk Management Report  150 points
C. Homework Exercises (6 @ 25 pts)  150 points
D. Aviation Safety Article/Poster (2 @ 30 pts)  60 points
Total = 1000 points

Grading System
A = > 900; B = 800-899.9; C = 700-799.9; D = 600-699.9; F = < 600

Homework Exercises
Homework will consist of textbook research, internet research, web site exercises, and definitions exercises. Class assignments and due dates will be listed on the Course Calendar on Blackboard. Written exercises will be submitted on blackboard and due by 5pm on the date posted on the Course Calendar.

In order to complete each exercise, download the exercise file from Blackboard's Assignments folder and save it to your computer. Complete the exercise using the same MS Word document. Rename the file (exercise 3_name.docx), save it to your computer, and then submit it on blackboard. For example, a file named Exercise 3.docx will be completed and resubmitted with a file name of Exercise 3_Jones.docx.

There are no make-up possibilities for homework exercises. **Deadlines are 5pm submission on Blackboard on the due date.** Late submissions receive a 50% credit until 5pm the day after the due date; after that, the grade is zero. Incomplete exercises receive reduced points accordingly.

Exams
Exams will be multiple-choice, true/false, fill-in-the-blank, and short answer. The course requires two exams and a comprehensive final. **Make-up exams will be available for an excused absence only.** Excused absences are governed according to the attendance policy in this syllabus.

Exam questions will cover material from the textbooks, lectures, and additional reading. Learning objectives are listed on all power point lectures and these should be your primary study guide for each exam.

Safety Risk Management Report
This research assignment is one segment of a Safety Management System (SMS). It is the second pillar of SMS called Safety Risk Management. The primary guiding references for hazard identification and risk assessment are: (a) ICAO SMS Manual (Chap. 4 and 5), (b) FAA AC 120-92 (pg. 12-16), and (c) FAA AC 150/5200-37 (pg. 9-16). The report will be a documentation of the Safety Risk Management program here at Southeastern Aviation Sciences Institute.

The class will be subdivided into teams of three students each. Each team will be assigned to analyze the hazards and risks in a segment Southeastern's aviation operations. The reports are to be written individually, but the team is to coordinate and collaborate to prevent duplicate hazard analysis. The subject areas to be covered will encompass our flight operations, maintenance, Southeastern's ramp and hangers, the Durant Airport, and other airports.
Each student will then write a SRM report covering the team’s focus area as follows:
   a) identify three hazards 
   b) assess the risks 
   c) develop controls for the identified risks 
   d) put this data into a final SRM report.

It will be necessary for students to arrange visits to: (a) the Durant airport property, (b) other airports, (c) the university property at the airport, (d) interview key personnel, and (e) possibly administer surveys. Other data collection processes will be up to the student.

Instructions and grading criteria are in this syllabus and posted on the Blackboard assignment link. Tentatively, the assignment due date will be prior to Thanksgiving break.

**Aviation Safety Articles/Posters**

The two safety articles are to be current contributions to the class discussions of aviation safety. This may take the form of an internet article, new book, news report, personal event, accident, incident, new safety technology, or any other timely contribution to aviation safety.

Written and illustrated documentation is to be submitted and I will ask students to share the safety item with the class (not a formal presentation). There can be no duplications. Each student will submit an article in the first half and the second half of the semester. Due dates will be assigned to each student. The articles must be aligned with the lecture topics.

Some of the safety articles might be put on the new SE Aviation Safety Bulletin Board or posted to the SE Aviation Safety Reports website on Blackboard. Please see the assignment on Blackboard for specific instructions of what is to be submitted.

**ATTENDANCE POLICY**

Attendance is required for all exams and quizzes unless the absence has been approved (minimum of 48 hours notice) in advance by the instructor. Absence on exam or quiz day without prior instructor notification will result in a grade of zero, unless it is an emergency absence as described by Southeastern University policies. Excusal and make up would require a serious conflict, official excusal (see below), or family emergency. Please note the methods of communicating with the instructor listed at the beginning of the syllabus.

Generally, excused absences are covered by official department policy: (a) medical illness or doctor’s appointment, (b) adverse weather, or (c) approved school functions. Flight training will not qualify as a reason for an excused absence on exam or quiz day. Exam or quiz make-ups are only available with an official excused absence and/or prior approval by the instructor. It is the student’s responsibility to contact the instructor as soon as possible and arrange to make up the exam or quiz.

**CHEATING or PLAGIARISM**

Cheating may be defined as using unauthorized materials, giving or receiving unauthorized materials, or receiving unauthorized assistance during an examination or other academic exercise. Examples may include:

a) Copying the work of another student during an examination OR other academic exercise (including computer exercises on Blackboard), or permitting another student to copy one’s work;

b) Taking an examination for another student, or allowing another student to take one’s examination;

c) Possessing unauthorized notes, study sheets, electronics (phones or computers), or other materials during an examination or other academic exercise;

d) Falsifying or tampering with examination results.

e) Completing, copying, or using the results of any other student's computer assignments, written assignments, or presentations. Representing any of these as your own work is cheating.
**Plagiarism** may be defined as the use of another's ideas or words (written or verbal) without acknowledgement. The work of published authors is their *intellectual property*, regardless if it is copyrighted or not. Examples of plagiarism may include:

a) Failing to use quotation marks or a block quotation when quoting from a source  
b) Failing to document distinctive ideas from a source  
c) Fabrication or inventing sources  

Cheating and plagiarism will result in those actions outlined by the School of Business *Academic Honesty Policy*.

I suggest every student read the university's Academic Honesty Policies. Cheating or plagiarism penalties can be severe; expulsion is not worth the risk.

**POLICY FOR INCLEMENT WEATHER**

Refer to Southeastern’s standard university policies.

**STUDENTS WITH DISABILITIES**

Any student needing special accommodations due to a disability should contact the Coordinator of Student Disability Services, Student Union, Suite 204 or call (580) 745-2254 (TDD# 745-2704). It is the responsibility of each student to make an official request for accommodations to the Coordinator.

Any student who discloses a disability and/or inquires about accommodations or services should be referred to:

**The Coordinator of Student Disability Services**  
Student Union, Suite 204, (580) 745-2254

After a student self-identifies, the University employee has a duty to direct that student to the appropriate office for services. Every effort will be made to be in full compliance with Sec. 504 and 508 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act. No qualified individual with a disability can be excluded from, denied the benefits of, or otherwise subjected to discrimination under any program or activity on campus.

If you have questions or concerns, please contact the Office for Student Affairs (X2368) or the Coordinator of Student Disability Services (X2254) for further information.
# Safety Risk Management Report Grade Criteria

<table>
<thead>
<tr>
<th>Name:</th>
<th>Date:</th>
<th>Possible</th>
<th>Earned</th>
</tr>
</thead>
</table>

**Title Page**: refer to template  
**Table of contents**: refer to template  
- Hazards listed with page numbers in right column

**Body Text Style**:  
- 8.5" x 11" white paper; 1" margins (all four sides)  
- 12-point font; double-spaced, print one side only  
- Each Hazard begins at the top of new page  
- Maximum length of 3 pages for each hazard  
- Headings: APA level 1 and 2 required (see template)

**Format Deductions**:  
- Grammar=G  Punctuation=P  Spelling=Sp  Paragraph=P#  
  (0.5 pt per error; max of 10 pt deduction)

**Part 1: List the type of operation or activity**  
Generic Hazard:  
- List the specific components of the hazard.  
  - List the components with a reasonable description;  
  - Write each as a risk statement (condition and consequence)  
- Provide background information as necessary.  
- Explain your source of identification of this hazard.

**Part 2: List existing defenses to control risk(s), the risk index, and the risk tolerability**  
- Assign a risk index to the hazard.  
  - Explain your reasoning of the probability of the occurrence.  
  - Explain your reasoning of the possible outcomes (severity).  
- List and explain the proposed actions to reduce the risk(s) and the new resulting risk index.  
- List and explain each defensive strategy (option A, B, etc.) effectively.  
  - Why will your defensive strategy work?  
  - Why have previous defensive strategies not worked?  
- Establish the person responsible to implement the risk mitigation strategy and why.

**Part 3: Indentify other risk factors**  
- Identify and explain any consequential risk that may be created while attempting to address the original hazard(s).  
- Indentify and explain any residual risk that may remain after the process has been completed.

**Overall**:  
Penalty for late (due in class on calendar date published on BB)  
(50% for 48-hour period after deadline)  
**TOTAL**: 100%

**Instructor Comments:**
Southeastern Oklahoma State University
AVIA 3202- Flight Instructor Ground

GENERAL INFORMATION
Instructor: George Jacox
Office Number: Flight Operations, Eaker Field
Office Hours: M-F, 1330 - 1500, or by appointment
Telephone Number: 580-745-3245

PREREQUISITES AND SUPPORT COURSES
AVIA 1041, AVIA 3284

BRIEF COURSE OUTLINE
This course exposes the career-oriented student to requirements and skills necessary
to function as a Certified Flight Instructor.

COURSE OBJECTIVES
The student will be able to describe and list the fundamentals elements of the following:

- Planning an Instructional activity
- Development of a Lesson Plan
- Development of a Training syllabus for Private and Commercial certificates
- Practice teaching Private maneuvers
- Practice teaching Commercial maneuvers

TEXT MATERIALS
AC 60-14, Aviation Instructor's Handbook
Instrument/Commercial Manual, Jeppesen Sanderson
Flight Training Handbook, FAA
Current FAR/AIM book

STYLE/MODE OF TEACHING
Lecture/Seminar/Presentations/Demonstrations/Class Handouts.

DROP AND ADD POLICY
Same as University. Please review.

ATTENDANCE POLICY
The Federal Aviation Administration, per 14 CFR Part 141, requires minimum
contact time as stated in the approved curriculum. Therefore, all class absences
must be completed on an hour for hour basis. This must be accomplished by an
approved ASI Staff Flight instructor at the student’s expense. Scheduling and
completion of this requirement is the responsibility of the student.

Attendance is very important. Students are expected to attend all classes. Entering the
classroom after the start of class is very disrupting and inconsiderate of your class mates.
There is a 1% point deduction for being late. If you must leave during class time, be
considerate! Unannounced quizzes will be given, and added to your final grade. All
absences, except those having to do with pre-approved SOSU functions, will be considered unexcused.

Make-up exam will be given in extenuating circumstances only, and only with prior permission. Credit will not be given for assignments that are turned in after the due date. There will be no make-up quizzes. In the event of an absence, the student is responsible for scheduling a makeup lesson on all material covered in class. Attendance will be taken at the beginning of each class. Make-up quizzes will not be given.

Make-up exams will be given in extenuating circumstances only, with prior permission.

LABORATORY
N/A

READING
Reading assignments are to prepare you for that class period and should be accomplished prior to the scheduled class.

EXAMINATION
There will be two Presentations, “Two Test, Final Test and a notebook. The examination will be a combination of multiple choice, matching, fill in the blanks, and essay questions.

GRADING PROCEDURES

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<thead>
<tr>
<th>Assignment</th>
<th>Points</th>
<th>Grade Range</th>
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<tbody>
<tr>
<td>Presentation #1</td>
<td>50</td>
<td>90 - 100%</td>
<td>A</td>
</tr>
<tr>
<td>Presentation #2</td>
<td>50</td>
<td>80 - 89%</td>
<td>B</td>
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<tr>
<td>Test 1</td>
<td>100</td>
<td>70 - 79%</td>
<td>C</td>
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<tr>
<td>Test 2</td>
<td>100</td>
<td>69 - 69%</td>
<td>D</td>
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<tr>
<td>Note Book</td>
<td>200</td>
<td>Less than 60</td>
<td>F</td>
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<tr>
<td>Class participation</td>
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<td>Total</td>
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TERM PAPER/PRESENTATION
N/A

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Examples of plagiarism may include:

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2. Failing to document distinctive ideas from a source;

3. Fabrication or inventing sources.

**DISABILITIES ACT**

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Lecture Schedule
Flight Instructor Ground, Fall 2009

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
</tr>
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<tbody>
<tr>
<td>Oct. 13</td>
<td>II-1, Basic Aerodynamics</td>
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<tr>
<td>Oct. 15</td>
<td>II-1, Basic Aerodynamics</td>
</tr>
<tr>
<td>Oct. 18</td>
<td>II-1, Basic Aerodynamics</td>
</tr>
<tr>
<td>Oct. 20</td>
<td>II-1, Basic Aerodynamics</td>
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<tr>
<td>Oct. 25</td>
<td>II-2, Analysis of Basic Flight maneuvers and procedures</td>
</tr>
<tr>
<td>Oct. 27</td>
<td>II-2, Analysis of Basic Flight maneuvers and procedures</td>
</tr>
<tr>
<td>Oct. 29</td>
<td>II-2, Analysis of Basic Flight maneuvers and procedures</td>
</tr>
<tr>
<td>Nov. 1</td>
<td>II-2, Analysis of Basic Flight maneuvers and procedures</td>
</tr>
<tr>
<td>Nov. 3</td>
<td>II-3, Integration of instruction in visual and instrument flying</td>
</tr>
<tr>
<td>Nov. 5</td>
<td>II-3, Integration of instruction in visual and instrument flying</td>
</tr>
</tbody>
</table>
Nov. 8  II-3, Integration of instruction in visual and instrument flying
Nov. 10  Test I
Nov. 12  II-4, Communication and navigation
Nov. 15  II-5, Pilot information publications
Nov. 17  II-5, Pilot information publications
Nov. 19  II-5, Pilot information publications
Nov. 22  II-6, Importance to flight instruction
Nov. 29  II-6, Importance to flight instruction
Dec. 1   II-6, Importance to flight instruction
Dec. 3   Review for final  Note Books Due

Dec 6  Final test

CFI Notebooks
Fall

The notebooks will have everything you need to teach a private/commercial student. The format of the notebook will be left up to you, but will include:
1) Table of contents
2) An introduction
3) Course syllabi for a complete private, commercial certificate
4) Additional Information supporting your lessons.

It would be a good idea to have any useful information included.
You will be graded by the following:

1) Having a table of contents (tabbed)      30 points
2) Having an introduction                  20 points
3) Course syllabi, Private                50 points
4) Course syllabi, Commercial             50 points
5) Ease of use                            15 points
6) Logical flow                           20 points
7) Additional information                 15 points

Total points                         200
Notice

Upon completion of this course, the following information will be submitted to the FAA’s Airman Testing Standards Branch, AFS-630, in Oklahoma City, Oklahoma:

- Student’s last name, first name and middle initial
- Student’s course completion date
- Student’s social security number
- Student’s date of birth

The release of this information is in compliance with Order: 8700.1, Appendix: 3, Bulletin: HBGA 00-09

Dress Code

Each Student will dress like a professional flight instructor. This includes khakis, pullover shirt or “like new” blue jeans. This DOES NOT include, Hats, T-shirts, Flip flops or open toe shoes, cut off shorts/pants, shirts that were just pulled out of a pile.

Training Course Outline -- Training Syllabus

Flight Instructor Course - Airplane - Single Engine Land

Ground Training: 40 Hours

Ground Training Course Objectives
The student will obtain the necessary aeronautical knowledge and meet the prerequisites for the Flight Instructor - Airplane - written examination.

Ground Training Course Completion Standards
The student has demonstrated through oral examination, written tests, and records that he meets the prerequisites for the Flight Instructor - Airplane - written examination.

Stage One
A Presentation Of The Fundamentals Of Instruction
15:00 Hours

Stage One Objective
To ensure the student possesses an adequate knowledge of the fundamentals of flight instruction to instruct in flight training.
Stage One Completion Standards
This stage will be successfully completed when the student passes the Stage One final written examination with a minimum grade of 80 percent and has been reviewed in all areas found deficient.

Lesson I-1 - 3:00 Hours

Objectives
During this lesson, the student will be instructed in the principles of teaching and learning.

Content
How people learn
Perception
Individual mental, emotional, and physiological characteristics
Needs and requirements
Goals and values
Self-concept
Time and opportunity to perceive
The element of threat
Insight
Cultivating receptiveness to new experience
Organizing demonstrations, explanations, and directed student practice
Pointing out related perceptions as they occur
Supervising the "trial and error" process
Assisting the student in grouping associated perceptions into meaningful wholes or "blocks" of learning
Motivation
Types of motivation
Use of factors which affect motivation
Obstacles to learning
Self-consciousness
Antagonism or feeling of unfair treatment
Impatience
Worry or lack of interest
Physical discomfort, fatigue, and illness
Apathy fostered by poor instruction
Fear, anxiety, and timidity
Lack of confidence
Airsickness
Habits and transfer
The importance of the formation of correct habit patterns
The importance of habit patterns in aircraft control
The promotion of transfer of learning through use of flight syllabus
Positive transfer
Negative transfer
The influence of the "building block" techniques of instruction in habit development
Levels of learning
Rote performance
True understanding
Correlation of previous learning, understanding, and skill with new tasks, problems, techniques, and procedures
Rates of learning
The characteristics of the typical learning curve
Initial learning rate
Slumps or plateaus and their causes
The role of memory and the effect of forgetting in the achievement of satisfactory student progress
Reliability between memory and habit forming patterns
Usefulness of drill, recitation, and quizzing
Continued usage, practice, and application

Significant principles which reinforce memory
  Praise
  Association
  Favorable attitude
  Learning with all senses
  Meaningful repetition

Common misconceptions about learning
  Fear is the best motivator
  Making it easy to learn is contrary to the principles of sound teaching
  Pictures, illustrations, and diagrams are, per se, more effective than written or verbal presentations of information
  The greater the experience, the better the performance
  The impersonal approach is more effective than the friendly attitude in teaching
  Competition is the key to successful learning
  Frustration and failure are essential to learning

Completion Standards
This lesson will be successfully completed when, by oral examination, the student displays a basic understanding of the principles of teaching and learning as set forth in the current FAA Practical Test Standards.

Lesson I-2 - 3:00 Hours

Objectives
During this lesson, the student will be instructed in how to guide the learning process.

Content
  Plan the instructional activity
    Establish clear objectives or goals
    Identify the block of learning
    Provide for student participation
    Diagnose student ability
    Use a teaching sequence that "makes sense"
    Work from the known to the unknown
    Work from the easy to the difficult
    Plan so the student will see the necessity and logic of each succeeding step

  The flight training syllabus
    Arrange for efficient sequence in "block" of training
    Use syllabus as a guide
    Keep flexibility in teaching procedures

  The lesson plan
    Lesson planning is essential to teaching success
    Items to include in lesson plan

  The flight instruction breakdown
    Useful in preparing meaningful lesson plans
    Useful in guidance in offering effective instruction
    Requires personal analysis of maneuver
    Requires personal analysis of proposed procedures for teaching maneuver

Presentation of the instruction material
  Establish the atmosphere of cooperation
  Explain, demonstrate, and direct
  Require student participation
  Keep goal in sight
  Be brief, clear, and to the point in explanations
Use analogies as link between known and unknown
Question technique: use and importance
Deal with the individual needs of both poor students and apt students

Performance
Usually integrated with presentation
Require discipline
Make it realistic
Guide students efforts
Progress from easy to difficult
Relate to previous explanations and practice
Provide adequate practice but control blind "trial and error"
Understand factors relating to length and frequency of practices
Use of briefings and critiques
Skill versus knowledge
Role of repetition in learning and retention

Evaluate the performance
An integral part of each lesson
Establishes need for selective re-teaching or review
Acquaint student with his progress
Should include evaluation of things previously learned
Should be based on standards established by the training syllabus

Completion Standards
This lesson will be successfully completed when, by oral examination, the student displays a basic understanding of how to guide the learning process as set forth in the current FAA Practical Test Standards.

Lesson I-3 - 2:00 Hours

Objectives
During this lesson, the student will be instructed in the analysis of effective methods and techniques.

Content
The four basic steps in teaching process
Preparation
Presentation
  Telling or explaining--the lecture method
  Techniques of discussion
Application
  Doing - trial and practice
  Essential to the learning process
  Constitutes student's activity based on instructor's preparation and presentation
  Requires careful guidance and correction
Review and evaluation
Organizes thinking
Develops understanding of basic principles
Helps the student to see relationships
Measures the success of a teaching program
Tests for both understanding and performance
Characteristics of good evaluation
Common techniques of evaluation

Completion Standards
This lesson will be successfully completed when, by oral examination, the student displays a basic
understanding of the analysis of effective methods and techniques as set forth in the current FAA Practical Test Standards.

Lesson I-4 - 3:00 Hours

Objectives
During this lesson, the student will be instructed in the flight instructor's role in helping students to learn.

Content

Be a professional
Train and prepare
Follow a program of self-improvement
Adhere to ethical standards
Be of real service
Believe in your work
Maintain a positive attitude—be sincere, enthusiastic, friendly, and patient
Be proficient as a pilot
Be proficient as a teacher

The instructor/student relationship
Gain the student's confidence
Appreciate the student's problems
Allow for individual differences
Keep student aware of progress

Safety practices
Practice what you preach
Use the checklists
Observe established safety practices
Observe regulations
Teach respect for limitations of self and equipment

Use of training aids
Models
Charts, diagrams, and performance tables
Audiovisual courses
Programmed instruction

Completion Standards
This lesson will be successfully completed when, by oral examination, the student displays a basic understanding of the flight instructor's role in helping the students to learn as set forth in the current FAA Practical Test Standards.

Lesson I-5 - 2:00 Hours

Objectives
During this lesson, the student will be instructed in flight instructor responsibilities including maintaining student interest and motivation.

Content

Motivation - basic to all learning
Utilize interest noted during analysis of the student
Direct and control student's attention
Appeal to all the student's senses
Contrive interesting experiences
Teach from the known to the unknown
"Watch your language" - explain technical terms
Emphasize the positive
Utilize the incentive provided by rewards
Foster student learning
    Know the objective
    Devise the plan of action
Create a positive instructor/student relationship
Present information and guidance effectively
Transfer responsibility to the student as he learns
Evaluate teaching effectiveness through evaluation of the student's learning and proficiency
Instruction of student pilots
    Provide adequate instruction
    Require an adequate standard of performance
Give adequate supervision
Endorse student pilot certificates
Endorse student logbook
Maintain adequate records
Flight test recommendations and other instructor endorsements
Aircraft checkouts and refresher training
Flight instructor image
    Sincerity
    Accept the student as he is
    Appearance and habits
    Avoid the use of obscene language
    Maintain a professional demeanor
Completion Standards
This lesson will be successfully completed when, by oral examination, the student displays a basic understanding of flight instructor responsibilities including maintaining student interest as set forth in the current FAA Practical Test Standards.

Lesson I-6 - 1:00 Hour

Objectives
during this lesson, the student will be instructed in the important aeromedical information required for flight instruction.

Content
The general health factor
Specific aeromedical factors -- their symptoms and control
    Fatigue, boredom, inattention
    Hypoxia
    Alcohol
    Drugs
    Vertigo
    Carbon monoxide
    Vision
    Middle ear discomfort
Scuba diving -- "Airman's Bends"
Psychological factors in flying
    Anxiety
    Normal and abnormal reactions to stress
    The "difficult" student
    The seriously abnormal student
Completion Standards
This lesson will be successfully completed when, by oral examination, the student displays a basic understanding of aeromedical factors in flight training and the prescribed procedure in each situation as set forth in the current FAA Practical Test Standards.

Stage One Final Written Examination - 1:00 Hour
This stage will be successfully completed when the student passes the written exam with a minimum grade of 80 percent and has reviewed all areas found deficient.

Stage Two
Analysis Of Flight Training Maneuvers
25:00 Hours

Stage Two Objective
To ensure the student possesses an adequate knowledge and understanding of the performance and analysis of flight training maneuvers as required to instruct in the principles of flight.

Stage Two Completion Standards
This stage will be successfully completed when the student passes the Stage Two written examination with a minimum grade of 80 percent, and has been reviewed in all areas found deficient.

Lesson II-1 - 4:00 Hours

Objectives
During this lesson, the student will be instructed in the basic aerodynamics required to flight instruction.

Content
Aerodynamic terms and definitions
  Recommended terms
  Other terms often used by pilots
Airplane loading
  Weight and balance and flight performance
  Effects of load on the aircraft structure
  Effects of loading on stability and controllability
Forces acting on an airplane in flight
  Explanation of forces
  How forces are applied to the aircraft
The airplanes axes of rotation
  Explanation of these axes
  Location of these axes on the airplane
Functions of the control surfaces and trim tabs
  How they operate
  Their primary purposes
Use of flaps
  Effects on flight performance
  Effects on stability
Angle of attack
  In stalls
As an index of performance

Airspeed
  Control effectiveness
  Maximum performance airspeeds
    Slow flight
    Cruise
    Best rate-of-climb (Vy)
    Best angle-of-climb (Vx)
    Relationship between speed, angle of bank, and rate of turn

Turns
  Forces acting on an aircraft in a normal turn
  Changes of lift in a turn
  Changes of drag in a turn

Ground effect
  As a factor in takeoffs
  As a factor in landings
  Its use in emergencies

Torque and "P" factor
  Aircraft rigging
  Asymmetrical loading of the propeller
  Action of the spiral slipstream
  Gyroscopic action of the propeller
  Torque action

Controllable propellers
  How a propeller works
  Purpose of controllable propellers
  Operation of controllable propellers--the relationship between manifold pressure, RPM, and BMEP (Brake Mean Effective Pressure)

Completion Standards
This lesson will be successfully completed when, by oral examination, the student displays an understanding and can correctly analyze the basic aerodynamics required for flight instruction as set forth in the current FAA Practical Test Standards.

Lesson II-2 - 4:00 Hours

Objective
During this lesson, the student will be instructed in the analysis of basic flight maneuvers and procedures.

Content
  How and when to introduce maneuvers and procedures
  Preflight (including check of airplane documents and records), starting, warm-up, taxi, before takeoff, in-flight, and post flight checks and procedure
  Use of radio for voice communications
  Straight and level flight, turns, (including slips and skids), and confidence maneuvers
  Climbs and glides (including powered descents)
  Ground track maneuvers
    "S" turns across a road
    Turns about a point, including 720 degree steep turns
    Rectangular patterns
    Traffic patterns
  Stalls, stall recoveries, and flight at minimum controllable airspeeds
  Takeoffs and landings
Normal
Crosswind
Short, soft, and rough field landings
Slips, and slips to a landing
Downwind landings
Power approaches
Touch-and-go landings
Wheel landings (tail wheel type airplanes), stall landings, (nose wheel landings)
Go-arounds
Emergencies, including those applicable to multiengine aircraft
Solo flight
Pattern eights (along, across, and around)
Chandelles and lazy eights
Steep turns (including 720 degree power turns)
Constant radius power off spirals
Spins
Post solo emergencies
Knowing the correct technique for the maneuvers and procedures
Recognition and analysis of common student errors
Familiarization of effective methods of correcting student errors
Required maneuvers and procedures
Cross-country flying
Planning
Pilotage
Dead reckoning
Use of radio aids
Cross-country emergencies

Completion Standards
This lesson will be successfully completed when, by oral examination, the student displays an understanding, and can correctly analyze basic flight training maneuvers and procedures as set forth in the current FAA Practical Test Standards.

Lesson II-3 - 4:00 Hours

Objectives
During this lesson, the student will be instructed in the integration of instruction in visual and instrument flying, and the fundamentals of instrument flight.

Content
Objectives of integrated flight instruction
Development of habit patterns
Accuracy of flight control
Operating efficiency
Emergency capability
Other factors of integrated flight instruction
Procedures
Safety precautions
Flight instructor qualifications
The three major components of attitude instrument flight
Instrument coverage (cross check)
Instrument interpretation
Aircraft control
Instrument characteristics
Attitude indicator
Heading indicator
Vertical speed indicator
Turn and slip indicator
Airspeed indicator
Altimeter
Magnetic compass

Other important factors in instrument training
How to determine attitude by instrument indications
Recognition of incorrect use of controls by flight instrument references
The relationship between rate of turn, radius of turn, true airspeed, and angle of bank
Standard rate turns
Physiological reactions and sensory illusions
Required maneuvers for a private pilot certificate with an airplane rating

Completion Standards
This lesson will be successfully completed when, by oral examination, the student displays an understanding, and can correctly analyze both integrated flying and attitude instrument flying for training purposes as set forth in the current FAA Practical Test Standards.

Lesson II-4 - 4:00 Hours

Objectives
During this lesson, the student will be instructed in the use of radio for both communication and navigation.

Content
VHF communication equipment
   The "line-of-sight" range of transmissions
Understanding how to use UHF/DF service and radar assistance from ground stations
VOR equipment
   H, L, T, VOR's
   The components of the VOR system
   VOR radials and their relation to the station
   Determining the instrument indications and their relation to position from the station
   Time to station and off course navigation
   VOR checks
ADF equipment
   Determining magnetic directions and relative positions
   Determining bearing information
   ADF time and distance checks
   ADF tracking (both inbound and outbound)
   Operational characteristics and precautions to observe in use of L/F radio equipment

Completion Standards
This lesson will be successfully completed when, by oral examination, the student displays an understanding, and can correctly explain the use of radio equipment for flight training purposes as set forth in the current FAA Practical Test Standards.

Lesson II-5 - 4:00 Hours

Objectives
During this lesson, the student will be instructed in the use of pilot information publications.

Content
Airman's Information Manual
   NAVAIDS
   Airport and air navigation lighting and marking aids
   Altimetry
Good operating practices
Radar
Radiotelephone phraseology and techniques
Safety of flight
Weather
ATC operations and procedures
Flight data and special operations
NOTAMS
Airport directory
Airport facility directory

Airplane flight and owner's manuals
Know how to consult the weight and balance data to determine that the aircraft is properly loaded. Know how to compute empty weight, useful load, and gross weight.
Know how to compute moments from weight and center of gravity arms.
The grade and quantity of fuel and oil required
Flight load factor limitations and airspeed limitations
Use of performance charts as required for:
  Takeoff data
  Climb data
  Landing distance data
  Cruise performance data (cruise power settings, approximate true airspeeds, fuel consumption rate)
Use tables such as:
  Stall speed versus angle-of-bank table
  Airspeed calibration or correction table
NTSB Part 830, Rules pertaining to the Notification and Reporting of Aircraft Accidents, Incidents, and Overdue Aircraft, and preservation of Aircraft Wreckage, Mail, and Records
Federal Aviation Regulations
  Part 1, Definitions and Abbreviations
  Part 61, Certification: Pilots and Flight Instructors
  Part 91, General Operating and Flight Rules

Completion Standards
This lesson will be successfully completed when, by oral examination, the student displays an understanding, and can correctly teach the use of airman information publications as set forth in the current FAA Practical Test Standards.

Lesson II-6 - 4:00 Hours

Objectives
During this lesson, the student will be instructed in other areas of importance to flight instruction.

Content
Airframe and power plant operation
  Aircraft structures
  Airframe components and control surfaces
  Fuel and fuel systems
  Oil and oil systems
  Electrical system fundamentals
  Reciprocating engine principles and components
  Carburetor and fuel injection
  Propellers
  Engine instruments
Altimeters (A review of Lesson 3 as required)
Airspeed indicators
Aircraft stability
Static
Dynamic
Airport lighting
Special procedures for multi-engine instruction
Charts (density altitude, load factor, and oxygen)
Safe flying practices
  Density altitude
  Carburetor icing
  Snow, ice, and frost
  Wake turbulence
  Fuel contamination

Completion Standards
This lesson will be completed successfully when, by oral examination, the student displays an understanding and can correctly teach in all other major areas of importance to flight instruction as set forth in the current FAA Practical Test Standards.

Stage Two Final Written Examination - 1:00 Hour
This stage will be successfully completed when the student passes the written exam with a minimum grade of 80 percent and has reviewed all areas found deficient.
AVIA 3233
Advanced Aircraft Systems

Russell Bldg: R-218: M W F: 10am-10:50am

General Information
Instructor: John G. Van Bebber, Jr.
Office: Eaker Field—EF-105
Office Hours: M W F: 1pm-4pm
Telephone Number: Office (580) 745-3242
Cell (903) 815-1068
E-mail: primary jvanbebber@se.edu

Classroom Protocol
1. Electronic devices: All cell phones, lap top computers, pagers, or PDAs shall be off and silenced when class starts.
2. No recording devices are allowed in the classroom except as permitted by SOSU policy.
3. Tardiness is not tolerated, so the class will start on time with the door closed and subsequent entry is not allowed.
4. If you need to leave class early, please notify me before class. Subsequent reentry is not allowed.

Prerequisites
AVIA 1041, AVIA 2083, AVIA 3123

Course Outline
1. Introduction to the basic systems of a turbojet, turbofan, and turboprop aircraft
   • B-737-700 is the primary aircraft of the course
2. Gas turbine engine principles of operation
3. Turbojet, turbofan, and turboprop powerplants
4. Auxiliary power units
5. Electrical systems
6. Hydraulic systems:
   • Flight Controls
   • Landing Gear,
   • Wheel Brake Systems and tires
7. Fuel systems
8. Pneumatic systems
   • Air conditioning systems
   • Pressurization systems
   • Anti-icing and deicing systems
9. Fire Detection and Protection systems
10. Flight Instruments and Navigation systems
11. Weather Radar
12. Warning systems
13. Aircraft preflight: B737-NG—interior and exterior
Course Goals

1. The student will demonstrate an acceptable knowledge of the system components of a modern transport category aircraft (examples would include Cessna Citation, Boeing 737, or Embraer RJ 145/175).
2. The student will demonstrate the basic knowledge of pilot operation of a modern jet transport’s systems in normal and non-normal operations.
3. The student will demonstrate the knowledge of normal operation of the major systems of a B-737NG, which is a typical example of a modern jet transport.
4. The student will be prepared for a future airline-type ground school or systems training for a business jet.

Course Objectives and Student Outcomes

The student will demonstrate competent knowledge of the following advanced aircraft systems by a minimum examination score of 70%.

1. Describe and explain the theory of turbine engine operation.
2. Describe the components and operation of **turbojet, turbofan, and turboprop engines** to include the following:
   2.1. Describe each gas turbine engine section to include the intake, compressor, combustion chamber, turbine, and exhaust nozzle.
   2.2. Describe the components and operation of multi-spool engines.
   2.3. Describe turbine engine cockpit controls, indicators, and engine operation.
   2.4. Explain jet thrust, jet engine efficiency, and factors affecting each.
   2.5. Describe and explain the operation of a **turbofan-engine’s accessories**.
3. Describe the components and operation of **pneumatic systems** to include the following:
   3.1. Cockpit controls, indicators, and component operation of the **pressurization system, air conditioning system, and anti-ice system**.
4. Describe the components and operation of **hydraulic systems** to include the following:
   4.1. Cockpit controls, indicators, and component operation of the **flight control systems, landing gear system, and braking system**.
5. Describe the components and operation of **electrical systems** to include the following:
   5.1. Cockpit controls, indicators, and operation of the **AC power distribution, DC power distribution, and battery power**.
6. Describe the components and operation of **fuel systems** to include the following:
   6.1. Cockpit controls, indicators, and operation of **fuel storage, fuel supply to the engine, and fuel loading**.
7. Describe the components and operation of the **auxiliary power unit (APU)** to include the following:
   7.1. Cockpit controls, indicators, and operation of the **APU start system, electrical system, and pneumatic system**.
8. Describe the components and operation of the **flight and navigation instruments** to include the following:
   8.1. Cockpit controls, indicators, and operation of the **Primary Flight Display, Navigation Display, communication radios, and navigation systems**.
9. Describe the components and operation of the cockpit **annunciator and warning systems** to include the following:
   9.1. Cockpit controls, indicators, and operation of the **engine/APU fire detection and extinguishing systems, Ground Proximity Warning System (GPWS), collision avoidance systems (TCAS)**.
10. Describe the theory, components, and pilot operation of cockpit **weather radar systems**.
11. Describe the following systems operation by and interpretation of the respective system schematics:
   11.1. Engine Fuel and Oil system
   11.2. Electrical System
   11.3. Hydraulic System
11.4. Fuel System
11.5. Pneumatic system
11.6. Engine and Wing Anti-Ice systems

**Textbooks and References**

**Required**
3. **CPAT on-line systems training** for the B-737-700: internet access from any computer will be available with login information provided.

**Supplemental References**
4. Blackboard will have several documents from internet sources that will be assigned reading. Find these in the specific lecture folders under *Course Documents*. Several good general references for advanced systems subjects are found in the *External Links* folder.

**Style and Mode of Teaching**
Class will primarily be a lecture with class interaction and discussion. Blackboard will contain course documents, course information, announcements, helpful internet references, assignments, and other relevant information to read and study. Most homework assignments are to be submitted on Blackboard only.

Computer Based Training (CBT) on the B-737NG is accessed on CPAT’s web site. Completion of CPAT on-line training is to be accomplished as we progress through each system. There is no grade for completion, nor do I track your completion status. However, questions from CPAT systems training will be part of every exam.

**Course Assessment**

**Evaluations**

A. Exams
   - Exams (2 @ 200 pts) 400 points
   - Final Exam 270 points
B. Quizzes (3 @ 40 pts) 120 points
C. Assignment Exercises (6 @ 30 pts) 180 points
D. Attendance 30 points

Total = 1000 points

E. Grading System
   A = > 900; B = 800-899.9; C = 700-799.9; D = 600-699.9; F = < 600
**Exams (670 pts)**
Exam questions will be a combination of multiple-choice, true/false, fill-in-the-blank, and short answer. The course requires two exams and a comprehensive final exam. **Make-up exams are possible for an excused absence only.** Absences are governed according to the attendance policy in this syllabus.

**Quizzes (120 pts)**
Quizzes are scheduled approximately a week prior to the exams. They are used to motivate the student to stay current with the reading assignments and prepare for the exam.

There are no make-up possibilities for exercises or quizzes except with a valid excused absence. **It is your responsibility to check Blackboard for all course work and due dates.**

Late submissions (until 24 hours after deadline) receive 50% credit, but you may submit early.

**Assignment Exercises (180 pts)**
Assignments with due dates will be listed on the Course Schedule and are to be completed by 5pm on the due date. Homework exercises are found in the Assignments folder on blackboard.

Submission of homework exercises is as follows. The exercise document is downloaded from Blackboard’s Assignments folder and saved to your computer. The exercise will be completed using MS Word. You will rename the file (Exercise 3_student last name.doc) and submit via the blackboard. For example, a file named Exercise 3 will be resubmitted with a file name of Exercise 3_Jones.docx.

In-class exercises will require preparation before class and then submitted at the end of a class or as a Blackboard Assignment.

**Attendance (30 pts)**
Class attendance is expected and deductions are 5 points for each unexcused absence. See the Attendance Policy below for the rules explaining an excused absence. Everybody’s attendance grade starts with 30 points.

**Course Requirements for Grade**
A. Completion of all quizzes
B. Completion of all semester exams and the final exam

**Cheating and Plagiarism**
1) **Cheating** may be defined as using unauthorized materials, giving or receiving unauthorized materials, or receiving unauthorized assistance during an examination or other academic exercise. Examples may include:
   a) Copying the work of another student during an examination OR other academic exercise (including computer exercises on Blackboard), or permitting another student to copy one’s work;
   b) Taking an examination for another student, or allowing another student to take one’s examination;
   c) Possessing unauthorized notes, study sheets, electronics (phones or computers), or other materials during an examination or other academic exercise;
   d) Falsifying or tampering with examination results.
   e) Completing, copying, or using the results of any other student’s computer assignments, written assignments, or presentations. Representing any of these as your own work is cheating.

2) **Plagiarism** may be defined as the use of another's ideas or words (written or verbal) without acknowledgement. The work of published authors is their intellectual property, regardless if it is copyrighted or not. Examples of plagiarism may include:
   a) Failing to use quotation marks when quoting from a source
   b) Failing to document distinctive ideas from a source
c) Fabrication or inventing sources

d) Cheating and plagiarism will result in those actions outlined by the School of Business Academic Honesty Policy.

3) I suggest every student read the university’s Academic Honesty Policies. Cheating or plagiarism penalties can be severe; expulsion is not worth the risk.

**Attendance Policy**

Class attendance is part of your grade and required for all exam classes unless other arrangements have been approved (minimum of 24 hours notice) in advance by the instructor. A make-up exam should be scheduled prior to the excused absence if possible. Please note the methods of communication to the instructor at the beginning of the syllabus and use them. When absent, the student is responsible for contacting the instructor to make up exams or quizzes.

Excused absences are covered by official department policy: (a) medical illness or doctor’s appointment, (b) adverse weather, or (c) approved school functions. **Flight training will not qualify** as a reason for an excused absence. If serious personal issues require that you miss class, contact Southeastern’s Dean of Students for assistance.

**Drop and Add Policy**

Refer to Southeastern’s standard university policies and academic calendar.

**Policy for Inclement Weather**

Refer to Southeastern’s standard university policies.

**Students with Disabilities**

Any student needing special accommodations due to a disability should contact the Coordinator of Student Disability Services, Student Union, Suite 204 or call (580) 745-2254. It is the responsibility of each student to make an official request to the Coordinator for academic accommodations.”

Any student who discloses a disability and/or inquires about accommodations or services should be referred to the Coordinator of Student Disability Services, Student Union, Suite 204, (580) 745-2254.

After a student self-identifies, the University employee has a duty to direct that student to the appropriate office for services. Every effort will be made to be in full compliance with Sec. 504 and 508 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act. No qualified individual with a disability can be excluded from, denied the benefits of, or otherwise subjected to discrimination under any program or activity on campus.

If you have questions or concerns, please contact the Office for Student Affairs (X2368) or the Coordinator of Student Disability Services (X2254) for further information.
AVIA 3334: Advanced Aerodynamics  
Course Syllabus

Russell Bldg: R-218: MWF: 10:00a—10:50a

GENERAL INFORMATION
Instructor: John G. Van Bebber, Jr.  
Office: Eaker Field—EF-105  
Office Hours: M-F: 1pm-4pm by appointment  
Telephone No.: Office: (580) 745-3242  
Cell: (903) 815-1068  
E-mail: jvanbebber@se.edu

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PREREQUISITES AND SUPPORT COURSES
MATH 2143, PHYS 1114, AVIA 2083 & 3123

BRIEF COURSE OUTLINE
Please refer to the course lecture schedule posted and updated on blackboard for the actual sequence of subjects and assignments.
1. Introduction to the physical laws that affect aircraft aerodynamics  
   a. Properties of gases  
   b. Fluid motion  
   c. Gravity  
   d. Properties of the atmosphere  
   e. Newton’s laws of motion
2. Subsonic aerodynamic forces  
   a. Distribution of pressure around an airfoil  
   b. Factors affecting Lift  
   c. Factors affecting total Drag
3. Transonic aerodynamics  
   a. Compressibility theory: Wave propagation (speed of sound), Mach number, speed divisions  
   b. Shockwaves and supersonic airflow  
   c. Lift and Drag at high speeds  
   d. Aircraft control at high speed  
   e. Aircraft design for high speed  
   f. Handling and performance limitations of wing sweep
4. Aerodynamic principles of flight control systems found on transport category aircraft.
5. Aerodynamic principles of aircraft performance: takeoff, cruise, approach, and landing
6. Turbine engines and the principles of thrust
COURSE GOALS

1. The student will demonstrate fundamental knowledge of the aerodynamic principles related to transport category airplanes—specifically turbojet and turbofan powered aircraft.
2. The student will demonstrate fundamental knowledge and understanding of the natural physical laws involved in airplane flight—basic aerodynamics of wings, fuselage, tail section, and control surfaces. These principles focus on how and why the airplane reacts when the pilot is varying the aerodynamic forces that are acting upon the aircraft.
3. The student will demonstrate sufficient knowledge of advanced aerodynamic concepts to pass the FAA ATP Knowledge Test (Aerodynamics Section).

COURSE OBJECTIVES

Upon completion of the course, the student will demonstrate a satisfactory level of knowledge by examination of the following objectives with a minimum score of 70%. Each lecture begins with the objectives for that particular lecture. The following is a summary of those objectives:

1. Introduction to physics
   1.1. Describe and explain Newton’s 1st, 2nd, and 3rd Laws of force and motion.
   1.2. Define the mechanical concepts of force, vectors, moments, mass, work, energy, power, and friction.

2. Subsonic aerodynamics
   2.1. Describe and explain the atmosphere’s properties: temperature, static pressure, dynamic pressure, density, viscosity of air, and the components of the atmosphere.
   2.2. Define the ICAO standard atmosphere.
   2.3. Define the airfoil terms, which describe the cross-sectional shape of an airfoil.
   2.4. Describe and explain the aerodynamic forces on the aircraft and airfoils.
   2.5. Define and explain the relationship of the airfoil center of pressure to the aerodynamic center of the airfoil.
   2.6. Define and explain the different types of airspeed and Mach.
   2.7. Describe and explain the factors affecting coefficient of lift.
   2.8. Define and explain the factors affecting coefficient of drag.
   2.9. Define and explain the types of drag and their relation to airframe efficiency.
   2.10. Define and explain the factors of lift and angle of attack.
   2.11. Explain airflow separation over an airfoil relating laminar and turbulent flow characteristics.
   2.12. Explain graphically how thrust, drag, weight, and lift affect a jet aircraft’s performance related to takeoff, climb, cruise speed, cruise range, and cruise fuel efficiency.
   2.13. Explain graphically the variation in jet aircraft performance as impacted by variations in weight, altitude, and aircraft configuration.
   2.14. Define and explain the stall characteristics of various wing shapes.
   2.15. Explain takeoff performance factors of weight, airport pressure altitude, runway slope and surface characteristics, wind, temperature, and aircraft thrust.
   2.16. Define and explain the V speeds related to jet takeoff performance.
   2.17. Define and explain the important factors affecting landing performance: approach speed, hydroplaning, wheel braking systems, deceleration, and stopping distance.
   2.18. Define and explain the V-G diagram relating load factor to airspeed.
   2.19. Define and explain the limiting airspeeds and loads as depicted on the V-G diagram.
   2.20. Define and explain positive/negative static stability and positive/negative dynamic stability.

3. Transonic aerodynamics
   3.1. Explain the compressibility theory of air.
   3.2. Describe and explain the nature of supersonic airflow and shockwaves.
   3.3. Describe and explain the transonic changes in lift on an airfoil.
   3.4. Describe and explain the transonic effects of drag on the airframe.
   3.5. Explain how aircraft control at high speed differs from the characteristics below 250 knots.
3.6. Describe and explain aircraft design for high speed including limitations and handling characteristics of swept wing aircraft.

4. Aerodynamic Performance

4.1. Define and explain the principles of takeoff and climb performance of jet aircraft.
4.2. Define and explain principles of jet aircraft cruise performance to include fuel optimization, maximum range, and endurance.
4.3. Describe and explain aircraft performance limitations to include speed, aircraft structure, buffet onset boundaries, high altitude stability and control, and maneuvering limitations.
4.4. Describe and explain the principles of engine-out performance related to control, climb, and landing.
4.5. Describe and explain the principles of landing performance to include stopping and missed approach.

4.5.1. Describe and explain the complex wheel braking systems of jet aircraft.

5. Describe and explain the principles of turbine engine theory to include the principles of turbojet and turbofan jet propulsion, the gas turbine cycle, the principles of turbine engine efficiency, and the basic components of the turbine engine.

6. Aerodynamic principles of flight control systems to include:

6.1. Describe and explain the aerodynamic principles of the primary flight controls and trim systems.
6.2. Describe and explain the aerodynamic principles of secondary flight control systems.
6.3. Describe and explain the aerodynamic principles of lift augmentation devices.
6.4. Describe and explain the complex wheel braking systems on transport category aircraft.
6.5. Describe and explain the basic principles of hydroplaning; also, explain how modern complex wheel braking systems reduce the affects of hydroplaning.

TEXTBOOKS (required)

2. *Aerodynamics, Engines and Systems for the Professional Pilot*

Additional book references:

1. *Aerodynamics for Naval Aviators* (Hurt, 1965)

Supplemental References:
Blackboard will have several documents from various web sites and other sources that will be assigned reading. Quite often, the subject discussions will reference FAR Part 25, which are the certification rules for transport category aircraft. All FARs are accessible on the internet.

Web Site References

BLACKBOARD GUIDELINES

1. Always put your name and a date on the document submitted.
2. If you make an error in submission of an assignment, notify the instructor immediately. You cannot resubmit until the erroneous submission is cleared by the instructor.
3. The student is responsible for checking blackboard often to see the updates put on the course calendar, the course lecture schedule, and announcements. Normally, the Sunday evening before the week begins, I will have updates posted.
4. Grades are generally posted in a timely manner so that exam review may be accomplished in the next class session. The student is responsible to check My Grades on blackboard and notify the instructor immediately of any discrepancy or problem.

STYLE / MODE OF TEACHING

Class will primarily be a lecture with class interaction and discussion. SOSU Blackboard will contain course documents, course information, announcements, helpful internet references, homework assignments, and other relevant information to read and study. Class lecture presentations will be posted under the Course Documents link.

COURSE REQUIREMENTS FOR GRADE

1. Completion of all three exams
2. Completion of all quizzes and exercises

EVALUATION

A. Exams
   - Two semester exams @ 200 pts each       400 points
   - Final Exam                                250 points

B. Homework exercises and/or quizzes (7 @ 50 pts each)   350 points
   Total = 1000 points

Grading System
A = > 900; B = 800-899.9; C = 700-799.9; D = 600-699.9; F = < 600

Exams and Quizzes
Exams and Quizzes will be multiple-choice, true/false, fill-in-the-blank, and essay. The course requires two exams and a comprehensive final. Make-up exams will be given for an excused absence only. Absences are governed according to the attendance policy in this syllabus.
Exam questions will cover material from the textbooks, lectures, and additional reading. Learning objectives are listed on all power point lectures and these should be your primary study guide for each exam.

Homework Exercises
Homework will consist of textbook reading, internet reading, and written exercises. Class assignments and due dates will be listed on the Course Calendar on Blackboard. Written exercises will be submitted on blackboard and due at the beginning of the class session as posted on the Course Calendar.
In order to complete each exercise, downloaded the exercise file from Blackboard’s Assignments folder and save it to your computer. Complete the exercise using the same MS Word document. Rename the file (exercise 3_name.docx), save it to your computer, and then submit it on blackboard. For example, a file named Exercise 3.docx will be completed and resubmitted with a file name of Exercise 3_Jones.docx.
There are no make-up possibilities for homework exercises. Deadlines are 5pm submission on Blackboard on the due date. Late submissions receive a 50% credit until 5pm the day after the due date; after that, the grade is zero. Incomplete exercises receive reduced points accordingly.
ATTENDANCE POLICY

Attendance is required for all exams and quizzes unless the absence has been approved (minimum of 48 hours notice) in advance by the instructor. Absence on exam or quiz day without prior instructor notification will result in a grade of zero, unless it is an emergency absence as described by Southeastern University policies. Excusal and make up would require a serious conflict, official excusal (see below), or family emergency. Please note the methods of communicating with the instructor listed at the beginning of the syllabus.

Generally, excused absences are covered by official department policy: (a) medical illness or doctor’s appointment, (b) adverse weather, or (c) approved school functions. Flight training will not qualify as a reason for an excused absence on exam or quiz day. Exam or quiz make-ups are only available with an official excused absence and/or prior approval by the instructor. It is the student’s responsibility to contact the instructor as soon as possible and arrange to make up the exam or quiz.

CHEATING or PLAGIARISM

Cheating may be defined as using unauthorized materials, giving or receiving unauthorized materials, or receiving unauthorized assistance during an academic exercise. Examples may include:

a) Copying the work of another student during an examination OR other academic exercise (including computer exercises on Blackboard), or permitting another student to copy one’s work;

b) Taking an examination for another student, or allowing another student to take one’s examination;

c) Possessing unauthorized notes, study sheets, electronics (phones or computers), or other materials during an examination or other academic exercise;

d) Falsifying or tampering with examination results.

e) Completing, copying, or using the results of any other student's computer assignments, written assignments, or presentations. Representing any of these as your own work is cheating.

Plagiarism may be defined as the use of another’s ideas or words (written or verbal) without acknowledgement. The work of published authors is their intellectual property, regardless if it is copyrighted or not. Examples of plagiarism may include:

a) Failing to use quotation marks or a block quotation when quoting from a source

b) Failing to document distinctive ideas from a source

c) Fabrication or inventing sources

Cheating and plagiarism will result in those actions outlined by the School of Business Academic Honesty Policy.

I suggest every student read the university’s Academic Honesty Policies. Cheating or plagiarism penalties can be severe; expulsion is not worth the risk.

DROP AND ADD POLICY

Refer to Southeastern’s standard university policies and academic calendar.

POLICY FOR INCLEMENT WEATHER

Refer to Southeastern’s standard university policies.

STUDENTS WITH DISABILITIES

Any student needing special accommodations due to a disability should contact the Coordinator of Student Disability Services, Student Union, Suite 204 or call (580) 745-2254 (TDD# 745-2704). It is the responsibility of each student to make an official request for accommodations to the Coordinator.

Any student who discloses a disability and/or inquires about accommodations or services should be referred to:

The Coordinator of Student Disability Services
After a student self-identifies, the University employee has a duty to direct that student to the appropriate office for services. Every effort will be made to be in full compliance with Sec. 504 and 508 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act. No qualified individual with a disability can be excluded from, denied the benefits of, or otherwise subjected to discrimination under any program or activity on campus.

If you have questions or concerns, please contact the Office for Student Affairs (X2368) or the Coordinator of Student Disability Services (X2254) for further information.
Southeastern Oklahoma State University
AVIA 3362 Instrument Flight Instructor Ground

GENERAL INFORMATION
Instructor: Kyle Thomas
Office Number: Flight Operations, Eaker Field
Office Hours: M-F, 1330 - 1500, or by appointment
Telephone Number: 580-745-3246
E-Mail: kthomas@sosu.edu

PREREQUISITES AND SUPPORT COURSES
AVIA 3202-Flight Instructor Ground and Instrument Rating.

Course Goals
This course exposes the career-oriented student to requirements and skills necessary to function as a Certified Flight Instructor - Instrument. At its completion, the student will be able to demonstrate and teach the fundamental elements of the following:

- Fundamentals of Instructing
- Preflight procedures
- Navigation systems and procedures
- Air Traffic Control clearances
- Flight by reference to instruments

Course Objectives and Student Outcomes

1. Demonstrate a fundamental knowledge or the fundamentals of instructing as related to training instrument students.
2. Demonstrate instructional knowledge of IFR systems, equipment, and basic navigation
   2.1. Describe the construction, operating principles, and source of operation for each flight instrument
   2.2. Explain the Indications of static port blockage and the ramifications or using an alternate air source
   2.3. Construction and limitation of the magnetic compass
   2.4. List and describe the process of recognizing and recovering from unusual attitudes
   2.5. Describe an instrument preflight and appropriate taxi check procedures
   2.6. Demonstrate instructional of the three fundamentals skills of basic attitude flying
   2.7. List and describe limitations associated with NDBs
   2.8. Demonstrate instructional knowledge of NDB, VOR tracking and course intercept
3. Demonstrate instructional knowledge of IFR departure, en route, and arrival procedures
   3.1. Exhibit instructional knowledge of standard instrument departures and standard terminal arrivals
   3.2. Describe the process of complying with precision and non-precision instrument approach procedures
   3.3. Exhibit a working knowledge of low altitude en route charts and procedures
3.4. List and describe the process of IFR cross country planning
4. Demonstrate a fundamental understanding of IFR Regulations, 14 CFR parts 61, 47, and 91.
   4.1. Explain the regulatory requirements associated with recent experience requirements as listed in part 61
   4.2. List and describe the elements and regulations associated with IFR flight plans.
   4.3. Demonstrate instructional knowledge of the regulations that govern takeoff and landing under IFR
   4.4. Demonstrate instructional knowledge of minimum altitudes of IFR operations and minimum IFR cruising altitudes
   4.5. Describe the essential elements of IFR communications and communication failures
   4.6. Demonstrate instructional knowledge of IFR regulations associated with minimum equipments and regulatory IFR equipment inspections

RECOMMENDED TEXT MATERIALS
AC 60-14, Aviation Instructor's Handbook
Current FAR/AIM book
Instrument Flying Handbook
Instrument Procedures Handbook

STYLE/MODE OF TEACHING
Lecture/Seminar/Presentations/Demonstrations/Class Handouts/Student participation.

DROP AND ADD POLICY
Same as University. Please review the academic calendar regarding 8 week block courses.

ATTENDANCE POLICY
Attendance is very important. All absences, except those having to do with pre-approved SOSU functions, will be considered unexcused. **Your attendance grade will be decreased by 10% for each unapproved absence.**

Make-up exams and make-up presentations will be given in extenuating circumstances only. **You must have prior permission.** Also, credit will not be given for assignments that are turned in after the due date. There will be no make-up quizzes.

**Do not be late for class.**
Do not disturb class by entering after the session has begun. You will be asked to leave.
Course Completion Requirements

In addition to three section exams, you will be required to complete a presentation lasting no longer than 30 minutes. You will find a list of topics on the class schedule. E-mail me your top five choices.

I will post a tentative presentation schedule on Blackbaord.com. Look under course information. This schedule is subject to change.

Weights and Grading System

60% Exams
10% Attendance
20% Final FAA Knowledge test
10% Presentations

CHEATING or PLAGIARISM
Got Academic Policies page

Graduation Requirements, Professional Pilot
A minimum GPA of 2.5 is required in all Professional Pilot and Aviation Management Major-Minor degree requirements including specified general education requirements. In addition, no grade less than C in Professional Pilot ground courses is acceptable.

DISABILITIES ACT
Any student needing special accommodations due to a disability should contact the Coordinator of Student Disability Services, Student Union, Suite 204 or call (580) 745-2254 (TDD# 745-2704). It is the responsibility of each student to make an official request to the Coordinator for academic accommodations.

Equal Opportunity Statement
In Compliance with Title VI of the Civil Rights Act of 1964, Executive Order 11246 as amended, Title IX of the Education Amendments of 1972, Sections 503 and 504 of the Rehabilitation Act of 1973, and other Federal Laws and Regulations, Southeastern Oklahoma State University does not discriminate on the basis of race, color, national origin, sex, sexual identity, sexual orientation, age, religion, handicap, disability, or status as a veteran in any of its policies, practices or procedures, this includes but is not limited to admissions, employment, financial aid, and educational services.

Title IX of the Education Amendments of 1972 (20 U.S.C. § 1681) states: No person in the United States, shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving federal financial assistance…” Southeastern Oklahoma State
University does not discriminate on the basis of sex in its education programs or activities, in compliance with Title IX and the U.S. Department of Education’s regulations at 34 C.F.R. §§ 86.1 et seq. Individuals who believe they have been discriminated against on the basis of sex may contact S.E.’s Title IX Coordinator at 580-745-3090, titleix@se.edu, or PMB 2750.

Instrument Flight Instructor Ground
Very Tentative Schedule
(Dates are subject to change)
Spring 2016
January 11 – February 24

January
11 Intro to Class
   FOI Review
13 Compass Construction
   Compass Errors
   Gyroscopic Instruments, Construction, Source of Operation
   Pitot Static Instruments, Construction, Source of Operation and Use of the
   Alternate static system
   IFR Preflight
15 Required IFR equipment
   Basic Attitude Flying (Primary and Supporting method)
   Unusual Attitude Recovery
   VOR checks
18 NDB Tracking, Determine Course/Bearing TO the station
   NDB Course Intercept
   VOR Tracking
   Time and Distance Problems
   NDB Errors
20 Exam 1
25 Enroute Charts NOS
   Enroute Charts Jeppesen
   STARs and DPs (NOS and Jeppesen)
27 IFR Approach Segments
   Procedure Turns
29 Holds, How to enter
   Holds, How to fly

February
<table>
<thead>
<tr>
<th>Page</th>
<th>Content</th>
</tr>
</thead>
</table>
| 1    | Brief an ILS Approach  
      | Brief a VOR Approach  
      | Brief a GPS Approach |
| 3    | **Exam 2** |
| 5    | IFR Currency and Logging Instrument Flight Time  
      | Required IFR training and experience |
|      | NOTAMs  
      | IFR PTS |
| 8    | 91.167 and 91.169 (Fuel Req. and IFR Flight Plans)  
      | 91.175 Takeoff and Landing under IFR |
| 10   | IFR Clearances, How to pick up your IFR clearance  
      | Components of an ILS, legal substitutions |
| 12   | 91.185, Radio Failure  
      | Runway and Airport Markings |
| 15   | IFR Reports  
      | Visual Approaches, Contact Approaches, and Cruise Clearances. |
| 17   | EFB (Paperless cockpits)  
      | Circling Approaches |
| 19   | Instrument Proficiency Checks |
| 22   | Exam 3 |
| 22   | Review and Makeup |
| 24   | Review and Makeup |
| 26   | Final (Instrument Flight Instructor Knowledge Exam. Students must submit results before 1700) |
GENERAL INFORMATION
Instructor: George Jacox
Office Number: Flight Operations, Eaker Field
Office Hours: M - F, 1400 - 1500, or by appointment
Telephone Number: 580-745-3245

PREREQUISITES AND SUPPORT COURSES
AVIA 1004, AVIA 3321

BRIEF COURSE OUTLINE
This course will provide each student with the use of Garman G1000 cockpit. It will cover an Overview, Characteristic, Preflight, Configuration, and Use of the Garman G1000. Each student will get 3 hours in the Cessna C-172 G1000 aircraft. (This is an additional cost of $145.00 per hour for $435.00)

Course Objective
The student will be able to describe the architecture/ modular system of the G1000. They will be able to describe the functions and operations of the following:
- Primary flight instruments display
- Audio Panel
- Navigation keys
- Engine Indication System
- Multifunction Display (MFD)
- Checklists on the MFD
- Navigation features
- Data Link to Weather
- Complete VFR/IFR Flight Planning
- Autopilot Operation
- Failures and Emergencies

TEXT MATERIALS
Max Trescott’s G1000 Glass Cockpit Handbook

STYLE/MODE OF TEACHING
Lecture/Seminar/Presentations/Demonstrations/Class Handouts.

DROP AND ADD POLICY
Same as University. Please review.

Graduation Requirements
A minimum GPA of 2.5 is required in all Professional Pilot and Aviation Management Major-Minor degree requirements including specified general education requirements. In addition, no grade less than C in Professional Pilot ground courses is acceptable.

**ATTENDANCE POLICY**

Attendance is very important. Students are expected to attend all classes. Entering the classroom after the start of class is very disrupting and inconsiderate of your classmates. There is a 1% point deduction for being late. If you cannot get to class before the scheduled start time DO NOT COME! If you must leave during class time, be considerate! Unannounced quizzes will be given, and added to your final grade. All absences, except those having to do with pre-approved SOSU functions, will be considered unexcused.

Make-up exams will be given in extenuating circumstances only, and only with prior permission.

Make-up quizzes will not be given. Credit will not be given for assignments that are turned in after the due date. There will be no make-up quizzes. In the event of an absence, the student is responsible for scheduling a makeup lesson on all material covered in class. Attendance will be taken at the beginning of each class. Make-up quizzes will not be given.

Make-up exams will be given in extenuating circumstances only, with prior permission.

**LABORATORY**

N/A

**READING**

Reading assignments are to prepare you for that class period and should be accomplished prior to the scheduled class.

**EXAMINATION**

There will be two examinations. The examinations will be a combination of multiple choice, matching, fill in the blanks, and essay questions.

**GRADING PROCEDURES**

<table>
<thead>
<tr>
<th>Examination #1</th>
<th>100 points</th>
<th>90 - 100% = A</th>
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<tbody>
<tr>
<td>Examination #2</td>
<td>100 points</td>
<td>80 - 89% = B</td>
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<td></td>
<td>70 - 79% = C</td>
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<tr>
<td>Total</td>
<td>200 points</td>
<td>60 - 69% = D</td>
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<tr>
<td></td>
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<td>Less than 60 = F</td>
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</tbody>
</table>

**Class Participation**

You must be in class and participate. If you are not in class, you cannot participate. No more than three (3) unexcused absences.

**TERM PAPER/PRESENTATION**

n/a

**CHEATING or PLAGIARISM**

Goto Academic Policies page

**DISABILITIES ACT**

Any student needing special accommodations due to a disability should contact the Coordinator of Student Disability Services, Student Union, Suite 204 or call (580) 745-2254 (TDD# 745-
2704). It is the responsibility of each student to make an official request to the Coordinator for academic accommodations.

**Lecture Schedule**

<table>
<thead>
<tr>
<th>Date</th>
<th>Chapter</th>
</tr>
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<tbody>
<tr>
<td>January 12</td>
<td>Chapter 1- The Glass Cockpit Revolution</td>
</tr>
<tr>
<td>January 19</td>
<td>Chapter 2 – G1000 Benefits</td>
</tr>
<tr>
<td>January 24</td>
<td>Chapter 3 – G1000 System Overview</td>
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<tr>
<td>January 26</td>
<td>Chapter 4 – PFD Overview</td>
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<tr>
<td>January 31</td>
<td>Chapter 5 – Radios and Audio Panel</td>
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<tr>
<td>February 2</td>
<td>Chapter 6 – Engine Indication System</td>
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<tr>
<td>February 7</td>
<td>Chapter 7 – MFD Overview</td>
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<tr>
<td>February 9</td>
<td>Test I</td>
</tr>
<tr>
<td>February 14</td>
<td>Chapter 8 – Onboard Data Link Weather</td>
</tr>
<tr>
<td>February 16</td>
<td>Chapter 9 – Flight Planning with the G1000</td>
</tr>
<tr>
<td>February 28</td>
<td>Chapter 10/11 – Autopilot Operation and Instrument Flying</td>
</tr>
<tr>
<td>March 2</td>
<td>Chapter 12 – Electrical Systems/Component Failures and Emergencies</td>
</tr>
<tr>
<td>March 2</td>
<td>Chapter 13 – Flying a Trip</td>
</tr>
<tr>
<td>March 7</td>
<td>Chapter 14 – Future Enhancements</td>
</tr>
<tr>
<td>March 9</td>
<td>Test II</td>
</tr>
</tbody>
</table>

Flying the Scenarios until you are completed
AVIA 3503
Flight Management Technology and Commercial Operations

Eaker Field (R-114): T-Th: 10:30am—11:45pm

GENERAL INFORMATION
Instructor: John G. Van Bebber, Jr.
Office: Eaker Field: EF 105
Office Hours: M-F: 1pm-4pm. Call for appointment.
Telephone No: Office: (580) 745-3242
Cell: (903) 815-1068 (voicemail available)
E-mail: jvanbebber@se.edu

CLASSROOM PROTOCOL
1. Electronic devices: All cell phones, lap top computers, pagers, or PDAs shall be off and silenced when class starts.
2. No recording devices are allowed in the classroom except as permitted by SOSU policy.
3. Tardiness is not tolerated, so the class will start on time with the door closed and subsequent entry is not allowed.
4. If you need to leave class early, please notify me before class. Subsequent reentry is not allowed.

PREREQUISITES AND SUPPORT COURSES
- Commercial-Instrument license and permission required

BRIEF COURSE OUTLINE
1. Flight Management Systems
   1.1. FMS Introduction
      1.1.1. Overview
      1.1.2. Major functions
      1.1.3. FMC/CDU
   1.2. FMS Characteristics
      1.2.1. FMS Components
      1.2.2. Related Instruments
      1.2.3. FMS Navigation
      1.2.4. CDU Controls
   1.3. FMS Preflight
   1.4. Lateral Navigation (LNAV)—takeoff thru landing
   1.5. Vertical Navigation (VNAV)—takeoff thru landing

2. Airline Operations: Part 121 and Part 135
   2.1. Air Carrier operations specifications (FAR Parts 119, 121, 135)
   2.2. Airline organization and required management
   2.3. Airline required manuals
   2.4. Airman and crewmember requirements for Part 121 operations
      2.4.1. Staffing and duties
      2.4.2. Training programs
      2.4.3. Qualifications
      2.4.4. Flight/Duty time limitations
   2.5. Part 121 Aircraft performance rules and operating limitations
   2.6. Dispatching and flight release rules
   2.7. Flight operations control
COURSE GOALS
1. The student will demonstrate fundamental operating knowledge of a Boeing-type, Flight Management System and Autoflight system—specifically the B-737NG. The operations will include preflight, climb, cruise, descent, and approach.
2. The student will demonstrate a fundamental knowledge of the significant regulations affecting a pilot in airline operations. The focus will be on FAR Part 121 air carriers; but the course will also include the necessary discussions regarding FAR Part 119 and the relevant sections of FAR Part 135, 91, and 61.

COURSE OBJECTIVES
Upon completion of the course, the student will demonstrate a satisfactory level of knowledge by examination with a minimum score of 70%. The following is a summary of the objectives to be evaluated:

**Flight Management Systems**
1. Perform and explain the B-737NG FMS operations for preflight, climb, cruise, descent, and approach.
2. Perform and explain the B-737NG Autoflight functions of the Mode Control Panel (MCP) as related to the FMS during the above-mentioned phases of flight. This will include lateral navigation (LNAV) and Vertical Navigation (VNAV).
3. Properly operate the B-737NG simulator in all phases of flight using the advanced cockpit flight instruments (PFD and ND), the FMS, and the autopilot.
4. Describe and explain the Electronic Flight Instrument System (EFIS) and demonstrate proper control of the Primary Flight Display (PFD) and the Navigation Display (ND).
5. Describe and explain the B-737NG cockpit automation standard operating procedures that an airline would use.
6. Describe and explain the automation human factors that contribute to human error in autoflight operation of aircraft.

**Air Carrier Operations**
1. Describe and explain the relationship and differences between general operating flight rules (FAR 61 and 91) and FAR Part 135 & 121 operations.
2. List the elements and explain the air carrier Operating Specifications for Domestic, Flag, and Supplemental Operators (FAR 119 and 121).
3. List the elements and explain the air carrier Operating Specifications for Commuter and On-demand Operations (FAR 119 and 135).
4. Describe and explain the typical airline corporate management organization and the required management positions.
5. List and define the type of airmen and crewmember requirements for FAR Part 121 air carrier operations.
6. Describe and explain the crewmember qualifications, training requirements, and flight/duty time limitations for FAR Part 121 air carrier operations.
7. Define and explain the Part 121 aircraft performance rules and operating limitations related to: takeoff, enroute planning, and landing at destination.
8. Define and explain the dispatching and flight release rules of Part 121 domestic, flag, and supplemental operators.
9. As related to Part 121 Subpart T of domestic, flag, and supplemental operations, define and explain the rules of flight operations: operational control, airplane security, air carrier schedules, flight crewmember duties, admission to the flight deck, approved routes and limitations, emergencies, and passenger rules.
TEXTBOOKS (Required)
   (ISBN: 978-1-56027-646-3)
   (ISBN: 978-1-56027683-8)
3. FAA publication or online access to FAR Parts 1, 61, 91,119, 121, 135

Additional book references

Supplemental References
1. Several documents from the internet and other sources will be assigned reading listed on the Course Lecture Schedule. They are to be found on Blackboard within *External Links* or in the *Course Documents* folder.
2. In addition, we will use CPat’s B-737-700 computer based training (CBT) online. You will operate the FMS with Microsoft Flight Simulator 2004 and the PMDG B-737-800/900.

BLACKBOARD GUIDELINES
1. Always put your name and a date on the document submitted.
2. If you make an error in submission of an assignment, notify the instructor immediately. You cannot resubmit until the erroneous submission is cleared by the instructor.
3. The student is responsible for checking Blackboard often to see the updates put on the course calendar, the course lecture schedule, and announcements. Normally, the Sunday evening before the week begins, I will have updates posted.
4. Grades are generally posted in a timely manner so that exam review may be accomplished in the next class session. The student is responsible to check *My Grades* on Blackboard and notify the instructor immediately of any discrepancy or problem.

STYLE / MODE OF TEACHING
Class will primarily be a lecture with class interaction and discussion. SOSU Blackboard will contain *course documents, course information, announcements*, helpful internet references, homework *assignments*, and other relevant information to read and study. Class lecture presentations will be posted under the *Course Documents* link.

EVALUATION

A. Exams and Quizzes
   1. Exam 1—FMS Preflight and LNAV 200 points
   2. Exam 2—FMS LNAV, VNAV, Autoflight 200 points
   3. Exam 3—Air Carrier Operations (Chap. 1-6) 200 points
   4. Exam 4—Air Carrier Operations (Chap. 1-15) 200 points
   5. Quizzes (4 @ 50 pts each) 200 points

Total = 1000 points

B. Grading System:
   A = > 900; B = 800-899.9; C = 700-799.9; D = 600-699.9; F = < 600
Homework Assignments
The student will practice the FMS functions in the lab as needed. This will prepare you for the quizzes and exams. Repetition is the key to learning the FMS. Most other homework is assigned reading; and memorization of terminology definitions, acronyms, and symbols used in the advanced cockpit (e.g. PFD, ND, CDU).

The *Air Carrier Operations* text has practice exam questions at the end of each chapter. Study those for each quiz and exam.

Exams
Exams will be multiple-choice, true/false, fill-in-the-blank, and essay. The course requires two exams and a comprehensive final. **Make-up exams will be given for an excused absence only.**

Excused absences are governed according to the attendance policy in this syllabus.

Learning objectives are listed on all power point lectures and these should guide your study for each exam.

Exams 1 and 2 will cover Casner’s textbook and the practical operation of the B-737NG using MS Flight Simulator 2004 and the PMDG B-737NG software. Exams 3 and 4 will cover the textbook *Air Carrier Operations* and will be multiple-choice, true/false, and fill-in-the-blank.

Quizzes
Quizzes will cover the assigned reading homework, FMS practice, and handouts.

COURSE REQUIREMENTS FOR GRADE
1. Complete all exams and quizzes.

ATTENDANCE POLICY
Attendance is **required for all exams and quizzes** unless the absence has been approved (minimum of 48 hours notice) in advance by the instructor. Absence on exam or quiz day without prior instructor notification will result in a grade of zero. Excusal and make up would require a serious conflict, official excusal (see below), or family emergency. Please note the methods of communicating with the instructor listed at the beginning of the syllabus.

Generally, **excused absences** are covered by official department policy: (a) medical illness or doctor’s appointment, (b) adverse weather, or (c) approved school functions. **Flight training will not qualify as a reason for an excused absence.**

Exam or quiz make-ups are only available with an official excused absence and/or prior approval by the instructor.

CHEATING or PLAGIARISM
**Cheating** may be defined as using unauthorized materials, giving or receiving unauthorized materials, or receiving unauthorized assistance during an examination or other academic exercise.

Examples may include:

a) Copying the work of another student during an examination OR other academic exercise (including computer exercises on Blackboard), or permitting another student to copy one's work;

b) Taking an examination for another student, or allowing another student to take one’s examination;

c) Possessing unauthorized notes, study sheets, electronics (phones or computers), or other materials during an examination or other academic exercise;

d) Falsifying or tampering with examination results.

e) Completing, copying, or using the results of any other student's computer assignments, written assignments, or presentations. Representing any of these as your own work is cheating.
Plagiarism may be defined as the use of another’s ideas or words (written or verbal) without acknowledgement. The work of published authors is their intellectual property, regardless if it is copyrighted or not. Examples of plagiarism may include:

a) Failing to use quotation marks or a block quotation when quoting from a source
b) Failing to document distinctive ideas from a source
c) Fabrication or inventing sources

Cheating and plagiarism will result in those actions outlined by the School of Business Academic Honesty Policy.

I suggest every student read the university’s Academic Honesty Policies. Cheating or plagiarism penalties can be severe; expulsion is not worth the risk.

DROP AND ADD POLICY

Refer to Southeastern’s standard university policies and academic calendar.

POLICY FOR INCLEMENT WEATHER

Refer to Southeastern’s standard university policies.

STUDENTS WITH DISABILITIES

Any student needing special accommodations due to a disability should contact the Coordinator of Student Disability Services, Student Union, Suite 204 or call (580) 745-2254. It is the responsibility of each student to make an official request to the Coordinator for academic accommodations.”

Any student who discloses a disability and/or inquires about accommodations or services should be referred to:

The Coordinator of Student Disability Services
Student Union, Suite 204, (580) 745-2254

After a student self-identifies, the University employee has a duty to direct that student to the appropriate office for services. Every effort will be made to be in full compliance with Sec. 504 and 508 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act. No qualified individual with a disability can be excluded from, denied the benefits of, or otherwise subjected to discrimination under any program or activity on campus.

If you have questions or concerns, please contact the Office for Student Affairs (X2368) or the Coordinator of Student Disability Services (X2254) for further information.
AVIA 4562
Multi-Engine Ground

Eaker Field Lab: T-Th: 9:00am-9:50am

GENERAL INFORMATION
Instructor: John G. Van Bebber, Jr.
Office: Eaker Field (EF) 105
Office Hours: M-F: 1pm-4pm by appointment
Telephone No.: Office: (580) 745-3242
Cell: (903) 815-1068
E-mail: jvanbebber@se.edu

CLASSROOM PROTOCOL
1. Electronic devices: All cell phones, lap top computers, pagers, or PDAs shall be off and silenced when class starts.
2. No recording devices are allowed in the classroom except as permitted by SOSU policy.
3. Tardiness is not tolerated, so the class will start on time with the door closed and subsequent entry is not allowed.
4. If you need to leave class early, please notify me before class. Subsequent reentry is not allowed.

PREREQUISITES AND SUPPORT COURSES
1. AVIA 1041: Private Flying

BRIEF COURSE OUTLINE
Please refer to the course lecture schedule posted and updated on blackboard for the actual sequence of subjects and assignments. The FAA ground training requirements are listed at the end of this syllabus.

1. Stage 1: Light Multi-Engine Aircraft Operation
   1.1. Basic multi-engine aerodynamics and engine-out aerodynamics
   1.2. Aircraft Performance and Operating Limitations
   1.3. Weight and Balance Procedures for light twin-engine aircraft
   1.4. Preflight Operations
   1.5. Takeoff Planning for light twin-engine aircraft
   1.6. Systems of light twin-engine aircraft
   1.7. Emergency Procedures in multi-engine aircraft
   1.8. Operation of advanced avionics
2. Stage 2: Cessna 310R Operation and Training
   2.1. C-310R preflight procedures and planning
   2.2. C-310R systems knowledge
   2.3. C-310R normal operations: checklist and procedures
   2.4. C-310R operating limitations and airspeeds
   2.5. C-310R emergency procedures

COURSE GOALS
1. At the end of the course, the student will demonstrate satisfactory knowledge to begin flight instruction for the Multi-engine Class rating.
2. At the end of the course, the student will demonstrate satisfactory knowledge of multi-engine aircraft as set forth in the multi-engine sections of the current FAA Commercial Pilot Practical Test Standards.
COURSE OBJECTIVES

Upon completion of the course, the student will demonstrate satisfactory knowledge by examination (70% required) of the following:

1. Describe and explain the basic aerodynamic concepts and engine-out aerodynamic concepts of multi-engine aircraft.
2. Describe and explain multi-engine aircraft performance data charts and operating limitations.
3. Describe and explain the preflight functions required for light twin-engine aircraft.
4. Describe and explain the takeoff planning factors for light twin-engine aircraft.
5. Describe and explain the weight and balance procedures for light twin-engine aircraft.
6. Describe and explain the aircraft systems found in light twin-engine aircraft.
7. Describe and explain the emergency procedures in light twin-engine aircraft.
8. Describe and explain the engine-out maneuvers in light twin-twin engine aircraft.
9. Describe and explain the advanced avionics operations in light twin-engine aircraft.
10. Describe and explain the preflight actions related to the Cessna 310R.
11. Describe and explain the aircraft systems operation of the Cessna 310R.
12. Describe and explain each step on the normal operations checklist of the Cessna 310R.
13. Describe and explain the operating limitations and airspeeds of the Cessna 310R.
14. Describe and explain the Cessna 310R emergency procedures and emergency maneuvers.

TEXTBOOKS (Required)


Supplemental references:

Several documents from the internet and other sources will be assigned reading listed on the Course Lecture Schedule. They are to be found on Blackboard under External Links or in the Course Documents folder.

Additional book references:

4. The Complete Multi-Engine Pilot, 3rd Ed. (Gardner, 2009)

Web Site References

1. FAA Safety Team (FAAST) (http://www.faasafety.gov/)

BLACKBOARD GUIDELINES

1. Always put your name and a date on the document submitted.
2. If you make an error in submission of an assignment, notify the instructor immediately. You cannot resubmit until the erroneous submission is cleared by the instructor.
3. The student is responsible for checking blackboard often to see the updates put on the course calendar, the course lecture schedule, and announcements. Normally, the Sunday evening before the week begins, I will have updates posted.
4. Grades are generally posted in a timely manner so that exam review may be accomplished in the next class session. The student is responsible to check My Grades on blackboard and notify the instructor immediately of any discrepancy or problem.

STYLE / MODE OF TEACHING

Class will primarily be a lecture with class interaction and discussion. SOSU Blackboard will contain course documents, course information, announcements, helpful internet references, homework assignments, and other relevant information to read and study. Class lecture presentations will be posted under the Course Documents link.
COURSE REQUIREMENTS FOR GRADE
1. Completion of all three exams
2. Completion of all quizzes and exercises
3. A minimum grade of C is required before flight training is allowed.

EVALUATIONS
A. Exams
   • Exams (2 @ 200 pts) 400 points
   • Final Exam 300 points
B. Quizzes and homework exercises (6 @ 50 points) 300 points

Total = 1000 points

C. Grading System
   A = > 900; B = 800-899.9; C = 700-799.9; D = 600-699.9; F = < 600

Quizzes and Homework
   Homework will consist of textbook reading, internet reading, and written exercises. Class assignments and due dates will be listed on the Course Calendar on Blackboard. Written exercises will be submitted on blackboard and due at the beginning of the class session as posted on the Course Calendar.

   In order to complete each exercise, downloaded the exercise file from Blackboard's Assignments folder and save it to your computer. Complete the exercise using the same MS Word document. Rename the file (exercise 3_name.docx), save it to your computer, and then submit it on blackboard. For example, a file named Exercise 3.docx will be completed and resubmitted with a file name of Exercise 3_Jones.docx.

   There are no make-up possibilities for homework exercises. Deadlines are 5pm submission on Blackboard on the due date. Late submissions receive a 50% credit until 5pm the day after the due date; after that, the grade is zero. Incomplete exercises receive reduced points accordingly.

Exams
   Exams will be multiple-choice, true/false, fill-in-the-blank, and essay. The course requires two exams and a comprehensive final. Make-up exams will be given for an excused absence only. Excused absences are governed according to the attendance policy in this syllabus. Exam questions will cover material from the textbooks, lectures, and additional reading.

ATTENDANCE POLICY
   Attendance is required for all exams and quizzes unless the absence has been approved (minimum of 48 hours notice) in advance by the instructor. Absence on exam or quiz day without prior instructor notification will result in a grade of zero, unless it is an emergency absence as described by Southeastern University policies. Excusal and make up would require a serious conflict, official excusal (see below), or family emergency. Please note the methods of communicating with the instructor listed at the beginning of the syllabus.

   Generally, excused absences are covered by official department policy: (a) medical illness or doctor’s appointment, (b) adverse weather, or (c) approved school functions. Flight training will not qualify as a reason for an excused absence on exam or quiz day. Exam or quiz make-ups are only available with an official excused absence and/or prior approval by the instructor. It is the student’s responsibility to contact the instructor as soon as possible and arrange to make up the exam or quiz.
CHEATING or PLAGIARISM

**Cheating** may be defined as using unauthorized materials, giving or receiving unauthorized materials, or receiving unauthorized assistance during an examination or other academic exercise. Examples may include:

a) Copying the work of another student during an examination OR other academic exercise (including computer exercises on Blackboard), or permitting another student to copy one's work;

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d) Falsifying or tampering with examination results.

e) Completing, copying, or using the results of any other student's computer assignments, written assignments, or presentations. Representing any of these as your own work is cheating.

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a) Failing to use quotation marks or a block quotation when quoting from a source

b) Failing to document distinctive ideas from a source

c) Fabrication or inventing sources

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Any student who discloses a disability and/or inquires about accommodations or services should be referred to:

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Student Union, Suite 204, (580) 745-2254

After a student self-identifies, the University employee has a duty to direct that student to the appropriate office for services. Every effort will be made to be in full compliance with Sec. 504 and 508 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act. No qualified individual with a disability can be excluded from, denied the benefits of, or otherwise subjected to discrimination under any program or activity on campus.

If you have questions or concerns, please contact the Office for Student Affairs (X2368) or the Coordinator of Student Disability Services (X2254) for further information.
AVIA 4643
Physiology - Fall 2016
TT 3:30 - 4:45 Russell Building, Room 218 (R-218)

GENERAL INFORMATION
Instructor: Dr. Stan Alluisi (salluisi@se.edu)
Office: Eaker Field - Room 103
Office Hours: M-W 13:00 - 16:00; T-T 13:00 - 15:00; a nd by appointment.
Phone: 580-745-3241 (Office) or 580-924-8385 (Home)

PREREQUISITES None

COURSE OBJECTIVES
To change the way you think. By gaining a basic knowledge and understanding of how your body functions under normal conditions and under the various stresses imposed by flying you should be better able to deal with these changes when (not if) they ever confront you. You will be more prepared to deal with the physiological and psychological stresses imposed by flying and have tools to deal with them. You will also be more prepared to recognize physical and psychological symptoms in yourself and others that could compromise flight safety.

BRIEF COURSE OUTLINE
The Atmosphere
Altitude Physiology
Homeostasis & Adaptability
The Meaning of Human Factors...
Basic Human Anatomy
Vision & Visual Illusions
Human Error

Sleep, Jet Lag & Fatigue
Fatigue
Fitness & Performance
Communications
Motivation
Attitudes & Persuasion
Crew Resource Management

TEXT
Aviation Physiology booklet (Download & print from class web site)
Human Factors in Flight by Frank H. Hawkins (Bookstore)

STYLE OF TEACHING
Lecture with class discussion as well as self study through researching one ten page research paper on an aviation topic and a field trip to the FAA Altitude Chamber in Oklahoma City.

DROP POLICY
Same as University policy, so look it up!

ATTENDANCE POLICY
Attendance is very strongly suggested and will be recorded because lively class discussions will most certainly abound! In addition, not all of the material on the examinations will be out of the book. Material from the lectures, guest lecturers, movies and handouts may all be on the exams. The student is responsible for all of the material covered during any absence from class even if the absence is excused. It is also each student’s responsibility to sign in during each class period. If you do not sign in then in you are not present for attendance purposes. Presence in each class earns 5 points for a total of 155 points. Up to three excused absences will earn attendance credit. Absences beyond three, including excused absences, will not earn credit for attendance. Bottom line: Be there or be square.
GRADING PROCEDURES

<table>
<thead>
<tr>
<th>Component</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exam I</td>
<td>100 points</td>
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<tr>
<td>Exam II</td>
<td>100 points</td>
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<tr>
<td>Exam III</td>
<td>100 points</td>
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<tr>
<td>Final Exam</td>
<td>100 points</td>
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<tr>
<td>Term Paper - Outline &amp; Sources</td>
<td>50 points</td>
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<tr>
<td>Term Paper - Intro &amp; Conclusion</td>
<td>50 points</td>
</tr>
<tr>
<td>Term Paper - Final Edition</td>
<td>145 points</td>
</tr>
<tr>
<td>Altitude Chamber Field Trip</td>
<td>100 points</td>
</tr>
<tr>
<td>Quizes (10 @ 10 points each)</td>
<td>100 points</td>
</tr>
<tr>
<td>Attendance</td>
<td>155 points</td>
</tr>
<tr>
<td><strong>Total Points Available</strong></td>
<td><strong>1000 points</strong></td>
</tr>
</tbody>
</table>

Grading

- 90-100% = A  
- 80 - 89% = B  
- 70 - 79% = C  
- 60 - 69% = D  
- 00 - 59% = F

RESEARCH PAPER

**Topic:** The topic will be agreed on by the student and the instructor in advance. The topic MUST examine some aspect of aviation-related physiology or psychology and lend itself to an in-depth discussion of the topic. The topic should certainly be aviation related but **the primary focus should be on the physiological or psychological aspects of the situation.**

**Length:** 10 full type written pages, double spaced, 12 point type, with a 1 inch margin all around. In addition, a cover page and references page in APA format must ALL be included in a **single file** that is emailed to me at salluisi@se.edu. Note: The cover sheet and works cited pages **DO NOT** count toward the 10 required pages.

**Hand written and late drafts and final papers will not be accepted!**

**Content:** The paper should start with an introduction and include a brief account of the physiological issues involved. (**Hint: The final statement in your introduction had better be your thesis statement.**) Follow with a detailed account of the situation and explain the physiological aspects in excruciating detail from all side of the issue. After the detailed account, present your **ANALYSIS** of the physiological aspects of the situation. Finally, conclude with a summary of what you just told me and restate your thesis showing that you have proved your point. ALL term papers and drafts will be due no later than the end of class on the date due as shown in the schedule. No whining!

**References:** You must use at least **FOUR** references and **you cannot use the text book for the class or me as a reference at all!** Reference sources **MUST** include at least one book, one scholarly journal, and one web site. Other sources may be books, journals, magazines, newspaper articles, and personal interviews with experts and/or affected parties. You must document where you obtained all of your information. **Cite every fact and opinion that did not originate in your brain.** You must cite your sources using the **Publications Manual of the APA, Sixth Edition.** If you choose a topic that is discussed in the textbook you must cover it in far more depth or breadth than is covered in the text. **Do not just restate what the textbook says (I have already read it!) or what I have said in class!**

**NOTE:** The length of these papers is **TEN FULL PAGES.** I do not wish to read a pamphlet nor do I wish to read *War and Peace.* Whatever the length, I will give your paper an initial grade and then, **for each page less**
than ten pages, **10% of the grade will be deducted from the initial grade.** In addition, copious points will be deducted at my discretion for papers filled with long, rambling passages designed to inflate the work up to the minimum ten pages but containing no pertinent information germane to the issue at hand.

**Grading:** Take a look at the **Term Paper Grading Sheet** (found at: http://homepages.se.edu/aviation/files/2012/02/term-paper-grading-sheet.pdf) and use it to critique your own paper **BEFORE** you turn it in!

**Draft & Final Papers**

Your paper will be due in **THREE** different forms during the semester in class on the date specified in this syllabus.

1. You will receive **50 points** for turning in your 4 required reference sources and a complete outline of your paper.
   (Note: You must cite the four references in accordance with the *Publications Manual of the APA, Sixth Edition*).

2. You will receive **50 points** for turning in a complete introduction and conclusion based upon your outline.
   (Note: Your introduction must contain a thesis statement and your conclusion must restate this thesis.)

3. You will receive **185 points** for turning in your complete paper to include: A cover page; the 10 page paper; one or more references pages.
   (Note: the final version of the paper must substantially follow the outline previously turned in!)

I will grade, critique and then return your:

1. References and outline; and
2. Your introduction and conclusion.

**Turning In Your Paper**

All drafts and final papers will be due in electronic form and sent to me as a via email. Papers must be sent as a SINGLE attachment to the following address with the appropriate subject:

To: salluisi@se.edu
Subject: Alluisi-Draft1 or Alluisi-Draft2 or Alluisi-Final

**Plagiarism**

**DO NOT DO IT!** You may work in groups to research topics and I encourage you to have other students or friends proof read your papers, but **write your own papers!** At the very minimum all plagiarized papers will receive a grade of **ZERO!** Repeat offenders and egregious cases of plagiarism may result in dismissal from the ASI or even expulsion from the university, in accordance with the procedures in the **Student Code of Conduct** (http://homepages.se.edu/student-life/student-handbook/) and **ASI Policy** (http://homepages.se.edu/aviation/files/2012/02/academic_honesty_policy.pdf)

**Even a bad grade is better than no grade at all.**

**BOTTOM LINE**

Read the book or assigned readings, come to class prepared, ask questions, get involved in discussions, and have some fun learning about how your body works. This is knowledge that you can use and knowledge that can save your life!

**LEARNING OBJECTIVES:**

- Describe the gasses by % in the Atmosphere
- Describe how each gas is used in and affects the human body
- Explain effect of altitude on the human body
- Explain the SHEL model
- Describe Homeostasis & Adaptability
- Define Human Factors
- Describe the cardio-pulmonary system
- Describe the human Vision & hearing systems
- Explain visual & inner ear illusions
- Define Human Error
- Describe sleep patterns, Jet Lag & Fatigue
- Define Fatigue
- Explain the basics of human communications
- Explain how Motivation, Attitudes & Persuasion affect performance
HANDY DANDY GENERIC TERM PAPER OUTLINE

I. Cover Page (Must include: Title of Paper; Class Name; Date; Student Name.)

II. Introduction (A few paragraphs to 1 page.)
   (Briefly tell me what you are going to tell me about. Remember: The final statement
   in your introduction had better be your thesis statement.)

III. Detailed account of the event you are describing (5 to 6 pages.)
   (Who, what, where, when, why. Answer all of these questions especially the WHAT & WHY of the
   subject.)

IV. Describe the physiological or psychological issues that are involved (3 to 5 pages.)
   (Give details of what happened and how it changed the world. Remember - focus on physiology)

V. Conclusion (A few paragraphs to 1 page.)
   (Summarize the physiological or psychological issues and conclude with why your view is correct.)

VI. Bibliography/Works Cited as per APA Publications Manual, Fifth Edition (One or more pages, as
needed.)
   Remember, the works cited page does not count toward the 10 page minimum!

Email the paper as a SINGLE attached document to me at salluisi@se.edu
# AVIA 4643 Fall 2016 Physiology Schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Work Due/Activities/Exams/Information</th>
<th>Chapter to Read</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>16 August</td>
<td>Let The Classes Begin!</td>
<td>Booklet</td>
</tr>
<tr>
<td></td>
<td>18 August</td>
<td><em>(21 August: Last day to drop or add a class)</em></td>
<td><em>Atmosphere</em></td>
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<td><em>Booklet</em></td>
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<tr>
<td>2</td>
<td>23 August</td>
<td>Quiz 1 &amp; Class Contracts signed and returned</td>
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<td>25 August</td>
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<td><em>Atmosphere</em></td>
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<td>3</td>
<td>30 August</td>
<td>Quiz 2</td>
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<td></td>
<td>1 September</td>
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<td><em>Altitude Physiology</em></td>
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<td><em>Booklet</em></td>
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<tr>
<td>4</td>
<td>6 September</td>
<td>Quiz 3 &amp; Topic for Paper Due</td>
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<td>8 September</td>
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<td><em>Altitude Physiology</em></td>
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<td>5</td>
<td>13 September</td>
<td>Exam I</td>
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<td></td>
<td>15 September</td>
<td>Altitude Chamber Trip!</td>
<td><em>Meaning of Human Factors</em></td>
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<td><em>Chapt. 1</em></td>
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<td>6</td>
<td>20 September</td>
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<td><em>Notes</em></td>
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<tr>
<td>7</td>
<td>27 September</td>
<td>Quiz 4</td>
<td>Booklet</td>
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<td>29 September</td>
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<td><em>Human Anatomy</em></td>
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<td>8</td>
<td>4 October</td>
<td>Quiz 5</td>
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<tr>
<td></td>
<td>6 October</td>
<td>First Draft Due - Outline &amp; Sources</td>
<td><em>Human Anatomy</em></td>
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<td></td>
<td><em>Booklet</em></td>
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<td>9</td>
<td>11 October</td>
<td>15-16 October: Fall Break:</td>
<td>Booklet</td>
</tr>
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<td></td>
<td>13 October</td>
<td></td>
<td><em>Vision</em></td>
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<td></td>
<td><em>Booklet</em></td>
</tr>
<tr>
<td>10</td>
<td>18 October</td>
<td>Exam II</td>
<td>Booklet</td>
</tr>
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<td>20 October</td>
<td></td>
<td><em>Vision</em></td>
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<td></td>
<td><em>Booklet</em></td>
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<tr>
<td>11</td>
<td>25 October</td>
<td>Quiz 6</td>
<td>Chapter 2</td>
</tr>
<tr>
<td></td>
<td>27 October</td>
<td><em>(30 Oct: Last day to apply for graduation)</em></td>
<td><em>Human Error</em></td>
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<td><em>Chapter 2</em></td>
</tr>
<tr>
<td>12</td>
<td>1 November</td>
<td>Quiz 7 &amp; Second Draft Due - Intro &amp; Conclusion</td>
<td>Chapter 2</td>
</tr>
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<td></td>
<td>3 November</td>
<td></td>
<td><em>Human Error</em></td>
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<td><em>Chapter 2</em></td>
</tr>
<tr>
<td>13</td>
<td>8 November</td>
<td>Quiz 8</td>
<td>Chapter 3 &amp; 4</td>
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<td></td>
<td>10 November</td>
<td><em>(13 Nov: Last day to drop)</em></td>
<td><em>Fatigue, fitness &amp; perform.</em></td>
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<td><em>Chapter 3 &amp; 4</em></td>
</tr>
<tr>
<td>14</td>
<td>15 November</td>
<td>Final Edition of Paper Due</td>
<td>Chapter 3 &amp; 4</td>
</tr>
<tr>
<td></td>
<td>17 November</td>
<td>Quiz 9</td>
<td><em>Fatigue, fitness &amp; perform.</em></td>
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<td></td>
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<td><em>Chapter 3 &amp; 4</em></td>
</tr>
<tr>
<td>15</td>
<td>22 November</td>
<td>Exam III</td>
<td>Chapter 7</td>
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<td>24 November</td>
<td>25 - 27 November: T-Day Break:</td>
<td><em>Communications</em></td>
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<td><em>Chapter 7</em></td>
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<tr>
<td>16</td>
<td>29 November</td>
<td></td>
<td>Chapter 6</td>
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<tr>
<td></td>
<td>1 December</td>
<td>Quiz 10</td>
<td><em>Motivation &amp; Leadership</em></td>
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<td></td>
<td><em>Chapter 6</em></td>
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<tr>
<td>17</td>
<td>5 December</td>
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<tr>
<td></td>
<td>Finals Week</td>
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<td>9 December</td>
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<td></td>
<td>10 December</td>
<td></td>
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<td></td>
<td><em>Aviation Physiology Final Exam</em></td>
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<td><em>Tuesday, 6 December 2:00 - 4:00 PM</em></td>
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<tr>
<td></td>
<td></td>
<td>Commencement!</td>
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</tbody>
</table>
Altitude Chamber Field Trip

Attendance at the altitude chamber field trip is very strongly recommended. In addition to the altitude chamber ride, where you will experience the symptoms of hypoxia, you will also be exposed to several spatial disorientation devices. The field trip is free and includes transportation, the altitude chamber ride, and spatial disorientation training. You must bring cash or your own chow if you wish to eat lunch. You should eat lunch.

If you choose NOT to attend the field trip you must submit an 8-10 page paper on high altitude physiology IN ADDITION to the 10 page paper required of all students in this course. The specific subject matter and due date of the additional paper must be approved in advance by the instructor.

If you know you cannot go in the chamber for medical/physiological reasons see Dr. Alluisi as soon as possible.

The field trip is scheduled for Thursday, 22 September, 2016. The trip as currently scheduled will occupy the entire day. Excused absence letters will be available if you need them. We should be leaving the SOSU campus no later than 5:00 AM! We should return to campus before 7:00 PM. Yes, I know, that makes for a very long day. That’s why you should eat lunch.

If you cannot attend the chamber session see Dr. Alluisi as soon as possible. You CAN meet the requirement to attend if you schedule yourself for a chamber trip on your own or if you have previously taken an FAA or military altitude chamber ride and provide appropriate documentation.

The altitude chamber is located at the Mike Monroney Aeronautical Center on Will Rogers World Airport in Oklahoma City. Access to the facility is strictly controlled and you will need to bring the following:

1. A government issued photo ID
   Driver’s license, passport or Military ID - Your SOSU ID is not acceptable!
   If you do not have a government issued photo ID they will not let you onto the facility!

2. A current FAA Medical certificate (First, Second or Third Class)
   If you not have a current medical certificate you will not be allowed into the chamber.

Note: If you are NOT a U.S. Citizen please let Dr. Alluisi know during the first week of class since
AVIA 4643
Physiology - Fall 2016
Class Contract

I ____________________________ have read the syllabus for this class and understand
the grading policy, the schedule and the requirements for the written assignment. I understand
that I must first turn in my term paper outline and sources on time in order to obtain the 50 points
noted in the grading procedures, followed by my introduction and conclusion on time in order to
obtain an additional 50 points. I understand that the final draft of my paper must be turned in on
time and in accordance with this syllabus. I also understand that I must attend the field trip to the
Altitude Chamber, produce proof of an earlier chamber ride, or else be excused in advance and
turn in an additional eight (8) page paper on Altitude Physiology. In addition, I understand that
I alone am responsible for any material that I miss when I am not able to attend class and that
should I miss an examination or a due date for the paper without giving prior notice and a rea-
sonable explanation, that I will receive a zero (0) for that examination or paper, with very limited
exceptions for truly unavoidable or tragic situations.

I understand that my paper must be written using APA style and all references cited as per
the Publications Manual of the APA (6th Edition) and that I have read and understand the ASI
Academic Honesty Policy and agree to abide by it. (The ASI Academic Honesty Policy is avail-
able at:
http://homepages.se.edu/aviation/files/2012/02/academic_honesty_policy.pdf)

Finally, if I ever have any questions concerning the content of this class, the grading
procedures or the requirements for any assignment and cannot find the answer in the syllabus,
I understand that Dr. Alluisi is available via office hours, email, and telephone for consultation.
There is no excuse for my questions, however trivial, to go unanswered.

SIGN AND RETURN IN THIS COPY

______________________________       ______________________
signature                        date
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(But now it isn’t blank anymore!)

Shut UP!
AVIA 4643
Physiology - Fall 2016
Class Contract

I __________________________ have read the syllabus for this class and understand
the grading policy, the schedule and the requirements for the written assignment. I understand
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I understand that Dr. Alluisi is available via office hours, email, and telephone for consultation.
There is no excuse for my questions, however trivial, to go unanswered.

KEEP THIS COPY FOR YOUR RECORDS

_________________________________    ______________________
signature                        date

Page 9 of 10
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(But now it isn’t blank anymore!)

Shut UP!
AVIA 4663
Contemporary Topics in Aviation - Spring 2016
Tu/Th 11:00 - 12:15  Russell Building, Room 218 (R-218)

GENERAL INFORMATION
Instructor:  Dr. Stan Alluisi (salluisi@se.edu)
Office: Eaker Field - Room 103
Office Hours:  MTu 1:00 - 4:00, WTh 1:00 - 3:00, and by appointment.
Phone:  580-745-3241 (Office) or 580-924-8385 (Home)

PREREQUISITES
Senior standing. Ideally, this course should be taken the spring semester immediately prior to graduation.

COURSE OBJECTIVES
General: The objective of this course is to change the way you think and expand your horizons. By gaining a basic knowledge and understanding of the aviation industry and its various components the student will begin to see the industry as both a group of diverse organizations as well as a small part of the world-wide transportation infrastructure. The focus will be on the commercial aviation industry as a group of business in a predominantly service industry, moving people and things from place to place, as well as focusing upon the various national and international government agencies and bodies which regulate the industry, as well as business associations and advocacy groups which seek to influence governments and the industry. At the end of the course you should be more aware of the important issues facing the various components of the aerospace industry. You should also be capable of gathering pertinent information, evaluating this information, synthesizing information from various sources, and then concisely and persuasively presenting this information to an audience.

Aviation Management Majors: This course provides one of the two methods of completing your culminating experience requirement. If you have NOT already taken or been approved for an internship which meets the culminating experience requirement you MUST complete the culminating experience requirement in this class by earning a grade of C or better. The culminating experience requirement may be met in a variety of ways which may include: Managing a simulated airline during the semester; Completing a comprehensive, semester-long research project with formal presentation; or other project approved in advance.

TEXT
1.) Aviation Week & Space Technology magazine. A student rate subscription is available
   Online Subscription: http://www.globalcircservices.com/avweek.html

    2.) Several aviation oriented web pages. Subscribe to the following email newsletters:
    1. ATA SmartBrief: http://www.smartbrief.com/industry/aviation#.UsGuTvRDt8E
    3. AvWeb: http://www.avweb.com/register/

STYLE OF TEACHING
Lecture with student lead research and class discussion as well as copious self study.

DROP POLICY  Same as University policy, so look it up!

MENTAL & EMOTIONAL HEALTH
Any student experiencing mental or emotional issues who desires free, confidential, clinical counseling is encouraged to contact the SE Counseling Center at (580) 745-2988 to schedule an appointment during normal working hours Monday – Friday, 8:00 AM to 5:00 PM. For after hours mental health emergencies, please call SE Campus Police at (580) 745-2911 or the Mental Health Crisis Hotline at 1-(800) 522-1090.
ATTENDANCE POLICY
Attendance is required in this class since lively class discussions will most certainly abound! Attendance at each of the 30 class periods will earn five (5) points for a total of 150 points. **Note: The student is responsible for all of the material covered during any absence from class even if the absence is excused.**

ACCESS
Any student needing special accommodations due to a disability should contact the Coordinator of Student Disability Services, Student Union, Suite 328 or call (580) 745-2392 (TDD# 745-2704). It is the responsibility of each student to make an official request for accommodations to the Coordinator.

GRADUATION REQUIREMENTS
A minimum GPA of 2.5 is required in **ALL Professional Pilot and Aviation Management Major-Minor** degree programs, including specified general education requirements. In addition, no grade less than C in Professional Pilot ground courses is acceptable (As per the 2013-2015 SOSU Undergraduate & Graduate Catalog - page 102). Aviation Management students taking this course in order to meet their culminating experience requirement must pass with a grade of C or better.

GRADING PROCEDURES

<table>
<thead>
<tr>
<th>Category</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bi-Weekly AW&amp;ST Quizzes</td>
<td>480 points</td>
</tr>
<tr>
<td>Weekly Top-3 Articles</td>
<td>225 points</td>
</tr>
<tr>
<td>Attendance</td>
<td>150 points</td>
</tr>
<tr>
<td>Class Presentation</td>
<td>200 points</td>
</tr>
<tr>
<td>Presentation Memo</td>
<td>150 points</td>
</tr>
<tr>
<td>Career &amp; Placement Services Registration</td>
<td>100 points</td>
</tr>
<tr>
<td>Address &amp; References History-Draft</td>
<td>25 points</td>
</tr>
<tr>
<td>Address &amp; References History-Final</td>
<td>75 points</td>
</tr>
<tr>
<td>Resume - Draft</td>
<td>25 points</td>
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<tr>
<td>Resume - Final</td>
<td>100 points</td>
</tr>
<tr>
<td><strong>Total Points Available</strong></td>
<td><strong>1530 points</strong></td>
</tr>
</tbody>
</table>

Grading

- 90-100% = A (1377 - 1530)
- 80 - 89% = B (1224 - 1376)
- 70 - 79% = C (1071 - 1123)
- 60 - 69% = D (918 - 1070)
- 00 - 59% = F (000 - 917)

CLASS PRESENTATION (200 points)
Each student will be assigned a specific week during the semester in which they will make a presentation to the class on a specific topic to be agreed to by the instructor during the third week of class. The student will be responsible for researching the topic beforehand and providing the rest of the class with a list of references at least one week prior to the presentation so that the class can be up to speed on the topic at hand. The objective is for the presenter to cover the topic at hand and then facilitate the rest of the class to CONTRIBUTE to the discussion.

This is a formal presentation! The presenter must be **appropriately dressed** and use visual aids appropriate to the topic. All sources of information (including charts, graphs and images) should be documented during the presentation.

The presentation will be graded according to the Presentation Grading Sheet available on the ASI web page: [http://homepages.se.edu/aviation/files/2012/02/presentation-grading-sheet.pdf](http://homepages.se.edu/aviation/files/2012/02/presentation-grading-sheet.pdf)
BI-WEEKLY AW&ST QUIZZES (480 points)
Each timed (about 10-15 minute) open-magazine quiz will contain approximately ten questions covering current issues facing the aviation industry. All of the answers will be contained in the current issue of Aviation Week & Space Technology magazine. The questions will usually be of the “fill in the blank” or “true/false” type. If you have already read the magazine the quiz should be easy points. If you have not, you may run out of time trying to look things up. So READ!

WEEKLY “TOP - 3” ARTICLES (225 points)
Each week you should read Aviation Week & Space Technology magazine/web site and then pick the THREE articles that YOU believe to be the most important. Then email me. In the body of the email write Top-3 and then the date of the magazine and your name. On the next line list the title of the first article and the page number on which it is found. Then follow with the description. List the title, page number and description for the second and third article. Remember to explain WHY you think each article is so important!

Email the Top-3 Articles to: salluisi@se.edu
Subject: <Your Last Name> Top-3 <YYYY-MM-DD>
Example: Alluisi Top-3 2015-01-15

Note:
1. The date in the subject line should be the publication date of the magazine - not the date of the email.
2. The format of the date should be Year-Month-Day as numbers only (YYYY-MM-DD).
   Months and days should always be TWO digit numbers!
3. Only your last name should appear in the Subject line.
4. If the Subject line differs from this format I will not accept the email.
5. The three paragraphs should be included in the BODY of the email NOT in one or more attachments.
6. The first line of the body of the email should contain the same info as the Subject line:
   Examples: <Your Last Name> Top-3 <YYYY-MM-DD>
   Alluisi Top-3 2015-01-15
7. For each article type the title of the article and the page number on one line.
   Examples: Cash Cow p. 32
8. Follow the title line with your one to two paragraph description of why you believe it to be important
9. Repeat steps 7 & 8 for the next two article.

- Example of Body Text -

Alluisi Top-3 2015-03-22

Closing the Gap p. 34

   Bla, bla bla.

Long-Haul Backtrack p. 37

   Bla, bla bla.

Turboprop RNP Arrives p. 40

   Bla, bla bla.
PRESENTATION MEMO (150 points)
A formal one to two page memo describing the presentation will be due via EMAIL no later than five days after the end of the presentation. The memo should describe the main points of the presentation and describe any conclusions reached. The objective of the memo is to succinctly explain what happened during the presentation and any discussion and efficiently present that information to someone who was not present at the meeting, like your boss who was too busy playing golf. Email the memo to: salluisi@sosu.edu. Attached to the memo should be a list of sources of your research cited IAW the Style Manual of the APA, 6th Ed.

Subject: <Your Last Name> Memo
Example: Alluisi Memo

ATTENDANCE (150 Points)
Attendance is required. Attendance in each class is worth 5 points X 30 class periods = 150 points. Absences excused in advance will receive credit for attendance. It is the student’s responsibility to sign in every day. Failure to sign in means you will be counted as absent.

REGISTER WITH CAREER MANAGEMENT CENTER (100 Points)
Each student must register with the campus Career Management Center, located in University Center 223. You must complete ALL aspects of the registration process in order to receive the 100 points.

ADDRESS & REFERENCES HISTORY (Draft: 25 Points & Final: 75 Points)
Each student will compile a complete list of every address where they have reside; every school attended; every place of employment; and produce a list of contacts who can verify each of these entries.

RESUME (Draft: 25 Points & Final: 100 Points)
Each person in class will work on their resume during the semester. We will spend some time in class discussing resumes and critiquing them in class before the final version of your resume is due near the end of the semester. All draft versions and the final version of your resume will be due via EMAIL on the dates announced in class.

Email the resume to: salluisi@se.edu
Subject: <Your Last Name> Resume
Example: Alluisi Resume

CULMINATING EXPERIENCE REQUIREMENT (Aviation Management Only)
This course provides one of the two methods of completing your culminating experience requirement. If you have not already taken or been approved for an internship which meets the culminating experience requirement you MUST complete the culminating experience requirement in this class by earning a grade of C or better. The culminating experience requirement may be met in a variety of ways which may include: Managing a simulated airline during the semester; Completing a comprehensive, semester-long research project with formal presentation; or other project approved in advance.

BOTTOM LINE
Read Aviation Week magazine and web site and the assigned email newsletters and web pages, come to class prepared, ask questions, get involved in discussions, and have some fun learning about the current state of affairs in the aviation industry. After all, you’re getting graded on reading a cool magazine full of airplane pictures! What a deal.

PLAGIARISM (0 points!)
DO NOT DO IT! You may work in groups to research topics and I encourage you to have other students or friends proof read your memo and resume and review your class presentation, but do your own work! All plagiarized work will receive a grade of ZERO! Even a bad grade is better than no grade at all.
# AVIA 4663 Spring 2016
## Contemporary Topics in Aviation Schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Work Due/Activities/Exams/Information</th>
<th>Chapter to Read</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>12 January</td>
<td>Let the classes begin!</td>
<td>Read AW&amp;ST cover to cover every week!</td>
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<tr>
<td></td>
<td>14 January</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>15 January: Last day to drop/add a class</td>
<td></td>
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<tr>
<td>2</td>
<td>19 January</td>
<td>Turn in Signed Class Contract</td>
<td>Read AW&amp;ST cover to cover every week!</td>
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<td></td>
<td>21 January</td>
<td>Quiz 1</td>
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<tr>
<td>3</td>
<td>26 January</td>
<td>Dates assigned for class Presentation</td>
<td>Read AW&amp;ST cover to cover every week!</td>
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<td>28 January</td>
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<tr>
<td>4</td>
<td>2 February</td>
<td>Quiz 2</td>
<td>Read AW&amp;ST cover to cover every week!</td>
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<td>4 February</td>
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<td>5</td>
<td>9 February</td>
<td>Draft Resume due</td>
<td>Read AW&amp;ST cover to cover every week!</td>
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<td>11 February</td>
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<td>6</td>
<td>16 February</td>
<td>Reg. with career &amp; Placement Services Completed</td>
<td>Read AW&amp;ST cover to cover every week!</td>
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<td>18 February</td>
<td>Quiz 3</td>
<td></td>
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<td>7</td>
<td>23 February</td>
<td>Draft Address &amp; References History</td>
<td>Read AW&amp;ST cover to cover every week!</td>
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<td></td>
<td>25 February</td>
<td>LD</td>
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<tr>
<td>8</td>
<td>1 March</td>
<td>Final Resume</td>
<td>Read AW&amp;ST cover to cover every week!</td>
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<td></td>
<td>3 March</td>
<td>Quiz 4</td>
<td>4 March: Last day to drop w/an auto “W”</td>
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<td>9</td>
<td>8 March</td>
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<td>10 March</td>
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<td>10</td>
<td>14 March</td>
<td>Spring Break</td>
<td>Read AW&amp;ST cover to cover every week!</td>
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<tr>
<td></td>
<td>18 March</td>
<td>Spring Break</td>
<td></td>
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<tr>
<td></td>
<td>22 March</td>
<td>Quiz 5</td>
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<td>24 March</td>
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<tr>
<td>11</td>
<td>29 March</td>
<td>Final Address &amp; References History</td>
<td>Read AW&amp;ST cover to cover every week!</td>
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<td>31 March</td>
<td>Quiz 6</td>
<td>1 April: Last day to apply for graduation</td>
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<td>Topic 1 &amp; 2</td>
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<td>Topic 3 &amp; 4</td>
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<td>12</td>
<td>5 April</td>
<td></td>
<td>Read AW&amp;ST cover to cover every week!</td>
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<td>7 April</td>
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<td>13</td>
<td>12 April</td>
<td></td>
<td>Read AW&amp;ST cover to cover every week!</td>
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<td>14 April</td>
<td>Quiz 7</td>
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<td>14</td>
<td>19 April</td>
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<td>Read AW&amp;ST cover to cover every week!</td>
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<td></td>
<td>21 April</td>
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AVIA 4663  
Contemporary Topics in Aviation - Spring 2016  
Class Contract

I ______________________________ have read the syllabus for this class and understand the grading policy, the schedule and the requirements for the written assignment. I understand that there will be a quiz every week and that I will receive a zero (0) should I miss the quiz without prior excuse. Further, I understand that I must conduct one presentation during the semester and that I alone am responsible for organizing the research topic, making the research available to the class one week prior to the presentation and conducting a formal and professional presentation. I understand that I must email a memo summarizing the presentation within five days of the presentation. I must also email a draft resume and a final resume. I understand that attendance is graded, worth 5 points per class and will only be excused if notification is given in advance. In addition, I understand that I alone am responsible for any material that I miss when I am not able to attend class and that should I miss a weekly quiz, discussion, due date for a memo or the resume without giving prior notice and a reasonable explanation, that I will receive a zero (0) for that quiz, discussion, memo or resume, with very limited exceptions for truly unavoidable or tragic situations. Finally, if I ever have any questions concerning the content of this class, the grading procedures or the requirements for any assignment and cannot find the answer in the syllabus I understand that Dr. Alluisi is available via office hours, telephone and email for consultation. There is no excuse for any of my questions, however trivial, to go unanswered.

I understand that the references for my presentation must be cited as per the *Publications Manual of the APA (6th Edition)* and that I have read and understand the ASI Academic Honesty Policy and agree to abide by it.

(ASI Academic Honesty Policy is available at: http://aviation.se.edu/policies/academic_honesty.html)

_________________________________________   ______________________
print your name here                   signature                   date

**KEEP THIS COPY FOR YOUR RECORDS**

Page 6 of 8
AVIA 4663
Contemporary Topics in Aviation - Spring 2016
Class Contract

I [print your name here] have read the syllabus for this class and understand the grading policy, the schedule and the requirements for the written assignment. I understand that there will be a quiz every week and that I will receive a zero (0) should I miss the quiz without prior excuse. Further, I understand that I must conduct one presentation during the semester and that I alone am responsible for organizing the research topic, making the research available to the class one week prior to the presentation and conducting a formal and professional presentation. I understand that I must email a memo summarizing the presentation within five days of the presentation. I must also email a draft resume and a final resume. I understand that attendance is graded, worth 5 points per class and will only be excused if notification is given in advance. In addition, I understand that I alone am responsible for any material that I miss when I am not able to attend class and that should I miss a weekly quiz, discussion, due date for a memo or the resume without giving prior notice and a reasonable explanation, that I will receive a zero (0) for that quiz, discussion, memo or resume, with very limited exceptions for truly unavoidable or tragic situations. Finally, if I ever have any questions concerning the content of this class, the grading procedures or the requirements for any assignment and cannot find the answer in the syllabus I understand that Dr. Alluisi is available via office hours, telephone and email for consultation. There is no excuse for any of my questions, however trivial, to go unanswered.

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(ASI Academic Honesty Policy is available at: http://aviation.se.edu/policies/academic_honesty.html)

___________________________________________   ______________________
print your name here                   signature                   date

GIVE THIS COPY TO DR. ALLUISI

Page 8 of 8
AVIA 4674
Crew Resource Management Syllabus

Russell # 218: Tu/Th: 9:30am—10:45am

General Information
Instructor: John G. Van Bebber, Jr.
Office: Eaker Field: EF-105
Office Hours: M-F: 1pm-4pm
Telephone Number: Off: (580) 745-3242
Cell: (903) 815-1068
E-mail: primary jvanbebber@se.edu

Classroom Protocol
1. Electronic devices: All cell phones, lap top computers, pagers, or PDAs shall be off and silenced when class starts.
2. No recording devices are allowed in the classroom except as permitted by SOSU policy.
3. Tardiness is not tolerated, so the class will start on time with the door closed and subsequent entry is not allowed.
4. If you need to leave class early, please notify me before class. Subsequent reentry is not allowed.

Prerequisites
Commercial-Instrument License and permission required

Course Outline
1. Overview of Crew Resource Management
2. Human Factors
   A. Meaning of Human Factors
   B. Human Error
   C. Human Performance
3. Line Orientated Flight Training (LOFT): simulation flights in the FTD
   A. Three LOFT missions that enable real time practice of CRM skills
   B. Video debriefings for self-assessment
4. Crew Resource Management (CRM) skills
   A. Communication processes and decision behaviors
   B. Team Building
   C. Workload Management and Situation Awareness
5. Evolving Concepts of CRM
   A. Threat and Error Management
   B. Monitoring and Cross-checking
6. Review of CRM concepts and accident analysis
   A. System safety approach accident analysis
   B. Approach & Landing Accident Reduction: CFIT (Flight Safety Foundation)
   C. Case studies of current safety issues

Course Goals
1. The student will demonstrate knowledge of the overall objectives of Crew Resource Management to develop good crew performance in the two-pilot cockpit.
2. The student will demonstrate knowledge of good Crew Resource Management skills in the complex environment of commercial aviation; the objectives of pilot performance are prioritized as: a) safety, b) efficiency, and c) effectiveness (company and passengers).
3. The student will demonstrate knowledge of human factors that contribute to inevitable human error; also, how to mitigate human error in the cockpit.

4. The student will demonstrate knowledge of the management of all available resources on the flight deck to operate the aircraft safely, efficiently, and effectively.

5. The student will demonstrate knowledge of specific CRM skills: (a) effective communication, (b) workload management, (c) situation awareness, (d) decision-making, and (e) the skills of leadership and followership.

6. The student will demonstrate good crew performance as a captain and a copilot in the simulated flight environment (Piper Seneca, Part 91 commercial operation).

**Course Objectives and Student Outcomes**

The student will demonstrate acceptable knowledge of the following objectives by examination and a grade evaluation of at least 70%:

1. Describe and explain the general overall concepts of Crew Resource Management.

2. Explain the **human factors** relative to a two-pilot cockpit in modern commercial aircraft to include:
   2.1. List and describe the **various human factors** contributing to aircraft accidents and incidents.
   2.2. Explain the **concept of human error** in a two-pilot cockpit, and why human error is inevitable.
   2.3. Describe the processes of **human factors training** as it has evolved into mandatory CRM training.
   2.4. Describe and explain the **accident causation model** according to Dr. James Reason.

3. List and describe the **effective communication** processes needed in the cockpit, to include:
   3.1. Crew briefings
   3.2. Checklist usage (challenge and response) and standard operating procedures
   3.3. Crew coordination

4. Describe the process of good **decision-making** in the cockpit to include:
   4.1. Problem diagnosis
   4.2. Development of contingencies
   4.3. Risk assessment
   4.4. Option selection and evaluation

5. Describe and explain what the **“team approach”** means in a commercial cockpit.

6. Describe and explain how the **“social environment”** issues in a commercial cockpit affect crew performance.

7. List and describe the good **leadership** skills of a captain and the good **followership** skills of a copilot needed in the process of good **team building** to include:
   7.1. Envisioning
   7.2. Modeling
   7.3. Influencing
   7.4. Receptiveness
   7.5. Initiative
   7.6. Adaptability

8. Describe and explain the cockpit **checklists concept, design, and use** in the commercial cockpit to include:
   8.1. Describe and explain the industry standard of “challenge and response” checklist usage.
   8.2. Describe & explain airline operations written documentation.
   8.3. Explain why Normal Checklists are organized by phase of flight.
   8.4. Describe and explain the expanded Normal Checklist.
   8.5. Describe and explain the **Annunciated** and **Unannunciated** checklist.
   8.6. Explain and describe the various checklist errors and their human factors issues.

9. Describe and explain good **cockpit workload management** related to:
   9.1. Effective information management
   9.2. Effective use of all available resources to maximize cockpit performance
   9.3. The consequences of overload and stress
   9.4. The duties and responsibilities of the “pilot flying” (PF) and the “pilot monitoring” (PM)
9.5. Effective use of each level of automation

10. List and describe the three levels of situation awareness and how they relate to good decision making to include:
   10.1. Perception of the situation or problem
   10.2. Comprehension of the situation or problem
   10.3. Projection of the future situation and the decisions to be made

11. Describe and explain the concepts of Threat and Error Management to include:
   11.1. Define and explain Threats.
   11.2. List the threat classifications and examples.
   11.3. Define and explain Errors.
   11.4. List the error categories and examples.
   11.5. Define and explain an Undesired Aircraft State.
   11.6. Define and explain countermeasures to threats and errors.

12. Describe and explain the concepts of System Safety Analysis of aircraft accidents to include:
   12.1. Define and explain traditional accident analysis.
   12.2. Define and explain the newer “total systems approach” to accident analysis.
   12.3. Explain James Reason’s “Swiss Cheese” analysis model.
   12.4. Describe and explain how the Human Factors Analysis and Classification System (HFACS) is used to analyze the human deficiencies in aviation accidents.

13. During three Line Orientated Flight Training (LOFT) sessions in the FTD, the student will demonstrate the application of crew resource management skills based upon acceptable industry standard operating procedures. The evaluation criteria is listed as Behavioral Markers in Appendix 1 (Syllabus: page 11) of FAA Advisory Circular 120-51E and will include:
   13.1. Effective communication as listed in objective No. 2
   13.2. Good processes in decision-making as listed in objective No. 5
   13.3. Proper workload management, for both the captain and copilot, while using all available resources inside and outside the cockpit as listed in objective No. 4
   13.4. Good leadership skills of a pilot in command as listed in objective No. 3
   13.5. Good followership skills of a second in command as listed in objective No. 3
   13.6. Good situational awareness skills as listed in objective No. 6

14. Describe and explain the “best practices,” according to the Flight Safety Foundation, that must be instituted to reduce “Approach and Landing Accidents.”

15. The student will demonstrate an understanding their personal CRM skills that they have acquired in this course. The assessment and evaluation will be in the format of: (a) four CRM essays at specific course intervals, (b) three LOFT reports after each FTD session, and (c) a CRM journal documenting and summarizing their progression of learning the CRM skills as listed in objective No. 2, 3, 4, 5, and 6.

Textbooks

Required

Supplemental Texts and Course Material:
3. Blackboard will have several documents from internet sources that will be assigned reading. Find these in the specific lecture folders under Course Documents. Several good general references for CRM subjects are found in the External Links folder.
Style and Mode of Class Instruction
Each class session will primarily be a lecture with student interaction and discussion. Blackboard will contain course documents, course information, announcements, helpful internet references, assignments, and other relevant information to read and study. Most assignments will be submitted on Blackboard only.

Course Assessment

Evaluations
A. Exams
   1st and 2nd Exam (140 pts each) 280 points
   Final Exam 200 points
B. LOFT Reports (3 @ 50 pts each) 150 points
C. LOFT mission assessments (3 @ 40 pts each) 120 points
D. CRM course essays (4 @ 30 pts each) 120 points
E. CRM Journal 100 points
F. Attendance 30 points

Total = 1000 points

G. Grading System
   A = > 900; B = 800-899.9; C = 700-799.9; D = 600-699.9; F = < 600

Exams (480 pts)
Exams will be multiple-choice, true/false, fill-in-the-blank, and short essay. Course completion requires three exams—two during the semester and a final exam. Make-up exams will be given for an excused absence only. See the attendance policy below.

CRM Course Essays (120 pts)
Each CRM essay will be due and submitted on Blackboard according to the deadlines posted on the course calendar. Late submissions will receive 50% credit until 48 hours past the deadline; a zero is the grade after that. All course essays will be corrected, rewritten, and included in the CRM Journal. The essay format will be standardized and posted as an assignment on Blackboard. Refer to the instructions in this syllabus.

Line Orientated Flight Training (LOFT Missions & Reports: 270 pts)
Three LOFT simulator sessions will be required. The session will be a crew of two—captain and first officer. The FTD airplane will be a PA34-200 Piper Seneca V—a light twin, turbocharged reciprocating aircraft. The scenarios will be a real-time flight with passengers, ATC, a flight operations dispatch office, and all resources available within a Part 91 corporate flight operation.

Each LOFT session will be debriefed immediately after the FTD session by reviewing the video of the flight. The debriefing will be primarily both students’ self-assessment of the session with the instructor facilitating the discussion. Each student will be graded according to the CRM skills displayed during the LOFT.

Each student will also be evaluated by a written report analyzing the CRM skills and human factors experienced during the LOFT. The report format will be standardized and posted as an assignment on Blackboard. Refer to the instructions in this syllabus.

A lab fee of $150 will be assessed to cover all flight simulator time. This fee will be paid from the student’s flight account. If you do not have a flight account, please arrange with the instructor to pay this fee.

The LOFT sessions will be scheduled on weekday afternoons. Report times will generally be scheduled for 1pm and LOFT schedules will be posted and updated on Blackboard. Students must report to the dispatch desk at the scheduled times. The student must schedule flying and check rides around the simulator schedule. You must notify the instructor 24 hours in advance to cancel a LOFT
session; remember that an emergency is the only acceptable reason for cancellation. If a student is late for a LOFT session, the penalty is 25% of the LOFT session grade. If a student is absent without prior permission, the LOFT session grade is zero, but must be made up to complete the course or a final grade of F is issued.

**CRM Journal (100 pts)**
A CRM Journal will be due approximately two weeks before the semester ends. The journal will be a compilation of the CRM course, consisting of the following:
1) Four CRM essay assignments
2) Three LOFT reports
3) A concluding and reflective essay

**Attendance (30 pts)**
Class attendance is expected and a deduction of 5 points is assessed for each unexcused absence. Everybody starts with 30 points.

**Course Requirements for Grade**
1. Completion of three LOFT sessions and three LOFT reports
2. Completion of four CRM-course essays
3. Completion of the CRM Journal
4. Completion of all three exams

**Cheating and Plagiarism**
1) *Cheating* may be defined as using unauthorized materials, giving or receiving unauthorized materials, or receiving unauthorized assistance during an examination or other academic exercise. Examples may include:
   a) Copying the work of another student during an examination OR other academic exercise (including computer exercises on Blackboard), or permitting another student to copy one's work;
   b) Taking an examination for another student, or allowing another student to take one's examination;
   c) Possessing unauthorized notes, study sheets, electronics (phones or computers), or other materials during an examination or other academic exercise;
   d) Falsifying or tampering with examination results.
   e) Completing, copying, or using the results of any other student's computer assignments, written assignments, or presentations. Representing any of these as your own work is cheating.
2) *Plagiarism* may be defined as the use of another's ideas or words (written or verbal) without acknowledgement. The work of published authors is their *intellectual property*, regardless if it is copyrighted or not. Examples of plagiarism may include:
   a) Failing to use quotation marks when quoting from a source
   b) Failing to document distinctive ideas from a source
   c) Fabrication or inventing sources
   d) Cheating and plagiarism will result in those actions outlined by the School of Business *Academic Honesty Policy*.
3) I suggest every student read the university's Academic Honesty Policies. Cheating or plagiarism penalties can be severe; expulsion is not worth the risk.

**Attendance Policy**
Attendance is part of your grade and required for all exam classes unless other arrangements have been approved (minimum of 24 hours notice) in advance by the instructor. A make-up exam should be scheduled prior to the excused absence if possible. Please note the types of communication to the instructor possible at the beginning of the syllabus. The student is responsible for contacting the instructor when absent.
Excused absences are covered by official department policy: (a) medical illness or doctor’s appointment, (b) adverse weather, or (c) approved school functions. *Flight training will not qualify* as a reason for an excused absence. If serious issues in life require that you miss class, contact Southeastern’s Dean of Students for assistance.

**Drop and Add Policy**

Refer to Southeastern’s standard university policies and academic calendar.

**Policy for Inclement Weather**

Refer to Southeastern’s standard university policies.

**Students with Disabilities**

Any student needing special accommodations due to a disability should contact the Coordinator of Student Disability Services, Student Union, Suite 204 or call (580) 745-2254. It is the responsibility of each student to make an official request to the Coordinator for academic accommodations.”

Any student who discloses a disability and/or inquires about accommodations or services should be referred to the Coordinator of Student Disability Services, Student Union, Suite 204, (580) 745-2254. After a student self-identifies, the University employee has a duty to direct that student to the appropriate office for services. Every effort will be made to be in full compliance with Sec. 504 and 508 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act. No qualified individual with a disability can be excluded from, denied the benefits of, or otherwise subjected to discrimination under any program or activity on campus.

If you have questions or concerns, please contact the Office for Student Affairs (X2368) or the Coordinator of Student Disability Services (X2254) for further information.

**Crew Resource Management Journal**

**General Instructions**

The Crew Resource Management course requires a journal of the entire semester’s learning objectives. Approximately every three weeks, you will write a report documenting the learning objectives discussed in class and what you have learned about your own CRM skills. The reports are to be a chronology of your personal learning and how you are changing the management of your cockpit, as well as what you will take to your future two-pilot cockpit.

You will record notes of our class discussions as well as your interpretation of the textbook as we proceed through the semester. In addition, you will document your CRM development as we proceed. This should be an on-going self-assessment of your personal flight skills regarding such items as: (a) decision making, (b) situational awareness, (c) workload management, (d) leadership and followership skills, (e) command ability, (f) cooperation and team building, and (g) communication skills with ATC, your instructor, and/or student.

The journal will be due approximately two weeks before the semester ends. It will contain: (a) four CRM-course essays, (b) three LOFT reports, and (c) a concluding discussion and reflection of your CRM course achievement.

Please read and use the article entitled *Writing a Journal*. This document explains the objectives of writing a journal. Follow this guidance as you write LOFT Reports and CRM Course Essays.

**LOFT Reports**

The LOFT Report (minimum 400 words) is to be a discussion of each LOFT session. You are to assess the following CRM skills (Reference FAA AC120-51E, Appendix 1) used in the LOFT mission:

- Communication processes
- Decision making
• Leadership / Followership and team building
• Workload management / automation
• Situation awareness

Include the following as you write about the CRM skills listed above:
• Discuss and evaluate the key CRM skills learned on each mission.
• Evaluate your performance and your partner's performance as related to a safe, efficient, and effective mission.
• Assess the scenario for CRM training effectiveness. What did you learn?
• Describe your personal CRM skill deficiencies and/or improvements within this LOFT session.
• Make it read like a report, but with good explanation and reasoning. Do not simply state opinions and observations without facts to support.

CRM Course Essays
Write four essays (minimum 300 words); documenting the human factors, CRM skills, and personal assessment of learning that you have experienced within the current segment of the course. These essays will be due approximately every 3 weeks (check the calendar). The following are suggestions for the essay to document your progression in the course:
1. Discuss the significant learning objectives from the past three weeks of lecture and class discussions.
2. Describe your personal CRM skills that are presently part of your flight training.
3. Contrast your current CRM skills with the new CRM skills that you have learned and will incorporate in your future flying.
4. Include any examples of good or poor CRM skills that you displayed or encountered during your flight training, especially if the example relates to the course material presented in the lectures or class discussions.

Conclusion: Reflective Essay
The final semester document combines your four CRM course essays, three LOFT reports, and a concluding essay. The concluding essay is to be a discussion and reflection of your CRM course achievements and will be the primary grading criteria for the CRM Journal. Your journal should present a documented progression of your learning experiences as we proceed through the course.
Write a concluding and reflective essay (800 words minimum) to cover the following topics:
  a) CRM skills practiced in the simulator and your personal assessment of what you learned
  b) CRM skills and human factors that you learned about in the class lectures and discussions
  c) CRM skills that will need emphasis as you progress in your flying career
  d) Your evaluation of the objectives presented in this course
  e) Your overall assessment of your personal advancement in using your new CRM knowledge.

Final CRM Journal Document
A prime objective of this course is for you to become a safer pilot and prepare you for a future commercial pilot position. In addition, documenting this capstone course will provide a solid presentation to a future employer. I think you will find that future employers of commercial pilots are looking for a person with the CRM skills covered in this course. While your CRM skills continue to develop, revisit this document to keep yourself mindful of the safety aspects of managing a crew cockpit environment in a truly professional manner.
LOFT# ____ Report Grading Criteria

Name: __________________________ Date: __________________________ Possible: 100 Earned: __________

Title Page:
• LOFT #, date, origin, destination, captain, and copilot. 5

Introduction: 10
• State the scenario of the mission: airports, weather, sequence of significant events, crew position,

Body Text Style: 10
• 8.5” x 11” white paper; 1” margins (all four sides)
• 12-point font; double-spaced.
• Headings: as appropriate

Body Content: 50
• Assess the key learning points of this mission.
• Assess the overall flight—your performance and your partner’s.
• Describe your personal CRM skill deficiencies or improvements within this LOFT session.
• Logical flow: start to finish
• Make it read like a report; explanation with factual support

Technical Format: 10
• Grammar>G  Punctuation>P  Spelling>Sp (deduction of 0.5 point per error)

Conclusion: 15
• Assess the scenario for training effectiveness.
  What did you learn?

Overall Deductions:
Penalty for LESS than word-number required (10 pts)
Penalty for late: (50% during 48-hour period after deadline)

TOTAL: 100

Instructor Comments:
• Communication processes
• Decision making
• Leadership / Followership and team building
• Workload management / automation
• Situation awareness
### CRM Essay # ___ Grading Criteria

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#### Headings
- Subjects covered in the essay 5

#### Body Format/Text Style: 10
- 8.5” x 11” white paper; 1” margins (all four sides)
- 12-point font; double-spaced.

#### Body Content: 75
- Include some of the key learning points of the lectures
- Discuss how you might improve your CRM skills based on the subjects of the lectures.
- Discuss a personal experience dealing with CRM issues.

#### Technical Format: 10
- Grammar > G  Punctuation > P  Spelling > Sp

  (deduction of 0.5 point per error)

#### Overall Deductions:
- Penalty for LESS than word-number required (10 pts)
- Penalty for late: (50% during 48-hour period after deadline)

TOTAL: 100

Instructor Comments:
Final CRM Journal Grading Sheet

Name:                 Date:                  Possible  Earned

Title Page
  • Title, school name, course, student name, date

Table of contents
  • Subjects covered in the journal

Body Text Style:
  • 8.5” x 11” white paper; 1” margins (all four sides)
  • 12-point font; double-spaced.
  • Headings: minimum of two APA levels required

Body Content:
  • Include all four CRM Essays corrected
  • CRM skills and human factors that were covered
  • Include all three LOFT Reports corrected
  • CRM skills practiced in the simulator and your personal assessment of what you learned
  • CRM skills that will need emphasis as you progress

Technical Format:
  • Grammar>G  Punctuation>P  Spelling>Sp  10

(Deduction of 0.5 point per error)

Conclusion Essay:
  50
  Reflective summary of the course:
  a) CRM skills practiced in the simulator and your personal assessment of what you learned
  b) CRM skills and human factors that you learned in the class discussions
  c) CRM skills that will need emphasis as you progress in your flying career
  d) Your evaluation of the objectives presented in this course
  e) Your overall assessment of your personal advancement in using your new CRM knowledge
  • Summarize journal entries as a whole, identify issues and skills improvement that are significant.

Overall Deductions:
Penalty for LESS than word-number required (10 pts)
Penalty for late (due by midnight on date in syllabus)
  (50% for 48-hour period after deadline)

TOTAL: 100

Instructor Comments:
APPENDIX 1: CREW PERFORMANCE MARKER CLUSTERS

Italicized Markers apply to Advanced Technology Flight Decks. These behavioral markers are provided to assist organizations in program and curriculum development and to serve as guidelines for feedback. They are not presented as a checklist for evaluating individual crewmembers.

1. COMMUNICATIONS PROCESSES AND DECISION BEHAVIOR CLUSTER

   a. Briefings: An effective briefing is interesting and thorough. It addresses coordination, planning, and problems. Although briefings are primarily a captain's responsibility, other crewmembers may add significantly to planning and should be encouraged to do so.

   Behavioral Markers
   
   (1) The captain's briefing establishes an environment for open/interactive communications (e.g., the captain calls for questions or comments, answers questions directly, listens with patience, does not interrupt or "talk over," does not rush through the briefing, and makes eye contact as appropriate).
   (2) The briefing is interactive and emphasizes the importance of questions, critique, and the offering of information.
   (3) The briefing establishes a “team concept” (e.g., the captain uses “we” language, encourages all to participate and to help with the flight).
   (4) The captain's briefing covers pertinent safety and security issues.
   (5) The briefing identifies potential problems such as weather, delays, and abnormal system operations.
   (6) The briefing provides guidelines for crew actions centered on standard operating procedures (SOP); division of labor and crew workload is addressed.
   (7) The briefing includes the cabin crew as part of the team.
   (8) The briefing sets expectations for handling deviations from SOPs.
   (9) The briefing establishes guidelines for the operation of automated systems (e.g., when systems will be disabled; which programming actions must be verbalized and acknowledged).
   (10) The briefing specifies duties and responsibilities with regard to automated systems, for the pilot flying (PF) and the pilot monitoring (PM).

   b. Inquiry/Advocacy/Assertion: These behaviors relate to crewmembers promoting the course of action that they feel is best, even when it involves conflict with others.

   Behavioral Markers:
   
   (1) Crewmembers speak up and state their information with appropriate persistence until there is some clear resolution.
   (2) “Challenge and response” environment is developed.
   (3) Questions are encouraged and are answered openly and nondefensively.
   (4) Crewmembers are encouraged to question the actions and decisions of others.
   (5) Crewmembers seek help from others when necessary.
   (6) Crewmembers question status and programming of automated systems to confirm situation awareness.

   c. Crew Self-Critique Regarding Decisions and Actions: These behaviors relate to the effectiveness of a group and/or an individual crewmember in critique and debriefing. Areas covered should include the product, the process, and the people involved. Critique may occur during an activity, and/or after completing it.
Behavioral Markers:
(1) Critique occurs at appropriate times, which may be times of low or high workload.
(2) Critique deals with positive as well as negative aspects of crew performance.
(3) Critique involves the whole crew interactively.
(4) Critique makes a positive learning experience. Feedback is specific, objective, usable, and constructively given.
(5) Critique is accepted objectively and nondefensively.

d. Communications/Decisions: These behaviors relate to free and open communication. They reflect the extent to which crewmembers provide necessary information at the appropriate time (e.g., initiating checklists and alerting others to developing problems). Active participation in the decision-making process is encouraged. Decisions are clearly communicated and acknowledged. Questioning of actions and decisions is considered routine.

Behavioral Markers:
(1) Operational decisions are clearly stated to other crewmembers.
(2) Crewmembers acknowledge their understanding of decisions.
(3) “Bottom lines” for safety are established and communicated.
(4) The “big picture” and the game plan are shared within the team, including flight attendants and others as appropriate.
(5) Crewmembers are encouraged to state their own ideas, opinions, and recommendations.
(6) Efforts are made to provide an atmosphere that invites open and free communications.
(7) Initial entries and changed entries to automated systems are verbalized and acknowledged.

2. TEAM BUILDING AND MAINTENANCE CLUSTER

a. Leadership Followership/Concern for Tasks: These behaviors relate to appropriate leadership and followership. They reflect the extent to which the crew is concerned with the effective accomplishment of tasks.

Behavioral Markers:
(1) All available resources are used to accomplish the job at hand.
(2) Flight deck activities are coordinated to establish an acceptable balance between respect for authority and the appropriate practice of assertiveness.
(3) Actions are decisive when the situation requires.
(4) A desire to achieve the most effective operation possible is clearly demonstrated.
(5) The need to adhere to SOPs is recognized.
(6) Group climate appropriate to the operational situation is continually monitored and adjusted (e.g., social conversation may occur during low workload, but not high).
(7) Effects of stress and fatigue on performance are recognized.
(8) Time available for the task is well managed.
(9) Demands on resources posed by operation of automated systems are recognized and managed.
(10) When programming demands could reduce situation awareness or create work overloads, levels of automation are reduced appropriately.

b. Interpersonal Relationships/Group Climate: These behaviors relate to the quality of interpersonal relationships and the pervasive climate of the flight deck.
Behavioral Markers:

(1) Crewmembers remain calm under stressful conditions.
(2) Crewmembers show sensitivity and ability to adapt to the personalities of others.
(3) Crewmembers recognize symptoms of psychological stress and fatigue in self and in others (e.g., recognizes when he/she is experiencing “tunnel vision” and seeks help from the team; or notes when a crewmember is not communicating and draws him/her back into the team).
(4) “Tone” in the cockpit is friendly, relaxed, and supportive.
(5) During times of low communication, crewmembers check in with others to see how they are doing.

3. WORKLOAD MANAGEMENT AND SITUATION AWARENESS CLUSTER

a. Preparation/Planning/Vigilance: These behaviors relate to crews anticipating contingencies and the various actions that may be required. Excellent crews are always “ahead of the curve” and generally seem relaxed. They devote appropriate attention to required tasks and respond without undue delay to new developments. (They may engage in casual social conversation during periods of low workload and not necessarily diminish their vigilance.)

Behavioral Markers:

(1) Demonstrating and expressing situation awareness (e.g., the “model” of what is happening is shared within the crew).
(2) Active monitoring of all instruments and communications and sharing relevant information with the rest of the crew.
(3) Monitoring weather and traffic and sharing relevant information with the rest of the crew.
(4) Avoiding “tunnel vision” caused by stress (e.g., stating or asking for the “big picture”).
(5) Being aware of factors such as stress that can degrade vigilance, and watching for performance degradation in other crewmembers.
(6) Staying “ahead of the curve” in preparing for planned situations or contingencies, so that situation awareness and adherence to SOPs is assured.
(7) Ensuring that cockpit and cabin crewmembers are aware of plans.
(8) Including all appropriate crewmembers in the planning process.
(9) Allowing enough time before maneuvers for programming of the flight management computer.
(10) Ensuring that all crewmembers are aware of initial entries and changed entries in the flight management system.

b. Workload Distributed/Distractions Avoided: These behaviors relate to time and workload management. They reflect how well the crew manages to prioritize tasks, share the workload, and avoid being distracted from essential activities.

Behavioral Markers:

(1) Crewmembers speak up when they recognize work overloads in themselves or in others.
(2) Tasks are distributed in ways that maximize efficiency.
(3) Workload distribution is clearly communicated and acknowledged.
(4) Nonoperational factors such as social interaction are not allowed to interfere with duties.
(5) Task priorities are clearly communicated.
(6) Secondary operational tasks (e.g., dealing with passenger needs and communications with the company) are prioritized so as to allow sufficient resources for primary flight duties.
(7) Potential distractions posed by automated systems are anticipated, and appropriate preventive action is taken, including reducing or disengaging automated features as appropriate.
Southeastern Oklahoma State University  
AVIA-3284  INSTRUMENT GROUND

General Information

Instructor: Kyle Thomas
Office Number: Flight Operations Bldg.
Telephone: 580.745.3246
E-mail: kthomas@seu.edu

Prerequisites and Support courses
AVIA 1004 and 1041
Private Pilot Certificate
Stage 2 of commercial flying curriculum

Course Goals
This course is a comprehensive study of the technical subject matter necessary to operate safely as an instrument rated pilot. At its completion the student will be able to demonstrate knowledge of the fundamental elements of the following:

- IFR systems, equipment, flight by reference to instruments, and basic navigation
- IFR procedures- departure, en route, and arrival procedures
- Weather
- IFR Regulations

Course Objectives and Student Outcomes

1. Demonstrate a fundamental knowledge of IFR systems, equipment, and basic navigation
   1.1. Describe the construction, operating principles, and source of operation for each flight instrument
   1.2. Explain the Indications of static port blockage and the ramifications or using an alternate e air source
   1.3. Construction and limitation of the magnetic compass
   1.4. List and describe the process of recognizing and recovering from unusual attitudes
   1.5. Describe an instrument preflight and appropriate taxi check procedures
   1.6. Demonstrate knowledge of the three fundamentals skills of basic attitude flying
   1.7. List and describe limitations associated with NDBs
   1.8. Demonstrate knowledge of NDB, VOR tracking and course intercept

2. Demonstrate a fundamental knowledge of IFR departure, en route, and arrival procedures
   2.1. Exhibit knowledge of standard instrument departures and standard terminal arrivals
   2.2. Describe the process of complying with precision and non-precision instrument approach procedures
   2.3. Exhibit a working knowledge of low altitude en route charts and procedures
2.4. List and describe the process of IFR cross country planning
3. Demonstrate a fundamental understanding of Basic IFR Weather
   3.1. Describe and explain basic weather patterns and characteristics associated with the atmosphere and atmospheric circulation.
   3.2. Describe and explain basic weather patterns and characteristics associated with atmospheric stability, including clouds and cloud formation.
   3.3. Describe and explain basic weather patterns and characteristics of airmasses.
   3.4. Describe and explain weather hazards including thunderstorms and their associated risks, and icing.
   3.5. Demonstrate knowledge of go/no-go decisions based on the interpretation of various weather data sources, including METARS, TAFs, Pireps, FAs, FDs, Airmets and Sigmet, and Surface Analysis and Weather Depiction Charts.
4. Demonstrate a fundamental understanding of IFR Regulations, 14 CFR parts 61, 47, and 91.
   4.1. Explain the regulatory requirements associated with recent experience requirements as listed in part 61
   4.2. List and describe the elements and regulations associated with IFR flight plans.
   4.3. Demonstrate knowledge of the regulations that govern takeoff and landing under IFR
   4.4. Demonstrate knowledge of minimum altitudes of IFR operations and minimum IFR cruising altitudes
   4.5. Describe the essential elements of IFR communications and communication failures
   4.6. Demonstrate knowledge of IFR regulations associated with minimum equipments and regulatory IFR equipment inspections

Textbook and Materials:
Jeppesen Instrument/Commercial Manual
Current Copy of FAR/AIM

Style/Mode of Teaching
Lectures, Demonstrations, Multi-Media, Presentations, Class Handouts

Drop and Add Policy
Same as University’s, Please Review

Attendance Policy
Attendance is very important. Announced and unannounced quizzes will be given frequently. All absences, except those having to do with pre-approved SOSU functions, will be considered unexcused.

Make-up exams will be given in extenuation circumstances only. You must have prior permission. Also, credit will not be given for assignments that are turned in after the due date. There will be no make-up quizzes.
Do not be late for class.
Do not disturb class by entering after the session has begun. You will be asked to leave.

Grading System

A. Evaluation
   1. 4 exams
   2. 1 comprehensive final exam
   3. Homework and In-class assignments

B. Weights
   1. Exams 70%
   2. Final 20%
   3. Assignments and quizzes 10%

C. Grading Scale
   A= 90-100
   B= 80-89
   C= 70-79
   D= 60-69
   F= 0-59

Graduation Requirements/Professional Pilot

A minimum GPA of 2.5 is required in all Professional Pilot and Aviation Management Major-Minor degree requirements including specified general education requirements. In addition, no grade less than C in Professional Pilot ground courses is acceptable.

General Course Policies

A  Cheating and plagiarism: Cheating and plagiarism are practices that will not be tolerated by SOSU, the Department of Aerospace, or the FAA.

The Academic Honest Policy for the School of Business defines cheating and plagiarism as:

1. Cheating- “Using unauthorized materials or giving or receiving unauthorized assistance during an examination or other exercise."
2. Plagiarism- “The use of another's ideas or words without acknowledgement."

Cheating and plagiarism will result in those actions outlined in the School of Business Academic Honest Policy.
Additional Syllabus Statements

Any student needing special accommodations due to a disability should contact the Coordinator of Student Disability Services, Student Union, Suite 204 or call (580) 745-2254 (TDD# 745-2704). It is the responsibility of each student to make an official request for accommodations to the Coordinator.

Any student experiencing mental or emotional issues who desires free, confidential, clinical counseling is encouraged to contact the SE Counseling Center at (580) 745-2988 to schedule an appointment during normal working hours Monday – Friday, 8:00 AM to 5:00 PM. For after hours mental health emergencies, please call SE Campus Police at (580) 745-2911 or the Mental Health Crisis Hotline at 1-(800) 522-1090.

Equal Opportunity Statement

In Compliance with Title VI of the Civil Rights Act of 1964, Executive Order 11246 as amended, Title IX of the Education Amendments of 1972, Sections 503 and 504 of the Rehabilitation Act of 1973, and other Federal Laws and Regulations, Southeastern Oklahoma State University does not discriminate on the basis of race, color, national origin, sex, sexual identity, sexual orientation, age, religion, handicap, disability, or status as a veteran in any of its policies, practices or procedures, this includes but is not limited to admissions, employment, financial aid, and educational services.

Title IX of the Education Amendments of 1972 (20 U.S.C. § 1681) states: No person in the United States, shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving federal financial assistance…” Southeastern Oklahoma State University does not discriminate on the basis of sex in its education programs or activities, in compliance with Title IX and the U.S. Department of Education’s regulations at 34 C.F.R. §§ 86.1 et seq. Individuals who believe they have been discriminated against on the basis of sex may contact S.E.’s Title IX Coordinator at 580-745-3090, titleix@se.edu, or PMB 2750.
Tentative Schedule

January
12 Introduction, review syllabi
14 Construction, operating principles, and limitations of gyroscopic instruments
19 Construction, principles of operation, and operating limitations of pitot-static system and Magnetic compass
21 Attitude instrument flying procedures and techniques
26 VOR tracking and orientation
28 NDB tracking and orientation

February
2 Exam One
4 Departure Procedures and Enroute charts and procedures
9 Continue previous lesson
11 Continue previous lesson
16 Arrival charts and procedures
18 continue previous lesson
22 continue previous lesson
25 IFR cross-country planning

March
1 IFR cross-country planning
3 Exam Two
8 Basic meteorology
10 Continue previous lesson
22 Continue previous lesson, introduce weather reports and forecast
24 Continue reports and forecast
29 Weather services
31 Aviation Weather Exam

April
5 Certification of Pilots and Flight Instructors, FAR Part 61
7 Continue Part 61, Introduce Part 91
12 Continue Part 91,
14 Continue Part 91, Introduce NTSB 830
19 Introduce AIM and Review for Exam
21 Regulation/AIM Exam
26 Review for Final
28 Review for Final

May
2-6 (Tentative Date for Comprehensive Final @1500)
SOUTHEASTERN OKLAHOMA STATE UNIVERSITY
TRAINING COURSE OUTLINE
FLIGHT INSTRUCTOR CERTIFICATION COURSE

Southeastern Oklahoma State University’s Aviation Sciences Institute is located on the Southeastern Oklahoma State University campus and Eaker Field, which is located south of Durant, Oklahoma.

S.O.S.U.
Dept. of Aerospace
Station A, Box 4136
Durant, OK 74701

This training course outline meets all of the curriculum requirements for the Flight Instructor Certification Course

The training syllabus herein contains a separate ground -training course and a flight training course which will be taught concurrently.

COURSE OBJECTIVE: This course is designed to provide the ground and flight training necessary to successfully complete the required knowledge and skill tests for an FAA Flight instructor certification with an Airplane Category Rating and a Single-engine Land Class.

ENROLLMENT PREREQUISITES:

A. The Student must hold a Commercial Pilot certificate with an Instrument Rating before beginning the flight portion of the Flight Instructor certification course and;
B. Hold at least a second-class medical certificate
C. Be at least Eighteen years of age.

COMPLETION STANDARDS: The student must demonstrate through written tests, flight tests, and show through appropriate records that he meets the knowledge, skill, and experience requirements necessary to obtain a Flight instructor certificate with an airplane category rating and a single-engine land. The student should complete at least one stage every 90 days.

This page revised January 28, 2002
**Facilities and Equipment:** Southeastern Oklahoma State University’s Aviation Sciences Institute is located on Eaker Field, five miles south of Durant Oklahoma. This facility is the operations base for the institute’s administration, flight training, and aircraft maintenance.

**Aviation Sciences Institute Administration (Northwest Side)**
- ASI administration and faculty offices, including ASI director, Chief Flight Instructor, and Assistant Chief Flight Instructor.
- Staff flight instructor offices. These offices very in size and may be occupied by one to three CFIs. Each instructor has a lockable desk, at least one student chair for pilot briefing, personal computer with internet, phone with voice mail, and a dry erase board.
- Laser grade testing center.
- Conference room
- Classroom that may be used for student briefing.
- Kitchen and restrooms.

**Maintenance Hangar (Middle)**
- Director of Aircraft Maintenance.
- All aircraft maintenance.

**Flight Operations (Southeast Side)**
- Aircraft dispatch and line crew office.
- Check instructor offices. Each check instructor is provided issued a private office with a lockable desk, at least one student chair for lesson briefing, personal computer with internet, phone with voice mail, and a dry erase board.
- WSI weather system.
- Pilot briefing room equipped with computers with internet and phones for contacting FSS.
- Lounge area with vending machines.
- Unicom station.
- Check ride office.
- Simulator room.
- Kitchen area and restrooms.

**Airport:** Eaker Field is an uncontrolled airport with AWOS and a 5,000ft hard surface runway. It meets the requirements of 14 CFR Part 141.38 for day and night operations. The airport has VOR and GPS instrument approach procedures for runways 17 and 35.

**CLASSROOM INSTRUCTION:** All ground-schools are taught in the Russell Building on Southeastern’s main campus. The Russell Building is a modern facility with classrooms large enough for 30-40 students. All classrooms meet the requirements of 14 CFR FAR 141.45. Classroom training aids include a media cart with computer, projector, and VCR, for power-point presentations and numerous aviation related videos and computer software.

*This page revised September 2006*
AIRCRAFT and FLIGHT TRAINING DEVICES: The C-150/152 or C-172, and a Precision Flight Controls MFD (serial #51168) will be used for training in this course. All aircraft meet the requirements of FAR 141.39 and FAR 91.205 (day and night VFR.) Radio equipment will consist of at least one navigation/communication radio system (transceiver and VOR).

Although not part of the approved curriculum, a PFC Advanced Aviation Training System is available for student practice and demonstrations. The Precision Flight Controls MFD is a twin and single engine-advanced ATD (AATD.) Equipment includes: fuselage with full dual controls, 180 degree visual system and instruments for flight, engines, and systems. The IFR avionics package includes Garmin 430 GPS/Nav/Com, dual needle RMI, HSI. Full autopilot/flight director with altitude preselect is available, along with worldwide navigational, and visual capabilities using Real World Frequencies; three needle altimeter; toe brakes; adjustable seats (pilot and copilot); and cockpit lights. Additional equipment includes a center trim console which provides manual controls for elevator trim, and rudder trim in addition to selectors for fuel, cowl flaps, wing flaps and carburetor heat. The 180 degree visual system includes 5-50” color monitors. USGS 50 meter terrain data is used for the continental US. This Flight Training Device meets all requirements of Appendices B and C; 14 CFR 141.41 (b).

Aviation majors have access to On Top PCATD software. This training aid has a yoke with rudder pedals, a precision flight control quadrant, and an avionics control panel. This PCATD is intended to be used as a training aid only and is not approved for any Part 141 curriculum. Additionally, a KNL 94 GPS trainer is available for GPS demonstrations.

Chief Flight Instructor:
Kyle V. Thomas
kthomas@sosu.edu
580.745.3246

Assistant Chief Flight Instructor:
George C. Jacox
gjacox@sosu.edu
580.745.3245

Instructors: Each Instructor used for ground or flight instruction must hold a flight instructor certificate or ground instructor certificate, as appropriate, with ratings for the approved course of training and all aircraft used in this course.

All instructors meet the experience requirements in FAR 141.33 (a) (3).
# FLIGHT INSTRUCTOR CERTIFICATION COURSE

<table>
<thead>
<tr>
<th>Stage 1</th>
<th>C-150/152 or C-172</th>
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<tbody>
<tr>
<td>1. Preflight and Right Seat Op’s</td>
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<tr>
<td>2. Primary Flight Training</td>
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<tr>
<td>3. Stalls and MCA</td>
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<tr>
<td>4. Ground Reference Maneuvers</td>
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<tr>
<td>5. Takeoff’s and Landing’s</td>
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<tr>
<td>6. Advanced Commercial Maneuvers</td>
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<tr>
<td>7. Spins and Emergency Procedures</td>
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<tr>
<td>8. Cross-Country Flight</td>
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<tr>
<td>9. Review for Stage Check</td>
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<tr>
<td>Stage Check</td>
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<tr>
<td><strong>Sub-total for Stage 1</strong></td>
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In Stage 2 there will be 5 hours of practice ground instruction  

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<tr>
<th>Stage 2</th>
<th>Complex Aircraft</th>
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<tbody>
<tr>
<td>1. Preflight and Four Fundamentals</td>
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<tr>
<td>2. Primary Training Maneuvers</td>
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<td>6. Advance Commercial Maneuvers</td>
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<tr>
<td>7. Emergency Procedures</td>
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<td>8. High Performance Aircraft Operations</td>
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<td>9. Cross Country Operations</td>
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<td><strong>Sub-Total Stage 2</strong></td>
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</tbody>
</table>

**Total for CFI Course**  
25 hours

This page revised January 28, 2002
FLIGHT INSTRUCTOR CERTIFICATION COURSE - ASEL

**FLIGHT TRAINING COURSE OBJECTIVES.** The student will obtain the aeronautical skill and experience requirements necessary to meet the published requirements for a Flight Instructor Certificate with an Airplane category rating and a single engine class rating as outlined in the CFI Practical Test Standards.

**FLIGHT TRAINING COURSE COMPLETION STANDARDS.** The student has demonstrated through flight test and school records that he has the necessary aeronautical skill and experience set forth in the current FAA Flight Instructor Practical Test Standards.
STAGE ONE - ANALYSIS OF FLIGHT TRAINING MANEUVERS
10 HOURS FLIGHT INSTRUCTION
C-150/152 or C-172

STAGE ONE OBJECTIVES. The student will be instructed in the analysis of flight training maneuvers.

STAGE ONE COMPLETION STANDARDS. This stage will be complete when the student has completed the Stage One Flight Check, and demonstrates, in a satisfactory manner, the ability to correctly perform flight training maneuvers from the right seat as set forth in the current FAA Flight Instructor Practical Test Standards.

Lesson I-1

Lesson Objectives.
The student will be familiarized with both preflight and right seat operations.

Lesson Introduction:
Preflight discussion (Including parallax error)
Preflight Operations
Line Inspection (Including check of documents and records)
Starting
Warm-up
Taxi
Before takeoff procedures
In-flight procedures
Post-flight checks and procedures
Right seat familiarization with the Four Fundamentals of flight
Basic Attitudes
Turn references (Including slips and skids)
Right seat takeoffs and landings
Right seat instrument interpretation
Postflight review and preview of the next lesson

Completion Standards.
This lesson will be successfully completed when, by both oral and flight demonstration, the student displays an understanding of, and can properly perform and analyze preflight, and right seat familiarization as set forth in the current FAA Flight Instructor Practical Test Standards.

This page revised January 28, 2002
Lesson I-2

Lesson Objectives
The student will be familiarized with primary flight training maneuvers.

Lesson Introduction:
Lesson Review of I-1
Preflight discussion
Use of radio and voice communications
The integrated method of Flight Instruction
Straight and Level flight
Turns
  Slips and Skids
  Shallow, medium and steep
Confidence Maneuvers
Climbs and glides (Including powered descents)
Postflight review and preview of the next lesson

Completion Standards
This lesson will be successfully completed when, be both oral and flight demonstration, the student displays an understanding of, and can properly perform and analyze primary flight training maneuvers as set forth in the current FAA Flight Instructor Practical Test Standards.
Lesson I-3

Lesson Objectives
The student will be familiarized with stalls, minimum controllable airspeeds, and area of reverse command.

Lesson Introduction:
Review all maneuvers of the previous lessons as deemed necessary by his instructor.
Preflight discussion
Minimum controllable airspeed
  Clean configuration
  Landing configuration
Area of reverse command
  Demonstration
  Recovery
Stalls
  Full Stalls
    Power on
    Power off
    Clean configuration
    Landing configuration
  Imminent Stalls
    Power on
    Power off
    Clean configuration
    Landing configuration
Accelerated Stalls
Cross controlled Stalls
Stall recoveries
  Power on
  Power off
Postflight review and preview of the next lesson

Completion Standards
This lesson will be successfully completed when, by both oral and flight demonstration, the student displays an understanding of, and can properly perform and analyze stalls, minimum controllable airspeeds, and the area of reverse command as set forth in the current FAA Flight Instructor Practical Test Standards.
Lesson 1-4

Lesson Objectives
The student will be familiarized with ground reference maneuvers.

Lesson Introduction:
Review all maneuvers of the previous lesson as deemed necessary by the instructor
Preflight discussion
Tracking along a road
"S" turns across a road
Rectangular patterns
"8's" along a road
"8's" across a road
"8's" around pylons
"8's" on pylons
Postflight review and preview of the next lesson

Completion Standards
This lesson will be successfully completed when, by both oral and flight demonstration, the student displays and understanding of, and can properly perform and analyze ground reference maneuvers as set forth in the current FAA Flight Instructor Practical Test Standards.
Lesson Objectives
The student will be familiarized with takeoff's and landing's.

Lesson Introduction:
Review all maneuvers of the previous lessons as deemed necessary by the instructor
Preflight discussion
Normal takeoffs and landings
Short, soft and rough field procedures
Slips and slips to a landing
Down wind landing
Power approaches
Touch and go landings
Go-arounds
Power-Off 180degree Accuracy Approach and Landing. The 1,000ft marker will be the specified touchdown point.
Post flight review and preview of the next lesson

Completion Standards
This lesson will be successfully completed when, by both oral and flight demonstration, the student displays an understanding, and can properly perform and analyze takeoffs and landings as set forth in the current FAA Flight Instructor Practical Test Standards.

This page revised August 2004
Lesson I-6

Lesson Objectives
The student will be familiarized with advanced commercial flight training maneuvers.

Lesson Introduction:
Review all maneuvers of the previous lesson as deemed necessary by the flight instructor.
Preflight discussion
Chandelles
Lazy eights
Steep power turns
Gliding spirals
Postflight review and preview of the next lesson

Completion Standards
This lesson will be successfully completed when, by both oral and flight demonstration, the student displays an understanding of, and can properly perform and analyze advanced commercial flight training maneuvers as set forth in the current FAA Flight Instructor Practical Test Standards.
Lesson I-7

Lesson Objectives
The student will be familiarized with Spins and emergency procedures.

Lesson Introduction:
Review all maneuvers of the previous lessons as deemed necessary by the instructor.
Preflight discussion
Spins
   Entry
   Performance
   Recovery from Spins both left and right
Emergencies
   Systems and equipment malfunctions
   Fires
      Electrical
      Engine
      Cabin
   Partial engine failure
   Complete engine failure
      Emergency approach and landing (Simulated)
Postflight review and preview of the next lesson

Completion Standards
This lesson will be successfully completed when, by both oral and flight demonstration, the student displays and understanding and can properly perform and analyze Spins, Spin entry, Spin Recovery, and Emergency procedures as set forth in the current FAA Flight Instructor Practical Test Standards.
Lesson I-8

Lesson Objectives
The student will be familiarized with cross-country flight.

Lesson Introduction:
Review all maneuvers of the previous lessons as deemed necessary by the flight instructor
Preflight discussion
Planning
Pilotage
Dead reckoning
Use of radio aids
Diversion to alternate
Cross-country emergencies
Lost
Engine failure
Adverse or marginal weather
Icing
Loss of or restriction of visual references
Imminent fuel exhaustion
Postflight review and preview of the next lesson

Completion Standards
This lesson will be successfully completed when, by both oral and flight demonstration, the student displays an understanding of, and can properly perform cross-country operations as set forth in the current FAA Flight Instructor Practical Test Standards.
Lesson I-9

Lesson Objective
The student will review and become proficient in all flight maneuvers covered in Part I.

Lesson Review
Preflight discussion
Review all maneuvers of the previous lessons as deemed necessary by the instructor
Post flight review

Completion Standards
This lesson will be successfully completed when, by oral and flight demonstration, the student displays an understanding of and can properly perform and analyze all private and commercial maneuvers as set forth in the current FAA Flight Instructor Practical Test Standards.
Stage Check I

**Lesson Objectives**
During this flight the Chief Flight Instructor or his assistant, will determine if the student can correctly analyze, and perform basic flight training maneuvers as required to instruct in flight training.

**Completion Standards**
The student will be evaluated on the basis of the following standards as set forth in the current FAA Flight Instructor Practical Test Standards:
- Display reasonable skill and understanding in the executive of all applicable flight training maneuvers, and the analysis thereof
- Display an adequate knowledge of the aircraft to be used
- Maintain assigned altitudes within 100 feet
- Maintain assigned headings within 10 deg.
- Maintain assigned airspeeds within 10 knots
STAGE TWO
INSTRUCTIONAL PRACTICE - DUAL INSTRUCTION
10 Hours Flight Instruction
5 Hours Practice Ground Instruction
C-33 or C-182 RG

Stage II Objectives
During this stage the student will practice teaching all basic training maneuvers are required to instruct in flight training.

Stage II Completion Standards
This stage will be complete when the student has completed the Stage II Flight Check, and demonstrates the ability to instruct all Private and Commercial Maneuvers in the complex aircraft to the level as set forth in the current FAA Flight Instructor Practical Test Standards, and Lesson Plans will be written for each lesson.

Lesson II-1

Lesson Objectives
During this lesson the student will practice teaching both preflight and student orientation to the airplane and Four Fundamentals with the Integrated Method of flight instruction.

Lesson Introduction:
- Preflight discussion and practice teaching
- Preflight operations
  - Line inspection (Including check of documents and records)
  - Starting
  - Warmup
  - Taxi
  - Before takeoff procedures
  - In-flight procedures
  - Postflight checks and procedures
- Attitudes
- Turn references (Including slips and skids)
- Integrated Method
- Right seat takeoffs and landings

Completion Standards
This lesson will be successfully completed when, by both oral and flight demonstration, the student displays an understanding of, and can properly instruct in right seat familiarization and preflight and the analysis of all associated errors as set forth in the current FAA Flight Instructor Practical Test Standards.
Lesson II-2

Lesson Objectives
During this lesson the student will practice teaching primary flight training maneuvers.

Lesson Introduction:
Review all maneuvers of the previous lessons as deemed necessary by the instructor
Preflight discussion
Use of radio for voice communications
Straight and level flight
Turns
  Slips and skids
  Shallow, medium and steep
Climbs and glides (Including powered descents)
Teaching
  Stability (Longitudinal, lateral, directional)
  Orientation to traffic pattern and normal landing
Confidence maneuvers

Completion Standards
This lesson will be successfully completed when, by both oral and flight demonstration, the student displays an understanding of, and can properly instruct in primary flight training maneuvers, and the analysis of all associated errors as set forth in the current FAA Flight Instructor Practical Test Standards.
Lesson II-3

Lesson Objectives
During this lesson the student will practice teaching stalls, minimum controllable airspeed, and the area of reverse command.

Lesson Introduction:
Review all maneuvers of the previous lessons as deemed necessary by his instructor
Preflight discussion
Minimum controllable airspeed
  Clean configurations
  Landing configuration
Area of reverse command
  Demonstration
  Recovery
Stalls
  Full Stalls
    Power on
    Power off
    Clean
    Landing configuration
  Imminent Stalls
    Power on
    Power off
    Clean
    Landing configuration
  Accelerated stalls
  Cross controlled stalls
Stall recoveries
  Power on
  Power off
Postflight review and preview of the next lesson

Completion Standards
This lesson will be successfully completed when, by both oral and flight demonstration, the student displays an understanding of, and can properly perform and analyze stalls, minimum controllable airspeeds, and the area of reverse command as set forth in the current FAA Flight Instructor Practical Test Standards.

- 18-
Lesson II-4

Lesson Objectives
During this lesson the student will practice teaching ground reference maneuvers.

Lesson Introduction:
- Review all maneuvers of the previous lesson as deemed necessary by the instructor
- Preflight discussion
- Tracking along a road
- Turns about a point
- S turns across a road
- Rectangular patterns
- "8's" along a road
- "8's" across a road
- "8's" around pylons
- "8's" on pylons
- Postflight review and preview of the next lesson; make assignment

Completion Standards
This lesson will be successfully completed when, by both oral and flight demonstration, the student displays an understanding of, and can properly instruct in ground reference maneuvers, and the analysis of all associated errors as set forth in the current FAA Flight Instructor Practical Test Standards.
Lesson II-5

Lesson Objectives
During this lesson the student will practice teaching takeoffs and landings.

Lesson Introductions:
Review all maneuvers of the previous lessons as deemed necessary by the instructor
Preflight discussion
Normal takeoffs and landings
Short, soft and rough field procedures
Slips and Slips to a landing
Power-Off 180degree Accuracy Approach and Landing. *The 1,000ft marker will be the specified touchdown point.*
Downwind landings
Power approaches
Touch and go Landings
Go arounds
Postflight review and preview of the next lesson; make assignment

Completion Standards
This lesson will be successfully completed when, by both oral and flight demonstration, the student displays an understanding of, and can properly instruct in takeoffs and landings, and the analysis of all associated errors as set forth in the current FAA Flight Instructor Practical Test Standards.

*This page revised August, 2004*
Lesson II-6

Lesson Objectives
During this lesson the student will practice teaching advanced commercial flight training maneuvers.

Lesson Introduction:
- Review all maneuvers of the previous lessons as deemed necessary by the flight instructor
- Preflight discussion
- Chandelles
- Lazy eights
- Steep power turns
- Gliding spirals
- Postflight review and preview of the next lesson; make assignment

Completion Standards
This lesson will be successfully completed when, by both oral and flight demonstration, the student displays an understanding of, and can properly instruct in advanced commercial flight training maneuvers, and the analysis of all associated errors as set forth in the current FAA Flight Instructor Practical Test Standards.
Lesson II-7

Lesson Objectives
During this lesson the student will practice teaching emergency procedures.

Lesson Introduction:
Review all maneuvers of the previous lessons as deemed necessary by the instructor
Preflight discussion
Emergencies
  Systems and equipment malfunctions
  Fires
    Electrical
    Engine
    Cabin
Partial engine failure
Complete engine failure
  Emergency approach and landing (simulated)
  Emergency go arounds
Postflight review and preview of the next lesson; make assignment

Completion Standards
This lesson will be successfully completed when, by both oral and flight demonstration, the student displays an understanding of, and can properly instruct in emergency procedures; and the analysis of associated errors as set forth in the current FAA Flight Instructor Practical Test Standards.
Lesson II-8

Lesson Objectives
During this lesson the student will practice teaching high performance aircraft operations.

Lesson Introduction:
Review all maneuvers of the previous lessons as deemed necessary by the instructor
Complex aircraft operations
Preflight discussion of theory and operation of constant-speed prop and retractable
landing gear
Aircraft line inspection
Basic air work
Slowflight and minimum controllable airspeed
Stalls and recoveries
Gear, prop, and flap emergencies
Takeoffs and landings
Postflight review and preview of the next lesson; make assignment

Completion Standards
This lesson will be successfully completed when, by both oral and flight demonstration, the
student displays an understanding of, and can properly instruct in high performance aircraft
operations and the analysis of all associated errors as set forth in the current FAA Flight
Instructor Practical Test Standards.
Lesson II-9

Lesson Objectives
During this lesson the student will practice teaching cross-country operations.

Lesson Introduction:
- Review all maneuvers of the previous lessons as deemed necessary by the instructor
- Preflight discussion
- Planning
- Pilotage
- Dead reckoning
- Use of radio aids
- Diversion to alternate
- Cross country emergencies
  - Lost
  - Engine failure
  - Adverse or marginal weather
  - Icing
  - Loss of or restriction of visual references
  - Imminent fuel exhaustion
- Postflight review and preview of the Stage II Check

Completion Standards
This lesson will be successfully completed when, by both oral and flight demonstrations, the student displays an understanding of, and can properly instruct in cross country operation and the analysis of all associated errors as set forth in the current FAA Flight Instructor Practical Test Standards.
Stage II Check

Stage II Objectives
During this flight the Chief Flight Instructor, or his assistant will determine if the student can properly instruct, perform, and analyze all associated errors involved in student flight training maneuvers, as necessary to meet at least the minimum requirements of the CFI Practical Test Standards.

Completion Standards
At the completion of this lesson, the applicant will demonstrate the skill, maneuvers, procedures and instructional knowledge required to successfully meet or exceed the criteria outlined in the current FAA Flight Instructor Airplane Practical Test Standards.
Training Course Outline -- Training Syllabus

Flight Instructor Course - Airplane - Single Engine Land

Ground Training: 40 Hours

Ground Training Course Objectives
The student will obtain the necessary aeronautical knowledge and meet the prerequisites for the Flight Instructor - Airplane - written examination.

Ground Training Course Completion Standards
The student has demonstrated through oral examination, written tests, and records that he meets the prerequisites for the Flight Instructor - Airplane - written examination.
Stage One
A Presentation Of The Fundamentals Of Instruction
15:00 Hours

Stage One Objective
To ensure the student possesses an adequate knowledge of the fundamentals of flight instruction to instruct in flight training.

STAGE ONE COMPLETION STANDARDS. This stage will successfully be completed when the student completes the exam and subsequently corrects the examination to 100%.

Lesson I-1 - 3:00 Hours

Objectives
During this lesson, the student will be instructed in the principles of teaching and learning.

Content
How people learn
Perception
   Individual mental, emotional, and physiological characteristics
   Needs and requirements
   Goals and values
   Self-concept
   Time and opportunity to perceive
   The element of threat
Insight
   Cultivating receptiveness to new experience
   Organizing demonstrations, explanations, and directed student practice
   Pointing out related perceptions as they occur
   Supervising the "trial and error" process
   Assisting the student in grouping associated perceptions into meaningful wholes or "blocks" of learning
Motivation
   Types of motivation
   Use of factors which affect motivation
Obstacles to learning
   Self-consciousness
   Antagonism or feeling of unfair treatment
   Impatience
   Worry or lack of interest
   Physical discomfort, fatigue, and illness

This page revised January 28, 2002
Apathy fostered by poor instruction
Fear, anxiety, and timidity
Lack of confidence
Airsickness

Habits and transfer
- The importance of the formation of correct habit patterns
- The importance of habit patterns in aircraft control
- The promotion of transfer of learning through use of flight syllabus
- Positive transfer
- Negative transfer
- The influence of the "building block" techniques of instruction in habit development

Levels of learning
- Rote performance
- True understanding
- Correlation of previous learning, understanding, and skill with new tasks, problems, techniques, and procedures

Rates of learning
- The characteristics of the typical learning curve
- Initial learning rate
- Slumps or plateaus and their causes

The role of memory and the effect of forgetting in the achievement of satisfactory student progress
- Relationship between memory and habit forming patterns
- Usefulness of drill, recitation, and quizzing
- Continued usage, practice, and application

Significant principles which reinforce memory
- Praise
- Association
- Favorable attitude
- Learning with all senses
- Meaningful repetition

Common misconceptions about learning
- Fear is the best motivator
- Making it easy to learn is contrary to the principles of sound teaching
- Pictures, illustrations, and diagrams are, per se, more effective than written or verbal presentations of information
- The greater the experience, the better the performance
- The impersonal approach is more effective than the friendly attitude in teaching
- Competition is the key to successful learning
- Frustration and failure are essential to learning

Completion Standards
This lesson will be successfully completed when, by oral examination, the student displays a basic understanding of the principles of teaching and learning as set forth in the current FAA Practical Test
Standards.
Lesson I-2 - 3:00 Hours

Objectives
During this lesson, the student will be instructed in how to guide the learning process.

Content
Plan the instructional activity
   Establish clear objectives or goals
   Identify the block of learning
   Provide for student participation
   Diagnose student ability
   Use a teaching sequence that "makes sense"
   Work from the known to the unknown
   Work from the easy to the difficult
   Plan so the student will see the necessity and logic of each succeeding step

The flight training syllabus
   Arrange for efficient sequence in "block" of training
   Use syllabus as a guide
   Keep flexibility in teaching procedures

The lesson plan
   Lesson planning is essential to teaching success
   Items to include in lesson plan

The flight instruction breakdown
   Useful in preparing meaningful lesson plans
   Useful in guidance in offering effective instruction
   Requires personal analysis of maneuver
   Requires personal analysis of proposed procedures for teaching maneuver

Presentation of the instruction material
   Establish the atmosphere of cooperation
   Explain, demonstrate, and direct
   Require student participation
   Keep goal in sight
   Be brief, clear, and to the point in explanations
   Use analogies as link between known and unknown
   Question technique: use and importance
   Deal with the individual needs of both poor students and apt students

Performance
   Usually integrated with presentation
   Require discipline
   Make it realistic
   Guide students efforts
   Progress from easy to difficult
   Relate to previous explanations and practice

- D-
Provide adequate practice but control blind "trial and error"
Understand factors relating to length and frequency of practices
Use of briefings and critiques
Skill versus knowledge
Role of repetition in learning and retention
Evaluate the performance
  An integral part of each lesson
  Establishes need for selective re-teaching or review
  Acquaint student with his progress
  Should include evaluation of things previously learned
  Should be based on standards established by the training syllabus

Completion Standards
This lesson will be successfully completed when, by oral examination, the student displays a basic understanding of how to guide the learning process as set forth in the current FAA Practical Test Standards.
Lesson I-3 - 2:00 Hours

Objectives
During this lesson, the student will be instructed in the analysis of effective methods and techniques.

Content
The four basic steps in teaching process
Preparation
Presentation
  Telling or explaining--the lecture method
  Techniques of discussion
Application
  Doing - trial and practice
  Essential to the learning process
  Constitutes student's activity based on instructor's preparation and presentation
  Requires careful guidance and correction
Review and evaluation
  Organizes thinking
  Develops understanding of basic principles
  Helps the student to see relationships
  Measures the success of a teaching program
  Tests for both understanding and performance
  Characteristics of good evaluation
  Common techniques of evaluation

Completion Standards
This lesson will be successfully completed when, by oral examination, the student displays a basic understanding of the analysis of effective methods and techniques as set forth in the current FAA Practical Test Standards.
Lesson I-4 - 3:00 Hours

Objectives
During this lesson, the student will be instructed in the flight instructor's role in helping students to learn.

Content
Be a professional
Train and prepare
Follow a program of self-improvement
Adhere to ethical standards
Be of real service
Believe in your work
Maintain a positive attitude--be sincere, enthusiastic, friendly, and patient
Be proficient as a pilot
Be proficient as a teacher

The instructor/student relationship
Gain the student's confidence
Appreciate the student's problems
Allow for individual differences
Keep student aware of progress

Safety practices
Practice what you preach
Use the checklists
Observe established safety practices
Observe regulations
Teach respect for limitations of self and equipment

Use of training aids
Models
Charts, diagrams, and performance tables
Audiovisual courses
Programmed instruction

Completion Standards
This lesson will be successfully completed when, by oral examination, the student displays a basic understanding of the flight instructor's role in helping the students to learn as set forth in the current FAA Practical Test Standards.
Lesson I-5 - 2:00 Hours

Objectives
During this lesson, the student will be instructed in flight instructor responsibilities including maintaining student interest and motivation.

Content
Motivation - basic to all learning
   Utilize interest noted during analysis of the student
   Direct and control student's attention
   Appeal to all the student's senses
   Contrive interesting experiences
   Teach from the known to the unknown
   "Watch your language" - explain technical terms
   Emphasize the positive
   Utilize the incentive provided by rewards
Foster student learning
   Know the objective
   Devise the plan of action
   Create a positive instructor/student relationship
   Present information and guidance effectively
   Transfer responsibility to the student as he learns
   Evaluate teaching effectiveness through evaluation of the student's learning and proficiency
Instruction of student pilots
   Provide adequate instruction
   Require an adequate standard of performance
   Give adequate supervision
   Endorse student pilot certificates
   Endorse student logbook
   Maintain adequate records
Flight test recommendations and other instructor endorsements
Aircraft checkouts and refresher training
Flight instructor image
   Sincerity
   Accept the student as he is
   Appearance and habits
   Avoid the use of obscene language
   Maintain a professional demeanor

Completion Standards
This lesson will be successfully completed when, by oral examination, the student displays a basic understanding of flight instructor responsibilities including maintaining student interest as set forth in the current FAA Practical Test Standards.

- H-
Lesson I-6 - 1:00 Hour

Objectives
during this lesson, the student will be instructed in the important aeromedical information required for flight instruction.

Content
  The general health factor
  Specific aeromedical factors -- their symptoms and control
    Fatigue, boredom, inattention
    Hypoxia
    Alcohol
    Drugs
    Vertigo
    Carbon monoxide
    Vision
    Middle ear discomfort
  Scuba diving -- "Airman's Bends"
  Psychological factors in flying
    Anxiety
    Normal and abnormal reactions to stress
    The "difficult" student
    The seriously abnormal student

Completion Standards
This lesson will be successfully completed when, by oral examination, the student displays a basic understanding of aeromedical factors in flight training and the prescribed procedure in each situation as set forth in the current FAA Practical Test Standards.

STAGE ONE COMPLETION STANDARDS. 1:00 hour, This stage will successfully be completed when the student completes the exam and subsequently corrects the examination to 100%.

This page revised January 28, 2002
Stage Two Objective
To ensure the student possesses an adequate knowledge and understanding of the performance and analysis of flight training maneuvers as required to instruct in the principles of flight.

STAGE TWO COMPLETION STANDARDS.
This stage will successfully be completed when the student completes the exam and subsequently corrects the examination to 100%.

Lesson II-1 - 4:00 Hours

Objectives
During this lesson, the student will be instructed in the basic aerodynamics required to flight instruction.

Content
Aerodynamic terms and definitions
  Recommended terms
  Other terms often used by pilots
Airplane loading
  Weight and balance and flight performance
  Effects of load on the aircraft structure
  Effects of loading on stability and controllability
Forces acting on an airplane in flight
  Explanation of forces
  How forces are applied to the aircraft
The airplanes axes of rotation
  Explanation of these axes
  Location of these axes on the airplane
Functions of the control surfaces and trim tabs
  How they operate
  Their primary purposes
Use of flaps

This page revised January 28, 2002
Effects on flight performance
Effects on stability

Angle of attack
In stalls
As an index of performance

Airspeed
Control effectiveness
Maximum performance airspeeds
  Slow flight
  Cruise
  Best rate-of-climb (Vy)
  Best angle-of-climb (Vx)
  Relationship between speed, angle of bank, and rate of turn

Turns
Forces acting on an aircraft in a normal turn
Changes of lift in a turn
Changes of drag in a turn

Ground effect
As a factor in takeoffs
As a factor in landings
Its use in emergencies

Torque and "P" factor
Aircraft rigging
Asymmetrical loading of the propeller
Action of the spiral slipstream
Gyroscopic action of the propeller
Torque action

Controllable propellers
How a propeller works
Purpose of controllable propellers
Operation of controllable propellers--the relationship between manifold pressure, RPM, and BMEP (Brake Mean Effective Pressure)

Completion Standards
This lesson will be successfully completed when, by oral examination, the student displays an understanding and can correctly analyze the basic aerodynamics required for flight instruction as set forth in the current FAA Practical Test Standards.
Lesson II-2 - 4:00 Hours

Objective
During this lesson, the student will be instructed in the analysis of basic flight maneuvers and procedures.

Content
How and when to introduce maneuvers and procedures
Preflight (including check of airplane documents and records), starting, warmup, taxi, before takeoff, in-flight, and postflight checks and procedure
Use of radio for voice communications
Straight and level flight, turns, (including slips and skids), and confidence maneuvers
Climbs and glides (including powered descents)
Ground track maneuvers
"S" turns across a road
Turns about a point, including 720 degree steep turns
Rectangular patterns
Traffic patterns
Stalls, stall recoveries, and flight at minimum controllable airspeeds
Takeoffs and landings
Normal
Crosswind
Short, soft, and rough field landings
Slips, and slips to a landing
Downwind landings
Power approaches
Touch-and-go landings
Wheel landings (tailwheel type airplanes), stall landings, (nosewheel landings)
Go-arounds
Emergencies, including those applicable to multiengine aircraft
Solo flight
Pattern eights (along, across, and around)
Chandelles and lazy eights
Steep turns (including 720 degree power turns)
Constant radius power off spirals
Spins
Post solo emergencies
Knowing the correct technique for the maneuvers and procedures
Recognition and analysis of common student errors
Familiarization of effective methods of correcting student errors
Required maneuvers and procedures
Cross-country flying
  Planning
  Pilotage
  Dead reckoning
  Use of radio aids
  Cross-country emergencies

Completion Standards
This lesson will be successfully completed when, by oral examination, the student displays an understanding, and can correctly analyze basic flight training maneuvers and procedures as set forth in the current FAA Practical Test Standards.
Lesson II-3 - 4:00 Hours

Objectives
During this lesson, the student will be instructed in the integration of instruction in visual and instrument flying, and the fundamentals of instrument flight.

Content
- Objectives of integrated flight instruction
  - Development of habit patterns
  - Accuracy of flight control
  - Operating efficiency
  - Emergency capability
- Other factors of integrated flight instruction
  - Procedures
  - Safety precautions
  - Flight instructor qualifications
- The three major components of attitude instrument flight
  - Instrument coverage (cross check)
  - Instrument interpretation
  - Aircraft control
- Instrument characteristics
  - Attitude indicator
  - Heading indicator
  - Vertical speed indicator
  - Turn and slip indicator
  - Airspeed indicator
  - Altimeter
  - Magnetic compass
- Other important factors in instrument training
  - How to determine attitude by instrument indications
  - Recognition of incorrect use of controls by flight instrument references
  - The relationship between rate of turn, radius of turn, true airspeed, and angle of bank
  - Standard rate turns
  - Physiological reactions and sensory illusions
- Required maneuvers for a private pilot certificate with an airplane rating

Completion Standards
This lesson will be successfully completed when, by oral examination, the student displays an understanding, and can correctly analyze both integrated flying and attitude instrument flying for training purposes as set forth in the current FAA Practical Test Standards.
Lesson II-4 - 4:00 Hours

Objectives
During this lesson, the student will be instructed in the use of radio for both communication and navigation.

Content
- VHF communication equipment
  - The "line-of-sight" range of transmissions
  - Understanding how to use UHF/DF service and radar assistance from ground stations
- VOR equipment
  - H, L, T, VOR's
  - The components of the VOR system
  - VOR radials, and their relation to the station
  - Determining the instrument indications and their relation to position from the station
  - Time to station and off course navigation
  - VOR checks
- ADF equipment
  - Determining magnetic directions and relative positions
  - Determining bearing information
  - ADF time and distance checks
  - ADF tracking (both inbound and outbound)
  - Operational characteristics and precautions to observe in use of L/F radio equipment

Completion Standards
This lesson will be successfully completed when, by oral examination, the student displays an understanding, and can correctly explain the use of radio equipment for flight training purposes as set forth in the current FAA Practical Test Standards.
Lesson II-5 - 4:00 Hours

Objectives
During this lesson, the student will be instructed in the use of pilot information publications.

Content

Airman's Information Manual
NAVAIDS
Airport and air navigation lighting and marking aids
Altimetry
Good operating practices
Radar
Radiotelephone phraseology and techniques
Safety of flight
Weather
ATC operations and procedures
Flight data and special operations
NOTAMS
Airport directory
Airport facility directory

Airplane flight and owner's manuals
Know how to consult the weight and balance data to determine that the aircraft is properly loaded. Know how to compute empty weight, useful load, and gross weight.
Know how to compute moments from weight and center of gravity arms.
The grade and quantity of fuel and oil required
Flight load factor limitations and airspeed limitations
Use of performance charts as required for:
  Takeoff data
  Climb data
  Landing distance data
  Cruise performance data (cruise power settings, approximate true airspeeds, fuel consumption rate)
Use tables such as:
  Stall speed versus angle-of-bank table
  Airspeed calibration or correction table

NTSB Part 830, Rules pertaining to the Notification and Reporting of Aircraft Accidents, Incidents, and Overdue Aircraft, and preservation of Aircraft Wreckage, Mail, and Records
Federal Aviation Regulations
  Part 1, Definitions and Abbreviations
  Part 61, Certification: Pilots and Flight Instructors
  Part 91, General Operating and Flight Rules

Completion Standards
This lesson will be successfully completed when, by oral examination, the student displays an understanding, and can correctly teach the use of airman information publications as set forth in the current FAA Practical Test Standards.
Lesson II-6 - 4:00 Hours

Objectives
During this lesson, the student will be instructed in other areas of importance to flight instruction.

Content
Airframe and powerplant operation
   Aircraft structures
   Airframe components and control surfaces
   Fuel and fuel systems
   Oil and oil systems
   Electrical system fundamentals
   Reciprocating engine principles and components
   Carburetor and fuel injection
   Propellers
   Engine instruments
   Altimeters (A review of Lesson 3 as required)
Airspeed indicators
Aircraft stability
   Static
   Dynamic
Airport lighting
   Special procedures for multi-engine instruction
Charts (density altitude, load factor, and oxygen)
Safe flying practices
   Density altitude
   Carburetor icing
   Snow, ice, and frost
   Wake turbulence
   Fuel contamination

Completion Standards
This lesson will be completed successfully when, by oral examination, the student displays an understanding and can correctly teach in all other major areas of importance to flight instruction as set forth in the current FAA Practical Test Standards.

Stage Two Final Written Examination - 1:00 Hour
This stage will successfully be completed when the student completes the exam and subsequently corrects the examination to 100%.

This page revised January 28, 2002
Southeastern Oklahoma State University Aviation Sciences Institute is located on the Southeastern Oklahoma State University campus and Eaker Field, which is located south of Durant, Oklahoma.

The mailing address is:

S.O.S.U.
Dept. of Aerospace
Station A, Box 4136
Durant, OK  74701

This training course outline meets all of the curriculum requirements for the additional Flight Instructor rating courses.

The training syllabus herein contains a separate ground training course and a flight training course which will be taught concurrently.

**COURSE OBJECTIVE:** This course is designed to provide the ground and flight training necessary to successfully complete the required knowledge and skill tests for an FAA Flight Instructor Instrument certification with an Airplane Category Rating and a Single-engine Land Class.

**ENROLLMENT PREREQUISITES:**

A. The Student must hold a Flight Instructor certificate before beginning the flight portion of the Instrument Flight Instructor certification course and;
B. At least a third-class medical certificate
C. Be at least Eighteen years of age.

**COMPLETION STANDARD:** The student must demonstrate through written tests, flight tests, and show through appropriate records that he meets the knowledge, skill, and experience requirements necessary to obtain a Flight Instructor Instrument certificate with an airplane category rating and a single-engine land. The student should complete at least one stage every 90 days.

This page revised January 28, 2002
Facilities and Equipment: Southeastern Oklahoma State University’s Aviation Sciences Institute is located on Eaker Field, five miles south of Durant Oklahoma. This facility is the operations base for the institute’s administration, flight training, and aircraft maintenance.

Aviation Sciences Institute Administration (Northwest Side)
- ASI administration and faculty offices, including ASI director, Chief Flight Instructor, and Assistant Chief Flight Instructor.
- Staff flight instructor offices. These offices very in size and may be occupied by one to three CFIs. Each instructor has a lockable desk, at least one student chair for pilot briefing, personal computer with internet, phone with voice mail, and a dry erase board.
- Laser grade testing center.
- Conference room
- Classroom that may be used for student briefing.
- Kitchen and restrooms.

Maintenance Hangar (Middle)
- Director of Aircraft Maintenance.
- All aircraft maintenance.

Flight Operations (Southeast Side)
- Aircraft dispatch and line crew office.
- Check instructor offices. Each check instructor is provided issued a private office with a lockable desk, at least one student chair for lesson briefing, personal computer with internet, phone with voice mail, and a dry erase board.
- WSI weather system.
- Pilot briefing room equipped with computers with internet and phones for contacting FSS.
- Lounge area with vending machines.
- Unicom station.
- Check ride office.
- Simulator room.
- Kitchen area and restrooms.

Airport: Eaker Field is an uncontrolled airport with AWOS and a 5,000ft hard surface runway. It meets the requirements of 14 CFR Part 141.38 for day and night operations. The airport has VOR and GPS instrument approach procedures for runways 17 and 35.

CLASSROOM INSTRUCTION: All ground-schools are taught in the Russell Building on Southeastern’s main campus. The Russell Building is a modern facility with classrooms large enough for 30-40 students. All classrooms meet the requirements of 14 CFR FAR 141.45. Classroom training aids include a media cart with computer, projector, and VCR, for power-point presentations and numerous aviation related videos and computer software.

This page revised September 2006
AIRCRAFT and FLIGHT TRAINING DEVICES: The C-172R, including the C-172R with G-1000, may be used for training in this course. All aircraft meet the requirements of FAR 141.39 and FAR 91.205 (day and night VFR.) Radio equipment will consist of at least one navigation/communication radio system (transceiver and VOR).

A Precision Flight Controls MFD (AATD) may be used as an instructional aid only. Authorized instructors are encouraged to use it as a supplement to individual lessons. However, in no case will training time in the AATD be substituted for time in the aircraft.

The Precision Flight Controls MFD is a twin and single engine-advanced ATD (AATD.) Equipment includes: fuselage with full dual controls, 180 degree visual system and instruments for flight, engines, and systems. The IFR avionics package includes Garmin 430 GPS/Nav/Com, dual needle RMI, HSI. Full autopilot/flight director with altitude preselect is available, along with worldwide navigational, and visual capabilities using Real World Frequencies; three needle altimeter; toe brakes; adjustable seats (pilot and copilot); and cockpit lights. Additional equipment includes a center trim console which provides manual controls for elevator trim, and rudder trim in addition to selecters for fuel, cowl flaps, wing flaps and carburetor heat. The 180 degree visual system includes 5-50” color monitors. USGS 50 meter terrain data is used for the continental US. This Flight Training Device meets all requirements of Appendices B and C; 14 CFR 141.41 (b).

Chief Flight Instructor:
Kyle V. Thomas
kthomas@se.edu
580.745.3246

Assistant Chief Flight Instructor:
George C. Jacox
gjacox@se.edu
580.745.3245

Instructors: Each Instructor used for ground or flight instruction must hold a flight instructor certificate or ground instructor certificate, as appropriate, with ratings for the approved course of training and all aircraft used in this course.

All instructors meet the experience requirements in FAR 141.33 (a) (3).
## INSTRUMENT FLIGHT INSTRUCTOR CERTIFICATION

### Stage One Instrument Review

<table>
<thead>
<tr>
<th>Topic</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Basic Instrument</td>
<td>2.0</td>
</tr>
<tr>
<td>2. Advanced Air work Maneuvers</td>
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<tr>
<td>3. IFR Cross-Country Procedures</td>
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<td>4. Emergency Procedures</td>
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<td>5. Stage Check</td>
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**Stage One Total** 10 hrs. Airplane

### Stage Two Practice Teaching

<table>
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<th>Topic</th>
<th>Hours</th>
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<tr>
<td>1. Basic Instrument</td>
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<tr>
<td>2. Advanced Air work Procedures</td>
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<td>3. Navigation and Approach Procedures</td>
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<td>4. Emergency Procedures</td>
<td>1.0</td>
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<tr>
<td>5. Final Stage Check</td>
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</table>

**Stage Two Total** 5.0 hrs. Airplane

**Totals** 15.0 hrs. Airplane

*This page revised June 2016*
FLIGHT INSTRUCTOR INSTRUMENT COURSE
TRAINING OUTLINE

FLIGHT TRAINING COURSE OBJECTIVES
The student will obtain the aeronautical skill and experience necessary to meet the requirements for a Flight Instructor, Airplane, Instrument Flight Examination.

FLIGHT TRAINING COURSE COMPLETION STANDARDS
The student has demonstrated through flight test and school records that he possesses the necessary aeronautical skill and experience to pass the Flight Instructor, Airplane, Instrument Flight Examination as set forth in the current FAA Certified Flight Instructor Airplane, Instrument Practical Test Standards.
STAGE I
10 HOURS

STAGE I OBJECTIVES
To ensure the student possesses an adequate knowledge of the fundamentals of attitude instrument flight instruction to instruct in instrument flight training.

STAGE I COMPLETION STANDARDS
This stage will be successfully completed when the student passes the Stage I Flight Check, and has a thorough understanding of instrument operations and procedures as set forth in the current FAA Certified Flight Instructor Airplane, Instrument Practical Test Standards.

LESSON I-1

Lesson Objectives
During this lesson, the student will be reviewed in the basic flight instruments, instrument checklist, and the basic types of attitude instruments and their usage

Lesson Introduction
Basic Instruments
Techniques, procedures, and operating limitations in the use of basic flight instruments in performing the Four Fundamentals of flight
Pre-takeoff cockpit check
Basic Attitude Instrument flying (Competency required, Full and Partial panel)
Cross check, instrument interpretation, and aircraft control
Basic Maneuvers
Straight and level flight
Straight climbs and descents
Turns
Application of aerodynamics to basic maneuvers
Post flight review and preview of the next lesson

Completion Standards
This lesson will be successfully completed when, by both oral examination and ground and flight demonstration, the student displays basic attitude instrument flying procedures as set forth in the current FAA Certified Flight Instructor Airplane, Instrument Practical Test Standards.
Lesson I-2

Lesson Objectives
During this lesson, the student will be reviewed in advanced Air work maneuvers solely be reference to instruments.

Lesson Introduction
Review of previous lesson
Advanced Air work maneuvers
   Timed turns, Magnetic compass turns, steep turns, change of airspeed in turns, climbing and descending turns
Stall and recoveries from stalls, maneuvering at approach speeds
   Unusual attitudes and recoveries
Introduction to review of radio navigation
Post flight review and preview of the next lesson

Completion Standards
This lesson will be successfully completed when by both oral examination and ground and flight demonstration, the student displays a basic understanding of the methods of explaining and demonstration Advanced Air work maneuvers as set forth in the current FAA Certified Flight Instructor Airplane, Instrument Practical Test Standards.
Lesson I-3

Lesson Objectives
During this lesson, the student will be reviewed in IFR Cross-country procedures.

Lesson Content
Review of previous lesson
Air Traffic Control Clearances and Procedures
Departure, En-route, and Arrival Procedures
Obtaining Weather Information
IFR Cross-country Planning
VOR procedures
   Orientation, Interception of predetermined radials, Course tracking, Holding and Transitions.
Holding Procedures
Precision approach procedures
Non-precision approach procedures, Including RNAV IAPs
Missed approach procedures
Circling approach procedures
Landing from an straight in approach
Post flight review and preview of the next lesson

Completion Standards
This lesson will be successfully completed when by both ground and flight demonstration, the student displays a basic understanding of the methods of explaining and demonstrating radio navigation procedures and approaches as set forth in the current FAA Certified Flight Instructor Airplane, Instrument Practical Test Standards.

This page revised June 2016
Lesson I-4

Lesson Objectives
During this lesson, the student will be reviewed in emergency procedures.

Lesson Introduction
Review of previous lesson
Emergency procedures
   Equipment failure
       Navigation, communication, power-plant failure
       Loss of gyro and vacuum
Lost procedures
Weather related emergencies
   Thunderstorms
   Icing
Postflight review and preview of the next lesson

Completion Standards
This lesson will be successfully completed when, by both oral examination and ground and flight demonstration, the student displays a basic understanding of the methods of explaining and demonstrating emergency procedures as set forth in the current FAA Certified Flight Instructor Airplane, Instrument Practical Test Standards.
Lesson I-5

Lesson Objectives
During this lesson, the student will be review in all previous lessons.

Lesson Review
- Review of basic instruments and basic Air work maneuvers
- Review of advanced Air work maneuvers
- Review of radio navigation procedures
- Review of emergency procedures

Completion Standards
This lesson will be successfully completed when, by both oral examination and ground and flight demonstration, the student displays a basic understanding of the methods of explaining and demonstration analysis of instrument training maneuvers as set forth in the current FAA Certified Flight Instructor Airplane, Instrument Practical Test Standards.
Stage Check: Stage I

Lesson Objectives
During this flight, the Chief Flight instructor, or his assistant, will determine if the student displays adequate knowledge of and can safely instruct and demonstrate all phases of IFR flying including emergency procedures during flight solely by reference to instruments.

Completion Standards
The student will be evaluated on the basis of the following standards as set forth in the current FAA Certified Flight Instructor Airplane, Instrument Practical Test Standards:

- Display reasonable skill and proficiency in explaining and demonstrating all associated phases of IFR flight, including emergency procedures, during flight solely by reference to instruments.
- Display adequate knowledge in instructing in the aircraft used.
- During normal flight, maintain at least:
  - 100 ft. altitude.
  - 10 degree heading.
  - 10 knots airspeed.
- During approaches maintain at least:
  - 10 knots of approach speed.
  - No more than 100 ft. below the prescribed initial approach altitude.
  - Full scale deflection of the CDI or the glide slope indicator after glide slope intersection and not below the DH or MDA prior to runway sighting.
- During partial panel operation, the pilot shall maintain control of the aircraft at all times.
- Engine out operations (if multiengine) within:
  - 20 degrees of heading.
  - 5 knots of Vyse.
  - 100 ft. of altitude.
STAGE II
INSTRUCTIONAL PRACTICE
5.0 HOURS

STAGE II OBJECTIVES
During this stage the student will practice teaching all attitude instrument flight maneuvers.

STAGE II COMPLETION STANDARDS
This stage will be successfully completed when the student passes the Stage Two Flight Check, and demonstrates the ability to instruct in attitude instrument flight training, and analyze all associated errors as set forth in the current FAA Certified Flight Instructor Airplane, Instrument Practical Test Standards.

LESSON II-1

Lesson Objectives
During this lesson, the student will practice teaching basic flight instruments, instrument checklist, and the basic types of attitude instruments and their usage.

Lesson Introduction
Basic instruments.
Preflight planning: takeoff and departure procedures.
Pre-takeoff instrument cockpit check.
Techniques, procedures, and operating limitations in the use of basic flight instruments in performing the Four Fundamentals of flight.
Cross Check, instrument interpretation, and aircraft control.
Basic Air work maneuvers.
  Straight-and level flight (pitch, bank, power, and trim control).*
  Straight climbs and descents (constant airspeed, constant rate).*
  Turns (standard rate, constant angle of bank).*
  Application of aerodynamics to basic maneuver (slips/skids, coordination).

Post flight review and preview of the next lesson.

Completion Standards
This lesson will be successfully completed when, by both oral examination and ground and flight demonstration, the student displays an understanding of the methods of explaining and demonstrating basic attitude instrument flying procedures and the analysis of all associated errors as set forth in the current FAA Certified Flight Instructor Airplane, Instrument PTS.

This page revised June 2016
Lesson Objective
During this lesson, the student will practice teaching advanced Air work maneuvers solely by reference to instruments.

Lesson Introduction
Review of previous lesson.
Advanced Air work maneuvers.
Timed turns, magnetic compass turns, steep turns, change of airspeed in turns, climbing and descending turns.*
Stalls and recoveries from stalls, maneuvering at approach speeds.
Unusual attitudes and recoveries.*
Introduction to review of radio navigation.
Postflight review and preview of the next lesson.
*Competency required on these maneuvers using needle, ball, airspeed only - (partial panel).

Completion Standards
This lesson will be successfully completed when, by both oral examination and ground and flight demonstration, the student displays an understanding of the methods of explaining and demonstration radio navigation procedures and the analysis of all associated errors as set forth in the current FAA Certified Flight Instructor Airplane, Instrument Practical Test Standards.
LESSON II-3

Lesson Objectives
During this lesson, students will practice teaching radio navigation and IFR cross-country procedures.

Lesson Introduction
- Review of Previous lesson.
- Air Traffic Control clearances.
- Departure, En route, and Arrival Procedures.
- Obtaining WX Information;
- IFR Flight Planning
- VOR, ADF, and GPS procedures.
  - Orientation, time/distance checks, interception of predetermined radials or bearing, course tracking, holding and transitions.
- Precision and Non-Precision approach procedures, including at least VOR, NDB, GPS, and ILS.
- Missed approach procedures.
- Circling approach procedures.
- Landing from an approach.
- Post flight review and preview of the next lesson.

Completion Standards
This lesson will be successfully completed when, by both oral examination and ground and flight demonstration, the student displays an understanding of the methods of explaining and demonstrating radio navigation procedures and approaches and the analysis of all associated errors as set forth in the current FAA Certified Flight Instructor Airplane, Instrument Practical Test Standards.

This page revised August 2004
Lesson II-4

Lesson Objectives
During this lesson, the student will practice teaching emergency procedures.

Lesson Introduction
Review of previous lesson.
Emergency procedures.
   Equipment failure (navigation, communication, Powerplant failure).
      Single-radio intersection holds
      Loss of gyro vacuum (partial panel approaches)
Lost communication
Lost navigation
Lost procedures
WX related emergencies
   Thunderstorms
   Icing

Completion Standards
This lesson will be successfully completed when, by both oral examination and ground and flight demonstration, the student displays and understanding of the methods of explaining and demonstrating emergency procedures and the analysis of all associated errors as set forth in the current FAA Certified Flight Instructor Airplane, Instrument Practical Test Standards.
Lesson II-5

Lesson Objectives
During this lesson, the student will practice teaching all previous lesson.

Lesson Review
- Review of basic instruments and basic Air work maneuvers.
- Review of advanced Air work maneuvers.
- Review of radio navigation procedures.
- Review of emergency procedures.

Completion Standards
This lesson will be successfully completed when, by both oral examination and ground and flight demonstration, the student displays an understanding of the methods of explaining, demonstrating, and analysis of instrument training maneuvers and the analysis of all associated errors as set forth in the current FAA Certified Flight Instructor Airplane, Instrument Practical Test Standards.
STAGE CHECK: STAGE II

Lesson Objectives
During this flight, the Chief Flight Instructor, or his assistant, will determine if the student displays adequate knowledge of and can safely instruct and demonstrate all phases of IFR flying including emergency procedures during flight solely by reference to instruments.

Completion Standards
At the completion of this lesson, the applicant will demonstrate the skill, maneuvers, procedures and instructional knowledge required to successfully meet or exceed the criteria outlined in the current FAA Flight Instructor Airplane, Instrument Practical Test Standards.
**Training Course Outline--Training Syllabus**

**Additional Flight Instructor Rating Course - Instrument Airplane**

**Ground Training: 30 Hours**

Ground Training Course Objectives
The student will obtain the necessary aeronautical knowledge and meet the prerequisites for the Flight Instructor-Instrument Airplane written examination.

Ground Training Course Completion Standards
The student has demonstrated through oral exam, written test, and records that he meets the prerequisites for the Flight Instructor - Instrument Airplane written examination.
Stage One
A Review Of The Fundamentals Of Instruction
7:00 Hours

Stage One Objective
To ensure the student possesses an adequate knowledge of the fundamentals of flight instruction to instruct in instrument training.

STAGE ONE COMPLETION STANDARDS. This stage will successfully be completed when the student completes the exam and subsequently corrects the examination to 100%.

Lesson 1-1 - 1:00 Hour
Objectives
During the lesson, the student will be reviewed in the principles of teaching and learning.
Content
- How people learn
  - Perception
    - Individual mental, emotional, and physiological characteristics
    - Needs and requirements
    - Goals and values
    - Self-concept
    - Time and opportunity to perceive
    - The element of threat
  - Insight
    - Cultivating receptiveness to new experiences
    - Organizing demonstrations, explanations, and directed student practice
    - Pointing out related perceptions as they occur
    - Supervising the "trial and error" process
    - Assisting the student to group associated perceptions into meaningful wholes or "blocks" of learning
  - Motivation
    - Types of motivation
    - Use of factors which affect motivation
  - Obstacles to learning
    - Self-consciousness
    - Antagonism or feeling of unfair treatment
    - Impatience
    - Worry or lack of interest

This Page Revised January 28, 2002
Physical discomfort, fatigue, and illness
Apathy fostered by poor instruction
Fear, anxiety, and timidity
Lack of confidence
Airsickness

Habits and transfer
The importance of the formation of correct habit patterns
The importance of habit patterns in aircraft control
The promotion of transfer of learning through use of the flight syllabus
Positive transfer
Negative transfer
The influence of the "building block" technique of instruction in habit forming

Levels of learning
Rote performance
True understanding
Correlation of previous learning, understanding, and skill with new task, problems, techniques, and procedures

Rates of learning
The characteristics of a typical learning curve
Initial learning rate
Slumps or plateaus and their causes
Reversals and their causes

The role of memory and the effect of forgetting in the achievement of satisfactory student progress
Relationship between memory and habit patterns
Usefulness of drill, recitation, and quizzing
Continued usage, practice, and application

Significant principles that reinforce memory
Praise
Association
Favorable attitude
Learning with all the senses
Meaningful repetition

Common misconceptions about learning
Fear is the best motivator
Making it easy to learn is contrary to the principles of sound teaching
The greater the experience, the better performance
The impersonal approach is more effective than the friendly attitude in teaching
Competition is the key to successful learning
Frustration and failure are essential to learning

Completion Standards
This lesson will be successfully completed when, by oral examination, the student displays a basic understanding of the principles of teaching and learning as set forth in the current FAA Flight Instructor Instrument Practical Test Standards.
Lesson I-2 - 1:00 Hour

Objectives
During this lesson, the student will be instructed in how to guide the learning process.

Content

- Plan the instructional activity
  - Establish clear objectives or goals
  - Identify the block of learning
  - Provide for student participation
  - Diagnose student ability
  - Use a teaching sequence that "makes sense"
  - Work from the known to the unknown
  - Work from the easy to the difficult
  - Plan so the student will see the necessity and logic of each succeeding step

- The flight training syllabus
  - Arrange for efficient sequence in "blocks" of training
  - Use syllabus as a guide
  - Keep flexibility in teaching procedures

- The lesson plan
  - Lesson planning is essential to teaching success
  - Items to include in lesson plan

- The flight instruction breakdown
  - Useful in preparing meaningful lesson plans
  - Useful for guidance in offering effective instruction
  - Requires personal analysis of maneuver
  - Requires personal analysis of proposed procedure for teaching maneuver

- Presentation of the instruction material
  - Establish atmosphere of cooperation
  - Explain, demonstrate, and direct
  - Require student participation
  - Keep goal in sight
  - Be brief, clear, and to the point in explanations
  - Use analogies as link between known and unknown
  - Question technique: use and importance
  - Deal with the individual needs of both poor students and apt students

- Performance
  - Usually integrated with presentation
  - Require discipline
  - Make it realistic
  - Guide student efforts
  - Progress from easy to difficult
  - Relate to previous explanations and practice
  - Provide adequate practice but control blind "trial and error"
Understand factors relating to length and frequency of practices
Use of briefings and critiques
Skill versus knowledge
Role of repetition in learning and retention

Evaluate the performance
An integral part of each lesson
Establishes need for selective re-teaching or review
Acquaint student with his progress
Should include evaluation of things previously learned
Should be based on standards established by the training syllabus

Completion Standards
This lesson will be successfully completed when, by oral examination, the student displays a basic understanding of how to guide the learning process as set forth in the current FAA Flight Instructor Instrument Practical Test Standards.
Lesson I-3 - 1:00 Hour

Objectives
During this lesson, the student will be instructed in the analysis of effective methods and techniques.

Content
The four basic steps in the teaching process
- Preparation
- Presentation
  - Telling or explaining—the lecture method
  - Techniques of discussion
  - Demonstration or showing
- Application - trial and practice
  - Essentials to the learning process
  - Constitutes student's activity based on instructor's preparation and presentation
  - Requires careful guidance and correction
  - Requires student and instructor evaluation
  - Concentrate on strengthening weak points of performance
- Review and evaluation
  - Organizes thinking
  - Develops understanding of basic principles
  - Helps the student to see relationships
  - Measures the success of a teaching program
  - Tests for both understanding and performance
  - Characteristics of good evaluation
  - Common techniques of evaluation

Completion Standards
This lesson will be successfully completed when, by oral examination, the student displays a basic understanding of the analysis of effective methods and techniques as set forth in the current FAA Flight Instructor Instrument Practical Test Standards.
Lesson I-4 - 1:00 Hours

Objectives
During this lesson, the student will be instructed in the flight instructor's role in helping students to learn.

Content
Be a professional
Train and prepare
Follow a program of self-improvement
Adhere to ethical standards
Be of real service
Believe in your work
Maintain a positive attitude--be sincere, enthusiastic, friendly, and patient
Be proficient as a pilot
Be proficient as a teacher

The instructor/student relationship
Gain the student's confidence
Appreciate the student's problems
Assess the student's personality, thinking, and ability
Allow for individual differences
Keep student aware of progress

Safety practices
Practice what you preach
Use the checklists
Observe established safety practices
Observe regulations
Teach respect for limitations of self and equipment

Use of training aids
Models
Charts, diagrams, and performance tables
Audiovisual courses
Programmed instruction

Completion Standards
This lesson will be successfully completed when, by oral examination, the student displays a basic understanding of the flight instructor's role in helping students to learn as set forth in the current FAA Flight Instructor Instrument Practical Test Standards.

Lesson I-5 - 1:00 Hour
Objectives
During this lesson, the student will be instructed in flight instructor responsibilities including maintaining student interest and motivation.

Content
Motivation - basic to all learning
- Utilize interests noted during analysis of the student
- Direct and control student's attention
- Appeal to all the student's attention
- Contrive interesting experiences
- Teach from the known to the known
- "Watch your language" - explain technical terms
- Emphasize the positive
- Utilize the incentive provided by rewards

Foster student learning
- Know the objective
- Devise a plan of action
- Create a positive instructor/student relationship
- Present information and guidance effectively
- Transfer the responsibility to the student as he learns
- Evaluate teaching effectiveness through evaluation of student's learning and proficiency

Instruction of student pilots
- Provide adequate instruction
- Require an adequate standard of performance
- Give adequate supervision
- Endorse student pilot certificates
- Endorse student logbooks
- Maintain adequate records

Flight test recommendations and other instructor endorsements
- Aircraft checkouts and refresher training
- Flight instructor image

Completion Standards
This lesson will be successfully completed when, by oral examination, the student displays a basic understanding of flight instructor responsibilities including maintaining student interest as set forth in the current FAA Flight Instructor Instrument Practical Test Standards.

STAGE ONE COMPLETION STANDARDS. This stage will successfully be completed when the student completes the exam and subsequently corrects the examination to 100%.

This Page Revised January 28, 2002
Stage Two
Analysis Of The Fundamentals Of Attitude Instrument Flight
7:00 Hours

Stage Two Objective
To ensure the student possesses an adequate knowledge and understanding of the fundamentals, components, and principles involved in instructing attitude instrument flight.

Stage Two Completion Standards
This stage will successfully be completed when the student completes the exam and subsequently corrects the examination to 100%.

Lesson II-1 - 1:00 Hour

Objectives
During this lesson, the student will be instructed in the methods of explaining and demonstrating the construction, operating principles, and limitations of gyroscopic flight instruments.

Content
Properties of gyroscopic action, power systems, construction, principles of operation, and operating limitations of:

- Attitude indicator
- Turn/slip indicator
- Heading indicator

Completion Standards
This lesson will be successfully completed when, by oral examination, the student displays a basic understanding of the methods of explaining and demonstrating gyroscopic flight instruments as set forth in the current FAA Flight Instructor Instrument Practical Test Standards.

This Page Revised January 28, 2002
Lesson II-2 - 1:00 Hour

Objectives
During this lesson, the student will be instructed in the methods of explaining and demonstrating the construction, operating principles, and limitations of pressure differential flight instruments and magnetic compass.

Content
   Pitot-static system - construction, principles of operation, and operating limitations of:
      Altimeter
      Airspeed indicator
      Vertical velocity indicator
      Magnetic compass

Completion Standards
This lesson will be successfully completed when by oral examination, the student displays a basic understanding of the methods of explaining and demonstrating pressure differential flight instruments and magnetic compass as set forth in the current FAA Flight Instructor Instrument Practical Test Standards.
Lesson II-3 - 3:00 Hours

Objectives
During this lesson, the student will be instructed in the methods of explaining and demonstrating attitude instrument flying procedures and techniques.

Content
Instruments
  Pitch
  Power
  Bank
Basic maneuvers
  Straight and level, climbs and descents, turns
  Unusual attitudes and recovery

Completion Standards
This lesson will be successfully completed when, by oral examination, the student displays a basic understanding of the methods of explaining and demonstrating attitude instrument flying procedures and techniques as set forth in the current FAA Flight Instructor Instrument Practical Test Standards.

Stage Two Final Written Examination - 2:00 Hours
This stage will successfully be completed when the student completes the exam and subsequently corrects the examination to 100%.

This Page Revised January 28, 2002
Stage Three
Analysis Of The Procedures Of Instructing Instrument Flying
5:00 Hours

Stage Three Objective
To ensure the student possesses an adequate knowledge and understanding of the procedures and operational aspect of instructing instrument flying.

Stage Three Completion Standards
This stage will successfully be completed when the student completes the exam and subsequently corrects the examination to 100%.

Lesson III-1 - 1:30 Hour

Objectives
During this lesson, the student will be instructed in the procedures of instructing the basic operating principles, characteristics, and limitations of ground and airborne navigation facilities.

Content
VOR's
  Types
  Limitations
Radio beacons and compass locators
Commercial broadcasting stations
Radar facilities
  ASR
  PAR
Radio beacon systems
Distance measuring equipment
Instrument landing systems

Completion Standards
This lesson will be successfully completed when, by oral examination, the student displays a basic understanding of the methods of explaining and demonstrating the operating principles, characteristics, and limitations of ground and airborne navigation facilities as set forth in the current FAA Flight Instructor Instrument Practical Test Standards.

This Page Revised January 28, 2002
Lesson III-2 - 1:30 Hour

Objectives
During this lesson, the student will be instructed in the procedures of instructing the airway route system, direct flights, and other procedures.

Content
Victor (VOR) airways
   Limits
   Radials and bearings
   Route identification
   Altitude limits
   Reporting points
   Segment limits
   VOR/ADF orientation, navigation, tracking, time/distance
Direct flights
   Altitude/distance limits
Other procedures
   Radar vectors/approaches
   ILS, VOR, ADF approaches
   Area navigation
   Contact and visual approaches
   Distance measuring equipment
   Visual approach slope indicator

Completion Standards
This lesson will be successfully completed when, by oral examination, the student displays a basic understanding of the methods of explaining and demonstrating the airway route system, direct flights, and other procedures as set forth in the current FAA Flight Instructor Instrument Practical Test Standards.

Stage Three Final Written Examination - 2:00 Hours
This stage will successfully be completed when the student completes the exam and subsequently corrects the examination to 100%.

This Page Revised January 28, 2002
Stage Four
Federal Aviation Regulations & ATC Procedures
5:00 Hours

Stage Four Objectives
To ensure the student possesses an adequate knowledge and understanding of the federal aviation regulations and air traffic control procedures related to instrument flight certification and operating rules.

Stage Four Completion Standards
This stage will successfully be completed when the student completes the exam and subsequently corrects the examination to 100%.

Lesson IV-1 - 1:00 Hour

Objectives
During this lesson, the student will be instructed in the procedures of instructing the certification of pilots and flight instructors prescribed in FAR Part 61.

Content
FAR Part 61-Certification; Pilots and Flight Instructors
Subpart A - General
Subpart B - Aircraft Ratings
Subpart G - Flight Instructors

Completion Standards
This lesson will be successfully completed when, by oral examination, the student displays a basic understanding of the methods of explaining and demonstrating the certification of instrument rating as set forth in the current FAA Flight Instructor Instrument Practical Test Standards.

This Page Revised January 28, 2002
Lesson IV-2 - 1:00 Hour

Objectives
During this lesson, the student will be instructed in the procedures of instructing the general operation and flight rules prescribed in FAR Part 91.

Content
FAR Part 91 - General Operations and Flight Rules
- Subpart A - General; Subpart B - Flight Rules (IFR)
- Subpart C - Maintenance requirements
NTSB Regulation Part 830 - Aircraft Accidents,
- Aircraft accident investigations, notification and reports

Completion Standards
This lesson will be successfully completed when, by oral examination, the student displays a basic understanding of the methods of explaining and demonstrating the general operation and flight rules pertaining to instrument flight, and the requirements for reporting of aircraft accidents as set forth in the current FAA Flight Instructor Instrument Practical Test Standards.
Lesson IV-3 - 1:00 Hour

Objectives
During this lesson, the student will be instructed in the procedures of instructing the air traffic control procedures related to instrument flight.

Content
Takeoff and departure procedures
  Flight plan; ATIS; clearance delivery; departure control, SID
Enroute procedures
  Radar environment; non-radar environment; altitude assignment; preferred routes
Arrival procedures
  STAR; holding; approaches; missed approaches; emergencies

Completion Standards
This lesson will be successfully completed when, by oral examination, the student displays a basic understanding of the methods of explaining and demonstrating the air traffic control procedures related to instrument flight as set forth in the current FAA Flight Instructor Instrument Practical Test Standards.

Stage Four Final Written Examination - 2:00 Hours
This stage will successfully be completed when the student completes the exam and subsequently corrects the examination to 100%.

This Page Revised January 28, 2002
Stage Five
Review And Final Preparation
6:00 Hours

Stage Five Objective
To ensure the student meets at least the minimum knowledge requirements for the FAA Flight Instructor - Instrument written examination and to introduce the oral portion of the Flight Instructor - Instrument flight examination in accordance with FAR's Part 61 and Part 141, and the standards set by the school.

Stage Five Completion Standards
This stage will successfully be completed when the student completes the exam and subsequently corrects the examination to 100%.

Lesson V-1 - 2:00 Hours

Objectives
During this lesson, the student will be reviewed in the basic knowledge requirements for the Flight Instructor - Instrument written examination.

Content
Fundamentals of instruction
  How people learn; levels of learning; rates of learning; common misconceptions about learning
  The four basic steps in the teaching process
  The instructor/student relationship
Flight instruments/attitudes instrument flying
  Construction, operation, and limitations of flight instruments and analysis of the fundamentals of attitude instrument flying
IFR navigation
  IFR flight planning procedures; IFR navigation by radio aids; IFR departure, enroute, and approach charts
Rules and Publications
  Federal Aviation Regulations and Air Traffic Control procedures that apply to flight under IFR conditions

This Page Revised January 28, 2002
Lesson V-2 - 2:00 Hours

Objectives
During this lesson, the student will be introduced to the minimum basic knowledge requirements for the oral portion of the Flight Instructor - Instrument written examination.

Content
- Flight planning
- Weight and balance computations
- Performance computations
- Communications
- Basic instruments
- Partial panel

Completion Standards
This lesson will be completed when, by oral examination and demonstration, the student will be found to have been properly introduced to the basic knowledge requirements of the FAR's as set forth in the current FAA Flight Instructor Instrument Practical Test Standards.

Stage Five And Course Final Written Examination - 2:00 Hours
This stage will successfully be completed when the student completes the exam and subsequently corrects the examination to 100%.

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SOUTHEASTERN OKLAHOMA STATE UNIVERSITY
TRAINING COURSE OUTLINE

COMMERCIAL PILOT CERTIFICATION COURSE-AIRPLANE, SINGLE ENGINE

Southeastern Oklahoma State University’s Aviation Sciences Institute is located on the southeastern Oklahoma State University campus and Eaker Field, which is located south of Durant, Oklahoma.

The mailing address is:
S.O.S.U.
1405 N. 4th Ave., PMB 4136
Durant, OK 74701

This training course outline meets all of the curriculum requirements for the Commercial Pilot Certification Course contained in Appendix D of FAR Part 141.

The training syllabus herein contains a separate ground-training course and a flight-training course which will be taught concurrently.

**COURSE OBJECTIVE:** This course is designed to provide the ground and flight training necessary to successfully complete the required knowledge and skill tests for an FAA Commercial Pilot Certificate with an Airplane Category Rating and a Single Engine Land Class Rating.

**ENROLLMENT PREREQUISITES**
- A. The Student must hold a Private Pilot certificate before beginning the flight portion of the commercial pilot certification course and;
- B. Hold at least a third-class medical certificate.
- C. Be at least seventeen years of age.
- D. Hold an instrument rating with an Airplane Category rating; or
- E. Be concurrently enrolled in an approved instrument-rating course.

**COMPLETION STANDARD:** The student must demonstrate through oral tests, flight tests, and show through appropriate records that he meets the knowledge, skill, and experience requirements necessary to obtain a Commercial Pilot Certificate with an airplane category rating and a single-engine land class rating and an instrument - airplane rating. **The student must pass the required instrument rating practical test prior to beginning Stage Three of the Commercial Pilot Curriculum.** Furthermore, each student should complete at least one stage of training every 90 days.

This page revised August 8, 2011
Facilities and Equipment: Southeastern Oklahoma State University’s Aviation Sciences Institute is located on Eaker Field, five miles south of Durant Oklahoma. This facility is the operations base for the institute’s administration, flight training, and aircraft maintenance.

Aviation Sciences Institute Administration (Northwest Side)
- ASI administration and faculty offices, including ASI director, Chief Flight Instructor, and Assistant Chief Flight Instructor.
- Staff flight instructor offices. These offices very in size and may be occupied by one to three CFIs. Each instructor has a lockable desk, at least one student chair for pilot briefing, personal computer with internet, phone with voice mail, and a dry erase board.
- Laser grade testing center.
- Conference room
- Classroom that may be used for student briefing.
- Kitchen and restrooms.

Maintenance Hangar (Middle)
- Director of Aircraft Maintenance.
- All aircraft maintenance.

Flight Operations (Southeast Side)
- Aircraft dispatch and line crew office.
- Check instructor offices. Each check instructor is issued a private office with a lockable desk, at least one student chair for lesson briefing, personal computer with internet, phone with voice mail, and a dry erase board.
- Weather briefing computer.
- Pilot briefing room equipped with computers with internet and phones for contacting FSS.
- Lounge area with vending machines.
- Unicom station.
- Check ride office.
- Simulator room.
- Kitchen area and restrooms.

Airport: Eaker Field is an uncontrolled airport with AWOS and a 5,000ft hard surface runway. It meets the requirements of 14 CFR Part 141.38 for day and night operations. The airport has VOR and GPS instrument approach procedures for runways 17 and 35.

CLASSROOM INSTRUCTION: All ground-schools are taught in the Russell Building on Southeastern’s main campus. The Russell Building is a modern facility with classrooms large enough for 30-40 students. All classrooms meet the requirements of 14 CFR FAR 141.45. Classroom training aids include a media cart with computer, projector, and VCR, for power-point presentations and numerous aviation related videos and computer software.
AIRCRAFT and FLIGHT TRAINING DEVICES: The C-150/152, C-172, and C-182RG may be used for this course. All aircraft meet the requirements of FAR 141.39 and FAR 91.205 (day and night VFR.) Radio equipment will consist of at least one navigation/communication radio system (transceiver and VOR).

Although not part of the approved curriculum, a PFC Advanced Aviation Training System is available for student practice and demonstrations. The Precision Flight Controls MFD is a twin and single engine-advanced ATD (AATD.) Equipment includes: fuselage with full dual controls, 180 degree visual system and instruments for flight, engines, and systems. The IFR avionics package includes Garmin 430 GPS/Nav/Com, dual needle RMI, HSI. Full autopilot/flight director with altitude preselect is available, along with worldwide navigational, and visual capabilities using Real World Frequencies; three needle altimeter; toe brakes; adjustable seats (pilot and copilot); and cockpit lights. Additional equipment includes a center trim console which provides manual controls for elevator trim, and rudder trim in addition to selectors for fuel, cowl flaps, wing flaps and carburetor heat. The 180 degree visual system includes 5-50” color monitors. USGS 50 meter terrain data is used for the continental US. This Flight Training Device meets all requirements of Appendices B and C; 14 CFR 141.41 (b). Additionally, a KNL 94 GPS trainer is available for GPS demonstrations

Chief Flight Instructor:
Kyle V. Thomas
kthomas@se.edu
580.745.3246

Assistant Chief Flight Instructor:
George C. Jacox
gjacox@se.edu
580.745.3245

Instructors: Each Instructor used for ground or flight instruction must hold a flight instructor certificate or ground instructor certificate, as appropriate, with ratings for the approved course of training and all aircraft used in this course.

All instructors meet the experience requirements in FAR 141.33 (a) (3).
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MINIMUM TIME TABLE
COMMERCIAL PILOT CERTIFICATION

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Additionally, each lesson should be considered comprehensive. Therefore, students will always be expected to demonstrate elements of previous lessons.
Minimum Time Table  
Commercial Pilot Certification  

<table>
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*This page revised August 8, 2011*
MINIMUM TIME TABLE
COMMERCIAL PILOT CERTIFICATION

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<th>Lesson</th>
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<td>2. Scenario 2, Flight Plans and IAPs</td>
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<td>3. Scenario 3, Emergency Procedures</td>
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<td>4. Detailed Cross Country</td>
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<td>5. Stage Check</td>
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- The student must pass the required instrument rating practical test prior to beginning Stage Three of the Commercial Pilot Curriculum.
# Minimum Time Table

## Commercial Pilot Certification

### Stage Four

<table>
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<th>Lesson</th>
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<tr>
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<td>2. Complex Airplanes - Dual</td>
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<td>4. Solo Practice</td>
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<td>6. Solo Practice</td>
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<td>7. Cross-Country Ops</td>
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The individual times on this table are not mandatory; they are for instructor/student guidance only. Lesson times may vary because of individual student needs. **However, the minimum time listed for each stage will be attained at the completion to insure the student meets the minimum training requirements specified in FAR Part 141.**

Additionally, each lesson should be considered comprehensive. Therefore, students will always be expected to demonstrate elements of previous lessons.

> Stage Four must be completed in a Complex Airplane as defined by 61.31 (e).
STAGE ONE: 28 HOURS

Stage One Objectives
The objective of stage one is that the student review private pilot maneuvers and procedures and demonstrate private proficiency in the execution. The student also will be introduced to the techniques and procedures required for performance of steep power turns, steep spirals, chandelles, lazy eights, eights around pylons, eights-on-pylons, accuracy landings, short-field and soft-field landings, stalls and forced landings. In addition, he will become familiar with accepted procedures in flight emergencies.

Stage One Completion Standard
This stage will be complete when the student can perform each maneuver and procedure introduced with good coordination and planning. The student's proficiency in performance of steep power turns, steep spirals, chandelles, lazy eights, eights around pylons, and eights-on-pylons will attempt to meet the minimum standards outlined in the current FAA Commercial Practical Test Standards.
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1. **Lesson One** - Review and Introduction to Commercial Maneuvers - Dual (3.0 hrs.)

**A. Objective**
To allow the student to practice the maneuvers and procedures listed for review and demonstration private pilot proficiency in their performance. The student will also learn to obtain the maximum climb and turn performance from the training airplane through the introduction of steep power turns, chandelles, and maximum performance climbs.

**Content**
1. Pre-flight briefing
2. Pre-flight duties, including load and balance determination, line inspection, and aircraft servicing.
3. Private Pilot Flight maneuvers and procedures - **Review**
   a. Traffic patterns
   b. Normal and crosswind takeoffs and landings
   c. Recognition of imminent stalls and recovery from same with and without power.
   d. Flight at critically slow airspeed.
   e. Collision avoidance
   f. Additional maneuvers required by the Private Pilot PTS.
4. Flight Maneuvers and Procedures - **New**
   a. Steep power turns
   b. Chandelles
   c. Climbs at best angle and best rate
   d. After landing procedures

**B. Completion Standard**
At the completion of this lesson, the student will demonstrate private pilot proficiency in the performance of those maneuvers and procedures listed for review. In addition, he will demonstrate the techniques and procedures required for performance of steep power turns, chandelles, and maximum performance climbs.
2. **Lesson Two** - Solo Practice (1.0 hr)

A. **Objective**
   The objective of this lesson, is that the student will review the listed maneuvers and attempt to gain proficiency in their performance.

Content
   1. Flight maneuvers and procedures - **Review**
      a. Flight at critically slow airspeed
      b. Power-off stalls (imminent)
      c. Power-on stalls (imminent)
      d. Turns about-a-point
      e. Steep power turns
      f. Chandelles

B. **Completion Standard**
   Flight lesson two is complete when the student conducts a review of the listed maneuvers during each flight. During the review, he should attempt to gain smoothness, and coordination in the performance of each maneuver.
3. **Lesson Three** - Review and Introduction to Landings - Dual (3.0 hr.)

**A. Objective**
The objective of this lesson is to evaluate and correct any faulty areas of performance of the maneuvers listed for review, and to introduce the student to specialty landings.

**Content**
1. Pre-flight briefing
2. Flight maneuvers and procedures - **Review**
   a. S-turns across-a-road
   b. Eights around pylons
   c. Steep power turns
   d. Chandelles
   e. Climbs at best rate and best angle
3. Flight maneuvers and procedures - **New**
   a. Accuracy landings
   b. Eights-on-pylons
   c. Maximum performance takeoffs and landings using precision approaches and prescribed airplane performance speeds.
   d. Soft-field takeoffs and landings
   e. Short-field takeoffs and landings (with and without obstacles).
   f. Heavy traffic operations
   g. Power-Off 180-degree Accuracy Approach and Landing. *The 1,000ft marker will be the specified touchdown point.*
   h. After landing procedures
4. Post-flight critique and preview next lesson

**B. Completion Standard**
At the completion of this lesson, the student will demonstrate the listed ground reference maneuvers while maintaining appropriate wind drift correction and holding altitude within 100 feet. Steep power turns will be preformed with smooth entry and departure using bank angles within 10 degrees of the assigned angle. Chandelles will be demonstrated with coordination, planning and appropriate changes in pitch and bank. The student will also demonstrate the techniques and procedures required for the performance of accuracy landings, soft-field and short-field takeoffs and landings, operations in heavy traffic.

*This page revised August, 2004*
A. Objective
During flight lesson four, the objective will be to review the listed maneuvers and procedures, attempt to correct the areas of deficiency, and acquire added proficiency.

Content
1. Flight maneuvers and procedures - Review
   a. Soft-field takeoffs and landings
   b. Short-field takeoffs and landings
   c. Accuracy landings
   d. Flight at critically slow airspeed
   e. Power-off stalls (imminent)
   f. Power-on stalls (imminent)
   g. Steep power turns
   h. Chandelles
   i. Eights-on-pylons

B. Completion Standard
This lesson will be successfully completed when the student has conducted the assigned solo flights.
5. **Lesson Five** - Review and Introduction to Emergency Procedures, Dual (3.0 hr.)

A. **Objective**
To practice and demonstrate the review maneuvers so that any faulty areas of performance can be corrected. In addition, to familiarize the student with emergency climb and descent procedures, inadvertent flight into IMC, and VFR emergency procedures appropriate for combating engine and cabin fires.

**Content**
1. Pre-flight briefing
2. Flight maneuvers and procedures - **Review**
   a. Steep power turns
   b. Chandelles
   c. Short-field takeoffs and landings
   d. Soft-field takeoffs and landings
   e. Engine failure and forced landings
   f. Wake turbulence avoidance
3. Emergency maneuvers and procedures - **New**
   a. Emergency climbs and descents
   b. Cabin fire
   c. Engine fire
4. Inadvertent Flight into IMC (full panel)
   a. Straight and level flight
   b. Constant airspeed climbs and descents
   c. Standard rate turns
   d. Recovery from critical flight attitude
5. Post-flight critique and preview next lesson

B. **Completion Standard**
At the completion of this lesson, the student will be able to perform steep power turns while maintaining altitude within 100 feet and bank angle within 10 degrees. Chandelles will be performed with smoothness and will be completed within 15 degrees of desired heading. Airspeed at recovery will be within 10 knots of stall speed. Short and soft-field procedures will be performed correctly with good directional control. Additionally, the student will demonstrate that he understands the proper procedures for meeting the listed emergency procedures.
6. **Lesson Six** - Solo Practice (1.0 hr.)

A. **Objective**
To afford the student an opportunity to practice and review the listed maneuvers and procedures and attempt to correct any errors during execution.

**Content**
1. Flight Maneuvers and procedures - **Review**
   a. Steep power turns
   b. Chandelles
   c. Flight at critically slow airspeed
   d. Normal and/or crosswind takeoffs and landings

B. **Completion Standard**
This lesson is complete when the student has conducted a solo review of the listed maneuvers and procedures. During this flight, the student should attempt to perform with consistent smoothness, good planning, and proper coordination.
7. Lesson Seven—Review and Introduction to Additional Commercial Maneuvers—Dual (3.0 hrs.)

A. Objective
Students will demonstrate and practice those maneuvers listed for review, as well as the introduction of steep spirals and lazy eights.

Content
1. Pre-flight briefing
2. Flight maneuvers and procedures - Review
   a. Power-off stalls (full)
   b. Forward and side slips
3. Flight maneuvers and procedures - New
   a. Steep spirals
   b. Lazy eights
   c. Attitude instrument flying (full panel)
      a. Straight and level flight
      b. Constant airspeed climbs and descents
      c. Standard rate turns
      d. Recovery from critical flight attitude
4. Post-flight critique and preview next lesson

B. Completion Standard
At the completion of this lesson, the student will be able to demonstrate prompt stall recoveries with a minimum loss of altitude. During the performance of slips he will be able to maintain the correct airspeed within 10 knots. In addition, he will demonstrate the techniques and procedures required for the performance of steep spirals and lazy eights.
8. **Lesson Eight** - Solo Practice (2.0 hrs.)

A. **Objective**
   The objective of this lesson is to allow the student to continue to practice and increase his proficiency in the performance of the listed maneuvers, as well as any maneuvers specifically assigned by the instructor.

**Content**
1. Flight maneuvers and procedures - **Review**
   a. Steep power turns
   b. Chandelles
   c. Steep spirals
   d. Short-field takeoffs and landings
   e. Soft-field takeoffs and landings
   f. Cross-wind takeoffs and landings
   g. Accuracy landings
   h. Lazy eights
   i. Eights-on-pylons
   j. Air work assigned by instructor

B. **Completion Standard**
   This lesson will be successfully completed when the student has conducted a solo review of the listed assigned maneuvers, performing them with accuracy, good planning, and coordination.
9. Lesson Nine - Dual - Review (3.0 hrs.)

A. Objective
To allow the student to practice and demonstrate the accurate performance of those maneuvers listed.

Content
1. Pre-flight briefing
2. Flight maneuvers and procedures - Review
   a. Steep power turns
   b. Chandelles
   c. Steep spirals
   d. Lazy Eights
3. Attitude instrument flying (full panel)
   a. Straight and level flight
   b. Constant airspeed climbs and descents
   c. Standard rate turns
   d. Recovery from critical flight attitude
4. Post-flight critique and preview next lesson

B. Completion Standard
At the completion of this lesson, the student will demonstrate that he can perform the review maneuvers using smooth, coordinated control inputs. He will understand the minimum acceptable critique for each maneuver and know when a specific maneuver has met the criteria.
10. **Lesson Ten** - Solo Practice (2.0 hrs.)

**A. Objective**
During flight lesson ten, the student will practice the performance of the listed maneuvers and concentrate on correcting those areas where frequent difficulties are encountered.

**Content**
1. Flight maneuvers and procedures - **Review**
   a. Steep spirals
   b. Steep power turns
   c. Chandelles
   d. Normal and crosswind takeoffs and landings
   e. Forward and side slips
   f. Maneuvers and procedures assigned by the instructor

**B. Completion Standard**
This lesson is completed when the student has conducted a solo review of the assigned and listed maneuvers. He should be aware of those areas where he frequently experiences difficulties in performance and be able to analyze possible causes with his instructor.
11. **Lesson Eleven** - Solo Practice (1.0 hrs.)

**A. Objective**
To allow the student to practice the listed maneuvers and procedures to increase proficiency and experience.

**Content**
1. Flight maneuvers and procedures - **Review**
   a. Soft-field takeoffs and landings
   b. Short-field takeoffs and landings
   c. Accuracy landings
   d. Flight at critically slow airspeed
   e. Steep power turns
   f. Steep spirals

**B. Completion Standards**
This lesson will be completed when the student has conducted a solo review of the listed maneuvers and procedures.
12. Lesson Twelve - Dual - Review (3.0 hr.)

A. Objective
To allow the student to demonstrate and practice the listed maneuvers so the instructor can observe and correct any areas of deficiency.

Content
1. Preflight briefing
2. Flight maneuvers and procedures - Review
   a. Eights around pylons
   b. Eights-on-pylons
   c. Lazy eights
   d. Normal and maximum performance takeoffs and landings at maximum authorized takeoff weight.
   e. Cross-wind takeoffs and landings
   f. Collision avoidance
   g. Wake turbulence avoidance
3. Attitude instrument flying (full panel)
   a. Straight and level flight
   b. Constant airspeed climbs and descents
   c. Standard rate turns
   d. Recovery from critical flight attitude
4. Post-flight critique and preview next lesson

B. Completion Standard
This lesson will be successfully completed when the student is able to perform lazy eights, eights around pylons, and eights-on-pylons smoothly, with proper coordination, and in accordance with a pre-determined plan. Takeoffs will utilize good directional control and proper climb procedures with airspeeds maintained within 5 knots of desired speeds. Landings will utilize a stabilized approach with airspeed within 5 knots of the correct approach speed. Correct procedures for wake turbulence and collision avoidance will be demonstrated.
Lesson Thirteen - Solo Practice (1.0 hrs.)

A. Objective
During flight lesson thirteen, the student will continue to gain experience in the performance of listed and assigned flight maneuvers in preparation for the stage check.

Content
1. Flight maneuvers and procedures - Review
   a. Chandelles
      b. Lazy eights
      c. Power-off stalls (full)
      d. Forward and side slips
      e. Power-on stalls (full)
      f. Eights around pylons
      g. Eights-on-pylons
      h. Maneuvers assigned by the instructor

B. Completion Standard
This lesson is complete when the student has conducted a solo review of the listed and assigned maneuvers and procedures. He will be able to consistently apply correct techniques and attempt to accurately evaluate his own performance.
A. Objective
This lesson will serve to evaluate the student performance of the listed maneuvers and procedures. This stage check will be conducted by the Chief Flight Instructor or his assistant.

Content
1. Preflight briefing
2. Flight maneuvers and procedures - Review
   a. Chandelles
   b. Steep power turns
   c. Steep spirals
   d. Lazy eights
   e. Eights around pylons
   f. Eights-on-pylons
   g. Fire in flight
   h. Simulated engine failure and forced landings
3. Post-flight critique and preview next lesson

B. Completion Standard
At the completion of this lesson, the student will demonstrate that he can perform each of the listed maneuvers and procedures at a proficiency level which attempt to meet that outlined in the current FAA Commercial Pilot Practical Test Standards.
STAGE TWO - 68 HOURS

Stage Two Objective
The objective of stage two is that the student complete the night flight and the dual and solo cross-country experience requirements for a commercial pilot certificate. Each cross-country flight will involve a landing at a point more than 50 NM from the original departure point. In addition, he will continue to review and practice advanced maneuvers and procedures to maintain proficiency.

Completion Standard
Stage two will be successfully completed when the student demonstrates, through training records and stage check that he has attained the required cross-country experience and proficiency for a commercial pilot certificate and he is competent to act as pilot-in-command of extended cross-country flights. In addition, he will demonstrate that he has maintained or improved his proficiency in the performance of advanced maneuvers and procedures.
1. **Lesson One** - Night Operations - Dual (1.0 hr.)

   **A. Objective**
   During flight lesson one; the student will obtain an operational insight into local night operations. He will understand the precautions that are necessary for the conduct of safe night flight.

   **Content**
   1. Preflight briefing
   2. Ground Procedures
      a. Night flight preparation
      b. Night preflight inspection
   3. Flight maneuvers and procedures
      a. Normal takeoffs and landings
      b. Flight at approach speed
      c. Attitude instrument flying
      d. Stalls (imminent)
      e. Simulated engine failure procedures
      f. Simulated electrical failure (Blackout landings)
      g. Simulated instrument failure
   4. Post-flight critique and preview next lesson

   **B. Completion Standard**
   At the completion of this lesson, the student will demonstrate the techniques, procedures, and cautions required for night operations.
Lesson Two - Night Solo - Two Periods (2.0 hrs.)

A. Objective
To afford the student the opportunity to practice the listed maneuvers and procedures to increase his proficiency in night flight operations.

Content
1. Flight maneuvers and procedures
   a. Takeoffs and landings to a full stop
   b. Maneuvers and procedures assigned by the instructor

B. Completion Standard
This lesson will be completed when the student has conducted a solo review of the listed procedures during night flight. He will observe all precautions necessary for the conduct of safe night flight operations.
3. **Lesson three** - Cross-country Operations - Dual (5.0 hrs.)

**A. Objective**
To expand the students proficiency and knowledge of cross-country operations. The student will gain knowledge necessary to conduct safe cross-country flights. **The lesson must include at least one dual cross-country into Class B airspace. Also, one cross-country must include a route with a minimum 2 hr duration and a destination 100 nautical miles from Durant’s Eaker Field.** The lesson may be completed in two periods.

**Content**
1. Preflight briefing
2. Ground procedures - **Review**
   a. Route selection *(minimum 2 hr duration and 100 nautical miles from original departure point.)*
   b. Weather evaluation
   c. Fuel requirements
   d. Aircraft performance and limitations
   e. Airman’s Information Manual
   f. Navigation Log
   g. FAA flight plan
   h. Weight and balance
3. Flight maneuvers and procedures
   a. Area departure
   b. Opening flight plan
   c. Course interception
   d. Position reports to FSS
   e. Navigation
      1. Pilotage
      2. Dead reckoning
      3. VOR and/or ADF navigation
      4. Position fixes
      5. Computing ETA's
   f. Fuel management
   g. Emergency procedures appropriate to VFR flight:
      1. Lost procedure
      2. Low fuel supply
      3. Adverse weather
      4. Turbulence
5. Radio and instrument failures
6. Simulated powerplant failure
7. Deviating to alternate airport
h. Basic instrument flight and navigation
i. Airport operations
   1. Unfamiliar airports
   2. Traffic patterns
   3. High density airport operations
   4. Controlled and uncontrolled airport communications
j. Closing flight plan

B. Completion Standard
This lesson will be successfully completed when the student demonstrates that he can competently perform cross-country flights by demonstrating a thorough knowledge of flight planning, weather analysis, and the use of flight planning publications, such as the AIM. He will demonstrate the ability to navigate using pilotage, dead reckoning, and radio navigation. He also will handle all simulated emergency situations using correct procedures and good judgment.
4. **Lesson Four** - Solo Cross-Country (6.0 hrs.)

**A. Objective**
To increase the student's proficiency in the conduct of cross-country operations using pilotage, dead reckoning, and radio navigation. This lesson will afford the student experience at both controlled and uncontrolled airports.

**Content**
1. Pre-flight briefing
   a. Instructor review of student's cross-country planning
2. Flight procedures and maneuvers
   a. Pilotage
   b. Dead reckoning
   c. Radio navigation

**B. Completion Standard**
This lesson is complete when the student has conducted the assigned cross-country flight. The completed navigation log should show actual times of arrival over checkpoints to be within five minutes of respective estimates.
5. **Lesson Five** - Advanced Air Work Review - Dual (2.0 hrs.)

**A. Objective**
The objective of lesson five is to review the listed maneuvers and procedures with instructor’s guidance so any faulty habit patterns or areas of deficiency can be corrected.

**Content**
1. Pre-flight briefing
2. Flight maneuvers and procedures
   a. Chandelles
   b. Lazy eights
   c. Steep spirals
   d. Eights-on-pylons
3. Post-flight critique and preview next lesson

**B. Completion Standard**
This lesson will be successfully completed when the student has demonstrated each of the listed maneuvers and has learned to recognize and correct any areas of faulty performance.
6. **Lesson Six** - Solo Cross-Country (4.0 hrs.)

**A. Objective**
To conduct a solo cross-country flight to increase the student's proficiency and experience. The cross-country may be assigned from the approved airport list of this training course outline.

**Content**
1. Instructor's review of cross-country planning
2. Flight maneuvers and procedures
   - a. Pilotage
   - b. Dead reckoning
   - c. Radio navigation
   - d. Operations at Unicom of FSS equipped airport

**B. Completion Standards**
This lesson will be completed when the student has conducted the assigned cross-country flight. The navigation log should show that the actual time of arrival over checkpoints is within five minutes of respective estimates.
7. **Lesson Seven** - Solo Cross-Country - Two Periods (10.0 hrs.)

**A. Objective**
During lesson seven, the student will continue to increase his proficiency and experience in cross-country operations. The cross-country flight may be selected from the Approved Airport List.

**Content**
1. Instructor review of the student's cross-country planning.
2. Maneuvers and procedures
   a. Pilotage
   b. Dead Reckoning
   c. Radio navigation
   d. Operation at FSS or tower controlled airport

**B. Completion Standard**
This lesson is complete when the student has conducted the assigned cross-country flights.
8. **Lesson Eight** - Night Cross-Country - Dual (4.0 hrs.)

**A. Objective**
During this lesson the student will learn to plan and conduct night cross-country flights. This will include learning the operational difference between day cross-country and night cross-country flights and the added navigational considerations and flight precautions which must be exercised. The lesson should be completed in two periods.

**Content**
1. Preflight briefing
2. Ground procedures
   a. Route selection (*destination airport at least 100 nautical miles from departure point and a 2 hr duration.*)
   b. Weather evaluation
   c. Fuel requirements
   d. Aircraft performance and limitations
   e. Airman's Information Manual
   f. Navigation log
   g. FAA flight plan
   h. Weight and balance
3. Flight maneuvers and procedures
   a. Area departure
   b. Opening flight plan
   c. Course interception
   d. Navigation
      1. Pilotage
      2. Dead Reckoning
      3. Radio Navigation
   e. Fuel Management
   f. Emergency procedures
      1. Lost procedure
      2. Low fuel supply
      3. Adverse weather
      4. Radio and instrument failure
      5. Engine failure procedures
   g. Basic instrument flight and navigation
      1. VOR tracking
      2. ADF tracking (if available)
      3. Use of radar vectors and DF steers
   h. Airport operations

**B. Completion Standard**
At the completion of this lesson, the student will have demonstrated that he can conduct night cross-country flights as pilot-in-command. He will also display an understanding of the added operational considerations necessitated by the night environment and the correct analysis and handling of the simulated emergency situations.
9. **Lesson Nine** - Night Solo Practice - Three Periods (3 hrs.)

A. **Objective**
During flight lesson nine the student will increase his proficiency and experience in solo night flight operations by practice of assigned and listed maneuvers and procedures.

**Content**
1. Preflight briefing
2. Flight maneuvers and procedures
   a. Normal takeoffs and landings
   b. Traffic pattern entries and departures
   c. Maneuvers and procedures assigned by the instructor

B. **Completion Standard**
This lesson is completed when the student has conducted the assigned night flights, and has accumulated **at least 5 hrs. of solo night flight, including at least 10 takeoffs and landings to a full stop at an Airport with an Operating Control Tower.** He/she should perform the listed maneuvers accurately and observe established safety practices.

*This page revised August 8, 2011*
10. **Lesson Ten** - Solo Cross-Country - Two Periods (10 hrs.)

**A. Objective**
During this lesson the student will continue to increase his proficiency and experience in cross-country operations. In addition this lesson will provide experience to a variety of different airport environments and densities of traffic.

**Content**
1. Instructor review of the student's cross-country planning
2. Flight Maneuvers and procedures
   a. Pilotage
   b. Dead reckoning
   c. Radio navigation
   d. Operations at Unicom equipped airports
   e. Operations at tower controlled airports

**B. Completion Standard**
Lesson ten will be successfully completed when the student has conducted the assigned solo cross-country flights.
11. **Lesson Eleven** - Solo Cross-Country (10.0 hrs.)

   **A. Objective**  
   The student will gain further experience in cross-country flight operations. The cross-country flight may be selected from the Approved Airport List.

   **Content**  
   1. Instructor review of students cross-country planning  
   2. Flight maneuvers and procedures  
      a. Pilotage  
      b. Dead reckoning  
      c. Radio navigation  
      d. Operations at Unicom equipped airport  
      e. Operations at tower controlled airport

   **B. Completion Standard**  
   This lesson will be complete when the student has conducted the assigned solo cross-country flights. Airport arrivals and departures will be in accordance with established local procedures.
12. **Lesson Twelve** - Advanced Air Work Review - Dual (2.0 hr.)

**A. Objective**
The objective of lesson twelve is to review the listed maneuvers and procedures with instructor's guidance so any faulty habit patterns or areas of deficiency can be corrected.

**Content**
1. Preflight briefing
2. Flight maneuvers and procedures
   a. Chandelles
   b. Lazy eights
   c. Steep spirals
   d. Eights-on-pylons
3. Post-flight critique and preview of next lesson

**B. Completion Standard**
This lesson will be successfully completed when the student has demonstrated each of the listed maneuvers and has learned to recognize and correct any areas of faulty performance.
Lesson Thirteen - Solo Cross-Country (6.0 hrs.)

A. Objective
During this lesson, the student will obtain the cross-country flight experience required in FAR 141, Appendix D, 5(a) (2) for Commercial Pilot Certification. The cross-country will be listed in the Approved Airport List.

Content
1. Instructor review of student's cross-country planning
2. Flight maneuvers and procedures
   a. Landings at a minimum of three points, with one segment of the flight consisting of a straight-line distance of a least 250 nautical miles.
   b. Pilotage
   c. Dead reckoning
   d. Radio navigation

B. Completion Standard
This lesson is complete when the student has conducted the assigned cross-country flight and has attained the proficiency level of a commercial pilot.
14. **Lesson Fourteen** - Dual Review (2.0 hr.)

**A. Objective**
The objective of this lesson, is to allow the instructor to continue to monitor the students progress of the performance of the listed maneuvers.

**Content**
1. Flight maneuvers and procedures
   a. Lazy eights
   b. Eights on pylons
   c. Steep power turns
   d. Accuracy landings
   e. Flight maneuvers as determined by the instructor

**B. Completion Standard**
This lesson will be successfully completed when the student had demonstrated proficiency in the performance of the listed maneuvers as set forth by the FAA Commercial Pilot Practical Test Standards.
15. **Lesson Fifteen** - Stage Check - Dual (1.0 hr.)

**A. Objective**
During flight lesson fifteen, the Chief Instructor or his assistant will conduct a stage check of the student's cross-country flying and verify that he has obtained the cross-country experience and proficiency required for a commercial pilot certificate.

**Content**
1. Preflight briefing
   a. Instructor evaluation of student cross-country planning.
2. Flight maneuvers and procedures
   a. Departure
   b. Course interception
   c. Pilotage
   d. Dead Reckoning
   e. Radio navigation
   f. Emergency procedures

**B. Completion Standard**
This lesson will be successfully completed when the student has demonstrated that he is competent to act as pilot-in-command of extended cross-country flights and has obtained the cross-country experience for a commercial pilot certificate.
Stage 3: 10 Hours

G-1000 (TAA) Transition Syllabus
Aviation Sciences Institute
Southeastern Oklahoma State University

Taken from the FAA Industry Training Standards (FITS) Scenario-based Transition Syllabus and Standards for Technically Advanced Piston Aircraft
Version 2.0 June, 2006

How to use this FITS Syllabus

Each lesson in stage 3 consists of a scripted scenario, and each scenario increases in complexity as the PT progresses through the course. The instructor and PT should use the scenario as a “lesson plan” with the intent for the PT to study the plan and brief it as part of the pre-flight preparation.

At the completion of this stage of training, the PT must demonstrate competency in the instrument maneuvers and procedures identified in the Instrument Rating PTS.

To Instructors
Each lesson consists of a scenario description followed by a list of specific task to be accomplished by the student. Each scenario/lesson will be graded based upon the “learning centered” set of grading criteria. Grading will be conducted independently by the learner and the instructor, and then compared during the post flight critique.

Grading should be progressive. During each flight, the learner should achieve a new level of learning.

Grading System
1. Describe- Instructor assistance is required to successfully execute the maneuver. At the completion of the scenario, the student will be able to describe the physical characteristics and cognitive element of the activity.
2. Explain- Instructor assistance is required to successfully execute the maneuver. At the completion of the scenario, the student will be able to describe the activity and understand the underlying concepts, principles, and procedures that comprise the activity.
3. Practice- Coaching, instruction, and/or assistance from the CFI will correct deviations and errors identified by the CFI. At the completion of the activity the student will be able to plan and execute the scenario.
4. Perform- At no time will the successful outcome of the activity be in doubt. ("Perform" will be used to signify that the student is satisfactorily demonstrating proficiency in traditional piloting and systems operations skills.)

To Pilots in Training (PT)
The emphasis of each lesson is on the PT planning and execution of each scenario, with minimal help from the instructor. The value of the scenario-based training is in the opportunities it provides to plan, execute, and respond to changing situations in a more meaningful way.

This page revised August 8, 2011
Lesson 1- Intro to TAA (2.0 hrs)

Objective

The Pilot in Training (PT) will demonstrate a basic knowledge and proficiency in avionics and aircraft systems equipment location and normal operating procedures.

STUDENT PREPARATION

Review the following:
- Normal operating procedures in the POH or approved AFM
- A worksheet on systems and procedures
- Airport information for departure and destination airports.
- Route of flight information for both trips.
- Aircraft and avionics systems display and procedures.

BRIEFING ITEMS

A. INITIAL INTRODUCTION:
PTs should have a clear understanding of the Pilot in Command concept and how command is transferred. This should include a detailed pre-takeoff briefing procedure and format.

B. SINGLE-PILOT RESOURCE MANAGEMENT (SRM)
1. Checklist procedures.
2. Avionics systems to be used during this flight.
4. Operating procedures

C. SAFETY
The following safety items should be briefed to all PTs
1. Mid-air collision avoidance procedures
2. Taxi procedures

Scenario 1

Preflight
The PT will plan a flight with a full stop landing at an airport other than the departure airport. The PT will perform all weight and balance and performance calculations, and describe his/her approach to management of specific risks involved in this flight. The instructor will provide the necessary guidance to insure that the overall plan provides for all the scenario activities and sub-activities listed for this lesson. The PT will be evaluated on his/her ability to plan a comprehensive flight with conscious attention to all the required scenario activities. The PT will perform all preflight procedures, engine start-up, avionics set-up, and taxi and before-takeoff procedures for each leg of the scenario. This will include GPS flight plan programming for the
flight as well as MFD and PFD setup and an effective pre-takeoff briefing. The preflight procedures will be accomplished prior to takeoff for each leg of the flight.

**Leg 1**
The PT will perform a normal takeoff and departure to a safe altitude. Aircraft systems (PFD and MFD) and avionics will be practiced during the cruise, decent, and normal landing phase of the flight.

**Leg 2**
A different route will be programmed into the GPS flight plan for the return trip. After the aircraft is established in cruise the PT will continue to practice and become more familiar with aircraft systems and avionics. At some point on the return trip, the flight will proceed to a designated “practice” area to practice a sampling of maneuvers as required by the commercial pilot Practical Test Standards. The PT will use the GPS “direct” page to proceed to the destination, perform a descent and transition to an IAP that concludes with a missed approach then a normal or crosswind landing. The student may complete the approach without a view limiting device and with visual reference to the surface.

**Post-Flight**
The PT will perform all aircraft shutdown and securing procedures.

**Lesson One**

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<td>3. DM and RM</td>
<td>3. Describe</td>
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</tbody>
</table>

### Climb procedures

1. Manual Climb
2. Nav programming
3. Power management
4. SA, Task Management (TM), and DM
1. Practice
2. Explain
3. Explain
4. Describe

### Cruise Procedures

1. Lean Assist
2. Nav programming
3. TM, SA, and DM
1. Describe
2. Explain
3. Describe

### Control Performance Instrument /Visual Crosscheck

Note: All items will be accomplished enroute during the scenario

1. Straight and level
2. Normal Turns
3. Climbing & Descending Turns
1. Practice
2. Practice
3. Practice

### Low Speed Envelope and Steep Turns

Note 1: Slow Flight and Stall Recovery may be accomplished enroute or in a practice area
Note 2: Emphasis will be placed on stall prevention and recovery

1. Configuration Changes and Slow Flight
2. Recovery from Power Off Stalls
3. Recovery from Power On Stalls
4. Stall prevention, SA, TM, and DM
5. Steep Turns
1. Practice
2. Practice
3. Practice
4. Describe
5. Practice

### GPS Operation and Programming

1. IFR
   a. Direct-To
   b. Nearest Airport Information
   c. Approach Select
   d. Flight Plan
1. Describe

### Avionics Operation

This page revised August 8, 2011
1. Pilot Flight Display
2. MFD Normal Operation
   a. Setup Pages
   b. Navigation Mode
   c. Checklist Mode
1. Describe
2. Practice
<table>
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<td>Aircraft Tie down</td>
<td>2. Practice</td>
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Lesson 2- Flight Plans and IAPs (2.0 hrs)

Objective
The PT will plan a flight that will provide for the practice of skills introduced in Lesson 1, and will safely and efficiently demonstrate maneuvers in a TAA.

STUDENT PREPARATION

• Review previous Lessons
• Review the AFM/POH
• Plan flight profile using the scenario as listed above.

BRIEFING ITEMS

A. INITIAL INTRODUCTION:
   a. Weather
   b. Flight profile
   c. Command transfer and pre-takeoff briefing

B. SRM
   a. Avionics systems to be used during this flight
   b. Decision making

C. SAFETY
   a. Mid-air collision avoidance procedures
   b. Appropriate NOTAMS
   c. Airport diagrams and taxi procedures
   d. Emergency procedures

Scenario 2
The Instructor will provide feedback to the PT upon completion of each leg and guidance on the remaining portion of the flight.

Preflight
The PT will plan a VFR flight with a return to the home airport after landings at 3 other airports. This flight should consist of 4 legs with a full stop landing after each leg. The PT will plan the flight profile and perform all preflight procedures, engine start-up, avionics set-up, taxi, before takeoff procedures before each leg of the flight. The PT will perform all radio communications for the flight.

Leg 1
The PT will perform a normal takeoff and departure to a safe altitude. Climbing turns and transition to cruise flight are practiced. Aircraft systems and avionics functions are reviewed
during cruise, descent, and normal landing phases of the flight. GPS navigation, including flight plan pages, is practiced and review during the flight.
The PT will plan and conduct a normal decent and pattern transition with a full stop landing.

**Leg 2**  
A normal takeoff is performed and followed by a constant rate climb and transition to cruise.  
Cruise procedures and Flight Plan modification are practiced on this phase of the scenario. The PT will execute a GPS or ILS approach that concludes with a full stop landing.

**Leg 3**  
The PT will perform a normal takeoff and transition to cruise. The PT will practice use of the avionics systems and will be introduced to uncomplicated emergencies during flight. At some point during this phase of the scenario, the PT will plan to deviate to a safe “practice area” to review a sampling of maneuvers from the Commercial Pilot PTS and other aspects of the G-1000 as deemed necessary by the instructor. This portion of the flight should conclude with a transition/diversion to an airport with a full stop landing.

**Leg 4**  
The PT will perform a normal takeoff, climb and transition to cruise. The instructor will select the GPS and avionics procedures to be practiced en-route. The PT will perform a VNAV descent followed by a GPS approach to the lowest possible minimums.

**Post-flight**  
The PT will perform all aircraft shutdown and securing procedures. The Instructor will provide feedback and planning data to the PT for the next flight.

### Lesson 2

<table>
<thead>
<tr>
<th>Scenario Activities</th>
<th>Scenario Sub-Activities</th>
<th>Desired PT Scenario Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Normal Preflight and Cockpit procedures</strong></td>
<td>1. Normal Pre-Takeoff Checklist Procedures&lt;br&gt; 2. GPS Programming&lt;br&gt; 3. MFD Setup&lt;br&gt; 4. PFD Setup</td>
<td>1. Practice&lt;br&gt; 2. Explain/Practice&lt;br&gt; 3. Explain/Practice&lt;br&gt; 4. Explain/Practice</td>
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</tbody>
</table>

*This page revised August 8, 2011*
|-----------------------|---------------------------------------------------------------------------------|------------------------------------------|

Note: All items will be accomplished enroute during the scenario

Note 1: Slow Flight and Stall Recovery may be accomplished enroute or in a practice area
Note 2: Emphasis will be placed on stall prevention and recovery

*This page revised August 8, 2011*
## Descent Planning and Execution

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<td>1.</td>
<td>VNAV Planning</td>
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<td>2.</td>
<td>Navigation programming</td>
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<td>3.</td>
<td>Manual Descent</td>
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<td>4.</td>
<td>Autopilot descent</td>
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<td>5.</td>
<td>TA, SA, Controlled Flight Into Terrain (CFIT) Avoidance</td>
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<td>Explain/Practice</td>
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<td>Explain</td>
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<td>Practice</td>
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<td>4.</td>
<td>Perform</td>
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<td>Practice</td>
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## Instrument Approach procedures (IFR Rated Pilot)

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<td>GPS</td>
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<td>4.</td>
<td>Missed Approach</td>
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<td>5.</td>
<td>Procedure Turn</td>
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<td>6.</td>
<td>Holding</td>
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<td>7.</td>
<td>Task management and decision making</td>
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<td>Explain/Practice</td>
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<td>3.</td>
<td>Practice</td>
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<td>4.</td>
<td>Practice</td>
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<td>5.</td>
<td>Practice</td>
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<tr>
<td>6.</td>
<td>Explain</td>
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<tr>
<td>7.</td>
<td>Practice</td>
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## Landing

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<td>1.</td>
<td>Before landing procedures</td>
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<td>2.</td>
<td>IFR Landing Transition</td>
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<td>3.</td>
<td>Normal Landing</td>
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<td>4.</td>
<td>Soft and Short field landing</td>
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<tr>
<td>5.</td>
<td>Crosswind landing</td>
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<tr>
<td>6.</td>
<td>ADM and SA</td>
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<td>7.</td>
<td>Land and Hold Short Operations (LAHSO)</td>
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<td>Practice</td>
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<td>Explain/practice</td>
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<tr>
<td>3.</td>
<td>Practice</td>
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<td>4.</td>
<td>Practice (Optional)</td>
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<td>5.</td>
<td>Practice (Optional)</td>
</tr>
<tr>
<td>6.</td>
<td>Explain</td>
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<tr>
<td>7.</td>
<td>Perform</td>
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</table>

## Aircraft Shutdown and Securing procedure

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<tbody>
<tr>
<td>1.</td>
<td>Aircraft Shutdown and Securing Checklist</td>
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<td>2.</td>
<td>Aircraft Towing, Ground Handling, and Tie down</td>
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<td>1.</td>
<td>Practice</td>
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<td>2.</td>
<td>Explain/Practice</td>
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</tbody>
</table>
Lesson 3- Emergency Procedures (2.0 hrs)

Objective

The PT will demonstrate proficiency in all critical action emergency procedures and a representative cross section of non-critical action emergency procedures described in the aircraft POH.

STUDENT PREPARATION

• Review previous lessons
• Review the AFM/POH
• Plan flight profile using the scenario as listed above

BRIEFING ITEMS

A. INITIAL INTRODUCTION:
   a. Weather
   b. Flight profile
   c. Command transfer and pre-takeoff briefing

B. SRM
   a. Avionics systems to be used during this flight
   b. Abnormal and emergency procedures
   c. Decision making

C. SAFETY
   a. Mid-air collision avoidance procedures
   b. Appropriate NOTAMS
   c. Airport diagrams and taxi procedures
   d. Emergency procedures

Scenario 3

The PT will plan a short flight to a local airport with an ILS.

Preflight
The PT will plan the profile and perform all preflight procedures, engine start-up, avionics set-up, taxi, and before-takeoff procedures before each leg of the flight.

Leg 1
The flight will proceed under Basic Attitude Instrument flying conditions (Under the hood.) In cruise, the PT will execute the proper procedures for isolated systems failures as determined by the instructor. Airspeed and configuration changes will be practiced during cruise.
The PT will perform a partial panel ILS at the airport of intended landing followed by the proper missed-approach procedure.

**Leg 2**  
The PT will divert to the home airport. The PT will practice additional systems failures and end the flight with a Partial Panel GPS approach.

**Post-flight**  
The PT will perform all aircraft shutdown and securing procedures. The Instructor will provide feedback and planning data to the PT for the next flight.

<table>
<thead>
<tr>
<th>Scenario Activities</th>
<th>Scenario Sub-Activities</th>
<th>Desired PT Scenario Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flight Planning</td>
<td>1. Scenario Planning</td>
<td>1. Perform</td>
</tr>
<tr>
<td></td>
<td>2. Weight &amp; Balance, Aircraft performance Calculations</td>
<td>2. Perform</td>
</tr>
<tr>
<td></td>
<td>3. Preflight SRM Briefing</td>
<td>3. Perform</td>
</tr>
<tr>
<td></td>
<td>4. Decision-Making (DM) and Risk Management (RM)</td>
<td>4. Manage/Decide</td>
</tr>
<tr>
<td>Normal Preflight and Cockpit procedures</td>
<td>1. Normal Pre-Takeoff Checklist Procedures</td>
<td>1. Perform</td>
</tr>
<tr>
<td></td>
<td>2. GPS Programming</td>
<td>2. Perform</td>
</tr>
<tr>
<td></td>
<td>3. MFD Setup</td>
<td>3. Perform</td>
</tr>
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<td></td>
<td>4. PFD Setup</td>
<td>4. Perform</td>
</tr>
<tr>
<td>Engine Start and Taxi Procedures</td>
<td>1. Engine Start</td>
<td>1. Perform</td>
</tr>
<tr>
<td></td>
<td>2. Taxi</td>
<td>2. Perform</td>
</tr>
<tr>
<td></td>
<td>3. SRM/Situational Awareness (SA)</td>
<td>3. Manage/Decide</td>
</tr>
<tr>
<td>Before Takeoff Checks</td>
<td>1. Normal and Abnormal Indications</td>
<td>1. Perform</td>
</tr>
<tr>
<td></td>
<td>3. DM and RM</td>
<td>3. Manage/Decide</td>
</tr>
<tr>
<td>Takeoff (T/O)</td>
<td>1. Normal T/O</td>
<td>1. Perform</td>
</tr>
<tr>
<td></td>
<td>2. SA</td>
<td>2. Manage/Decide</td>
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<td>3. DM and RM</td>
<td>3. Manage/Decide</td>
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<tr>
<td>Cruise Procedures</td>
<td>1. Lean Assist</td>
<td>1. Perform</td>
</tr>
<tr>
<td></td>
<td>2. Best Power vs. Best Economy</td>
<td>2. Perform</td>
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<td></td>
<td>5. TM, SA, and DM</td>
<td>6. Manage/Decide</td>
</tr>
</tbody>
</table>

This page revised August 8, 2011
| Control Performance Instrument /Visual Crosscheck |
| Note: All items will be accomplished enroute during the scenario |
| 1. Straight and level |
| 2. Normal Turns |
| 3. Climbing and Descending Turns |
| 1. Perform |
| 2. Perform |
| 3. Perform |

| GPS Operation and Programming |
| 1. IFR |
| a. Direct-To |
| b. Nearest |
| c. Airport Information |
| d. Approach Select |
| e. Flight Plan |
| 1. Perform |

| Avionics Operation |
| 1. PFD |
| 2. MFD Normal Operation |
| a. Setup Pages |
| b. Navigation Mode |
| c. Checklist Mode |
| 3. Emergency Mode |
| 1. Perform |
| 2. Perform |
| 3. Perform |

| Avionics Interface |
| 1. Identification of Data/Power sources |
| 2. Identification of PFD Failure Modes |
| 1. Explain |
| 2. Explain |

| Emergency and Failure Modes |
| 1. AHRS Failure |
| 2. ADC Failure |
| 3. Display Failure |
| 1. Perform |
| 2. Perform |
| 3. Explain/Practice |

| Descent Planning and Execution |
| 1. VNAV Planning |
| 2. Navigation programming |
| 3. Manual Descent |
| 4. TA, SA, Controlled Flight Into Terrain (CFIT) Avoidance |
| 1. Perform |
| 2. Perform |
| 3. Perform |
| 4. Manage/Decide |

| Instrument Approach procedures in Emergency and failure Modes |
| 1. ILS |
| 2. VOR |
| 3. Manual GPS |
| 4. Missed Approach |
| 5. Procedure Turn |
| 6. Holding |
| 7. TM and DM |
| 1. Perform |
| 2. Perform |
| 3. Perform |
| 4. Perform |
| 5. Perform (Optional) |
| 6. Perform (Optional) |
| 7. Manage / Decide |
| **Landing** | 1. Before landing procedures  
2. IFR Landing Transition  
3. Normal Landing  
4. DM and SA | 1. Perform  
2. Perform  
3. Perform  
4. Manage/decide |
| **Aircraft Shutdown and Securing procedure** | 1. Aircraft Shutdown and Securing Checklist  
2. Aircraft Towing, Ground Handling, and Tie down | 1. Perform  
2. Explain/Practice |
LESSON 4, Detailed Cross Country (3.0 hrs)

OBJECTIVE
The PT will combine previously learned flight skills and instrument procedures to achieve flying proficiency.

SCENARIO 4
The PT will plan and perform a detailed cross-country flight, including standard arrival procedures and/or departure procedures, to airports within the lateral boundaries of Class B. Maneuvers and procedures should include representative sub-activities selected from the list of scenario activities for the course.

STUDENT PREPARATION

• Review previous lessons
• Review the AFM/ POH
• Plan flight profile using the scenario from lessons 3 and 4.

BRIEFING ITEMS

A. INITIAL INTRODUCTION:
   a. Weather
   b. Flight profile
   c. Command transfer and pre-takeoff briefing

B. SRM
   a. Avionics systems to be used during this flight
   b. Abnormal and emergency procedures
   c. Decision making

C. SAFETY
   a. Mid-air collision avoidance procedures
   b. Appropriate NOTAMS
   c. Airport diagrams and taxi procedures
   d. Instrument approach procedures
   e. Emergency procedures

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<table>
<thead>
<tr>
<th>Scenario Activities</th>
<th>Scenario Sub-Activities</th>
<th>Desired PT Scenario Outcome</th>
</tr>
</thead>
</table>
| Flight Planning                           | 1. Scenario Planning  
2. Weight & Balance, Aircraft performance Calculations  
3. Preflight SRM Briefing  
4. Decision-Making (DM) and Risk Management (RM) | 1. Perform  
2. Perform  
3. Perform  
4. Manage/Decide |
| Normal Preflight and Cockpit procedures   | 1. Normal Pre-Takeoff Checklist Procedures  
2. GPS Programming  
3. MFD Setup  
4. PFD Setup | 1. Perform  
2. Perform  
3. Perform  
4. Perform |
| Engine Start and Taxi Procedures          | 1. Engine Start  
2. Taxi  
3. SRM/Situational Awareness (SA) | 1. Perform  
2. Perform  
3. Manage/Decide |
| Before Takeoff Checks                     | 1. Normal and Abnormal Indications  
2. Aircraft Automation Management  
3. DM and RM | 1. Perform  
2. Manage/Decide  
3. Manage/Decide |
| Takeoff (T/O)                             | 1. Normal T/O  
2. Crosswind T/O  
3. Aborted T/O  
4. Soft Field/Short Field T/O  
5. SA  
6. DM and RM | 1. Perform  
2. Perform  
3. Perform  
4. Perform  
5. Manage/Decide  
6. Manage/Decide |
| Climb procedures                          | 1. Manual Climb  
2. Navigation programming  
3. Power management  
4. SA, Task management (TM), and DM | 1. Perform  
2. Perform  
3. Perform  
4. Manage/Decide |
| Cruise Procedures                         | 1. Lean Assist  
2. Best Power vs. Best Economy  
3. Manual Cruise  
4. Navigation programming  
5. TM, SA, and DM | 1. Perform  
2. Perform  
3. Perform  
4. Perform  
5. Manage/Decide |

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| Note: All items will be accomplished enroute during the scenario | 2. Normal Turns | 2. Perform |
| | 3. Climbing and Descending Turns | 3. Perform |
| GPS Operation and Programming | 1 IFR | 1. Perform |
| | a. Direct-To | |
| | b. Nearest | |
| | c. Airport Information | |
| | d. Approach Select | |
| | e. Flight Plan | |
| Avionics Operation | 1. PFD | 1. Perform |
| | 2. MFD Normal Operation | 2. Perform |
| | 3. Setup Pages | 3. Perform |
| Avionics Interface | 1. Identification of Data/Power sources | 1. Explain |
| | 2. Identification of PFD Failure Modes | 2. Explain |
| | 3. Aircraft Automation management | 3. Explain |
| Emergency and Failure Modes | 1. AHRS Failure | 1. Perform |
| | 2. ADC Failure | 2. Perform |
| | 3. Flight in Revisionary Mode/Display Failure | 3. Explain/Practice |
| Descent Planning and Execution | 1. VNAV Planning | 1. Manage/Decide |
| | 2. Navigation programming | 2. Perform |
LESSON 5- Stage check (1.0 Hrs.)

Final Evaluation Flight

Objective
The PT will demonstrate knowledge and skill level appropriate and demonstrate judgment, aeronautical decision-making skills and single pilot management skills to effectively, efficiently, and safely operate a TAA in an actual cross-country exercise.

SCENARIO 5
The PT will plan a detailed flight to multiple airports. The flight profile will include samples of the maneuvers and procedures listed in the course syllabus with an emphasis on judgment and decision-making in ambiguous situations. The PT will be expected to execute at least on leg of the flight followed by a diversion to the home airport.

STUDENT PREPARATION
- Review previous lessons
- Review the POH/AFM
- Plan flight profile using the maneuvers and procedures listed in the course syllabus

BRIEFING ITEMS
(PT)

A. INITIAL INTRODUCTION
   a. Weather
   b. Pilot in Command

B. SRM
   a. Flight profile
   b. Decision making

C. SAFETY
   a. Mid-air collision avoidance procedures
   b. Appropriate NOTAMS
   c. Airport diagrams and taxi procedures
   d. Instrument approach procedures
   e. Emergency procedures
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Note: All items will be accomplished enroute during the scenario.
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<tr>
<th>GPS Operation and Programming</th>
<th>IFR</th>
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<tr>
<td>f. Direct-To</td>
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<td>g. Nearest</td>
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<td>h. Airport Information</td>
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<td>i. Approach Select</td>
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<td>j. Flight Plan</td>
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<td>MFD Normal Operation</td>
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<td>Navigation Mode</td>
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<th>Avionics Interface</th>
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<th>Emergency and Failure Modes</th>
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<td>Flight in Revisionary Mode/Display Failure</td>
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<th>Descent Planning and Execution</th>
<th>VNAV Planning</th>
<th>Manage/Decide</th>
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<td>Navigation programming</td>
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<td>Manual Descent</td>
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<td>TA, SA, Controlled Flight Into Terrain (CFIT) Avoidance</td>
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| Instrument Approach procedures | 1. Precision  
2. VOR/GPS VNAV Approach  
3. Missed Approach  
4. Procedure Turn  
5. Holding  
6. TM and DM | 1. Perform  
2. Perform  
3. Perform  
4. Perform (Optional)  
5. Perform (Optional)  
6. Manage / Decide |
|-----------------------------|---------------------------------------------------------------|
| Landing | 1. Before landing procedures  
2. IFR Landing Transition  
3. Normal Landing  
4. DM and SA | 1. Perform  
2. Perform  
3. Perform  
4. Manage/decide |
| Aircraft Shutdown and Securing procedure | 1. Aircraft Shutdown & Securing Checklist  
2. Towing, Ground Handling, and Tie down | 1. Perform  
2. Explain/Practice |
STAGE FOUR: 15 HOURS

1. **OBJECTIVES:** To ensure the student possesses the skill and experience to meet the requirements for the Commercial Pilot Practical Test and the Instrument Rating-Airplane Practical Test as outlined in Parts 61 and 141 of the Federal Aviation Regulations, and the standards set by this school.

2. **REVIEW COMPLETION STANDARDS:** This phase and the course will be successfully completed when through oral exam, flight tests, and school records; the student has demonstrated necessary aeronautical skill and experience to meet the requirements for the Commercial Pilot Certificate with an Airplane Category Rating, and a Single-engine Land Class Rating and Airplane Instrument Rating.

   - Stage Four must be completed in a Complex Airplane as defined by 61.31 (e).
1. **Lesson One** - Introduction to Complex Airplane - Dual (2.0 hrs.)

A. **Objective**

To introduce the student to the basic ground and fight operational procedures of a complex airplane with retractable landing gear, flaps, and controllable pitch propeller.

**Content**

1. Preflight briefing
   a. Fuel system and octane requirements
   b. Preflight inspection
   c. Airplane servicing
   d. System analysis
   e. Prestart procedures
   f. Use of checklist
   g. Aircraft performance and charts
   h. Power settings, leaning procedures, and engine temps.
   i. Post-flight inspection

2. Flight maneuvers and procedures
   a. Normal takeoffs/landings
   b. Climbs
   c. Descents
   d. Cruise performance
   e. Power settings and learning procedures
   f. Flight at critically slow airspeed
   g. Power-on stalls (imminent)
   h. Power-off stalls (imminent)
   i. Accelerated maneuvers stalls (imminent)
   j. Use of landing gear and flaps

3. Post-flight critique and preview next lesson

B. **Completion Standard**

At the completion of this lesson the student will demonstrate an understanding of the listed procedures and maneuvers and be able to perform them with limited instructor assistance.
2. **Lesson Two** - Complex Airplane - Dual (2.0 hrs.)

**A. Objective**
To allow the student to demonstrate and review basic maneuvers and procedures to gain proficiency and to develop proficiency in landings and emergency procedures in a complex airplane.

**Content**
1. Preflight briefing
2. Review ground procedures covered in lesson 1
3. Review basic Air work taught in lesson 1
4. Flight maneuvers and procedures - *New*
   a. Short-field takeoffs and landings
   b. Soft-field takeoffs and landings
   c. Crosswind takeoffs and landings
   d. Power-Off 180-degree Accuracy Approach and Landing. *The 1,000ft marker will be the specified touchdown point.*
   e. Emergency procedures appropriate to the operation of complex aircraft systems:
      1. Manual Landing gear extension
      2. System operation
      3. Simulated engine failure
      4. Simulated engine fire
      5. Asymmetrical flaps
      6. Prop over speed
5. Post-flight critique and preview next lesson

**B. Completion Standard**
At the completion of this lesson, the student will be able to perform all of the ground procedures without assistance. All recoveries from imminent stalls will be performed before a full stall is encountered and with a minimum loss of altitude. Takeoffs will be performed using the correct procedures and good directional control. All approaches will be on a specified area of the runway. The student will handle all emergency procedures promptly and correctly.
A. **Objective**
To familiarize the student with basic commercial pilot maneuvers and instrument procedures in a complex airplane.

**Content**
1. Preflight briefing
2. Flight maneuvers and procedures
   a. Chandelles
   b. Steep power turns
   c. Steep spirals
   d. Eights-on-pylons
   e. Emergency system operation
3. Attitude instrument flying (full panel)
   a. Straight and level flight
   b. Constant airspeed climbs and descents
   c. Standard rate turns
   d. Recovery from critical flight attitude
4. Post-flight critique and preview next lesson

B. **Completion Standard**
At the completion of this lesson, the student will know the attitudes, power settings, and configurations required to perform the listed maneuvers and procedures. The student will also accurately demonstrate emergency operation of the airplane manufacturer's recommendations.
4. **Lesson Four** - Solo or Pilot-in-Command Practice - Complex Airplane (2.0 hrs.)

**A. Objective**

To allow the student to conduct solo or pilot-in-command review and practice of the listed maneuvers and procedures to increase his proficiency to the level of a commercial pilot.

**Content**

1. Flight maneuvers and procedures - **Review**
   a. Normal takeoffs and landings
   b. Soft-field takeoffs and landings
   c. Short-field takeoffs and landings
   d. Flight at critically slow airspeed
   e. Power-off stalls (imminent)
   f. Power-on stalls (imminent)

**B. Completion Standard**

This lesson will be successfully completed when the student has conducted a solo or pilot-in-command review of the listed maneuvers and procedures. During flight at minimum controllable airspeed, the student should maintain his altitude within 50 feet and headings within 10 degrees of that desired. During takeoff and landings, the student should maintain airspeeds within 5 knots of the desired speeds, and attention directed toward planning, directional control, smoothness, and accuracy.
5. **Lesson Five** - Advanced Maneuvers, Complex Airplane - Dual (2.0 hrs.)

**A. Objective**
To familiarize the student with advanced commercial maneuvers and procedures and to review previously taught maneuvers in a complex airplane.

**Content**
1. Preflight briefing
2. Flight maneuvers and procedures
   a. Lazy eights
   b. Chandelles
   c. Steep Power turns
   d. Steep spirals
3. Attitude Instrument Flying (full panel)
   a. Straight and level
   b. Airspeed and configuration changes
   c. Stalls
   d. Recovery from critical flight attitudes
4. Post-flight critique and preview next lesson

**B. Completion Standard**
At the completion of this lesson, the student will be able to demonstrate in the complex airplane the performance of chandelles, lazy eights, and steep power turns using proper coordination, attitude and airspeed control, planning, and smoothness. The student's performance of the listed maneuvers will attempt to meet the minimum performance outlines in the current FAA Commercial Pilot Practical Test Standard. During the performance of instrument maneuvers the student will be able to maintain assigned altitudes within 100 feet and headings within 10 degrees. Stall recoveries will be prompt and positive with minimum loss of altitude.
Lesson Six - Solo or Pilot-in-Command Practice - Complex Airplane (3.0 hrs.)

A. Objective
To afford the student the opportunity to conduct solo review and practice of the listed maneuvers and procedures in furthering his proficiency in complex airplane operations.

Content
1. Flight maneuvers and procedures
   a. Chandelles
   b. Steep power turns
   c. Steep spirals
   d. Flight at critically slow airspeed
   e. Takeoffs and landings (normal)
   f. Takeoffs and landings (short and soft-field)

B. Completion Standard
This lesson will be completed when the student has accomplished the solo review and practice of the listed and assigned flight maneuvers, and has accumulated 5 hrs. of pilot-in-command time with 10 takeoffs and landings to a full stop in the course. He/she will attempt to meet the proficiency required of a commercial pilot for complex airplane operations.

This page revised August 8, 2011
7. **Lesson Seven** - Cross country planning and diversion. (1 hour)

**A. Objective**
To familiarize the student with the elements of planning and flying an extended cross country flight in a complex airplane.

**Content**
1. Preflight briefing
   a. The student shall present and explain a preplanned VFR cross country using real-time weather. Computations shall be based on maximum cargo/passenger loads to a destination near the maximum range of the airplane.
2. Flight maneuvers and procedures
   a. correctly flies to at least the first planned checkpoint to demonstrate accuracy of computations and to demonstrate the ability to navigate by reference to landmarks.
   b. Exhibits knowledge of the elements related to procedures for diversion by selecting and diverting to an appropriate alternate airport promptly. The student shall make an accurate estimate of heading, ground speed, arrival time, and fuel consumption to the alternate airport.

**B. Completion Standard**
This lesson will be successfully completed when the student has demonstrated he is competent to act as pilot-in-command of an extended cross country flight in a complex airplane. The student shall: verify the airplane’s position within 1 nautical mile of the flight planned route at all times; arrive at en route checkpoints within 3 minutes of ETA; correct for and record the differences between preflight fuel, ground speed, and heading calculations and those determined en route; maintain altitude within 100 feet and heading within 10 degrees. The student will arrive at the alternate airport within 3 NM and within 3 minutes of ETA. The student will be able to readily locate the alternate airport.
8. **Lesson Eight** - Ground Instruction (one hour)

A. **Objective**
To familiarize the student with high altitude operations including various equipment necessary for operations at high altitudes and procedures for dealing with emergency situations that may be encountered at these altitudes.

**Content**
1. Supplemental Oxygen
   a. Regulatory requirements for use of supplemental oxygen
   b. Distinctions between “aviator’s breathing oxygen” and other types
   c. Method of determining oxygen service availability
   d. Operational characteristics of continuous flow, demand, and pressure-demand oxygen systems
   e. Care and storage of high-pressure oxygen bottles
   f. Determining oxygen duration

   **REFERENCES:** FAR 91; AC 61-107; AIM; POH; AIM

2. Pressurization
   a. Regulatory requirements for use of pressurized airplane systems
   b. Operational characteristics of the cabin-pressure control system
   c. Physiological hazards associated with high altitude flight and decompression
   d. Operation and physiological reasons for completing emergency descents
   e. Need for wearing safety belts and for rapid access to supplemental oxygen

   **REFERENCES:** FAR 91; AC 61-21; AC 61-107; POH

B. **Completion Standards**
This lesson will be complete when the student displays knowledge of supplemental oxygen and pressurization systems as related to high altitude flying.
9. **Lesson Nine - Stage Check - Dual (1.0 hr.)**

A. **Objective**

The objective of this lesson is to evaluate the student pilot-in-command qualifications in a complex airplane. This stage check will be conducted by the Chief Flight Instructor or his assistant.

**Content**

1. Preflight briefing
   a. Preflight inspection
   b. Fuel system and octane requirements
   c. Airplane servicing
   d. System analysis
   e. Prestarting preparations
   f. Use of checklist
   g. Aircraft performance charts
   h. Post-flight inspection

2. Flight maneuvers and procedures
   a. Normal takeoffs and landings
   b. Crosswind takeoffs and landings
   c. Short-field takeoffs and landings
   d. Cruise performance
   e. Flight at critically slow airspeed
   f. Use of landing gear and flaps
   g. Power-on stalls (imminent and/or full)
   h. Power off stalls (imminent and/or full)
   i. Steep power turns
   j. Chandelles
   k. Lazy eights
   l. Emergency procedures including simulated forced landing

3. Post-flight critique

B. **Completion Standard**

This lesson will be successfully completed when the student demonstrates he is competent to act as pilot-in-command of a complex airplane and has accumulated 10 takeoffs and landings to a full stop as pilot-in-command. These listed maneuvers will be performed at the proficiency level of a commercial pilot.
TRAINING COURSE OUTLINE--TRAINING SYLLABUS

COMMERCIAL PILOT AIRPLANE-SINGLE ENGINE LAND

GROUND TRAINING 100:00 HOURS

1. **GROUND TRAINING COURSE OBJECTIVES.** The student will obtain the necessary aeronautical knowledge and meet the prerequisites specified in Part 61 and Part 141 of the FARs for the Commercial Pilot Knowledge Examination.

2. **GROUND TRAINING COURSE COMPLETION STANDARDS.** The student will demonstrated through oral, written tests, and records that he/she meets the prerequisites specified in Part 61 and Part 141 of the FARs, and has the knowledge necessary to pass the Commercial Pilot Knowledge Examination.

STAGE ONE - FEDERAL AVIATION REGULATIONS: 21:00 HOURS

1. **STAGE ONE OBJECTIVE.** To develop the student's knowledge of the Federal Aviation Regulations, Accident Reporting Procedures, the privileges, limitations, and types of flight operations authorized with a commercial pilot certificate.

2. **STAGE ONE COMPLETION STANDARDS.** This stage will successfully be completed when the student completes the exam and subsequently corrects the examination to 100%.

3. **LESSON NO. 1 - 1:00 HOUR.**
   a. **Objective.** During this lesson the student will be instructed in the definitions and abbreviations of FAR Part 1.

   **CONTENT:**

   (1) Federal Aviation Regulations, Part 1.

   b. **Completion Standards.** The student will have successfully completed this lesson when, by oral or written examination, he displays an adequate knowledge and understanding of the definitions and abbreviations contained in Part 1 of the FARs.

*This page revised January 28, 2002*
4. **LESSON NO. 2 - 7:00 HOURS**

a. **Objective.** During this lesson the student will be instructed in the regulatory requirements of Part 61 of the Federal Aviation Regulations.

**CONTENT:**

(1) FAR Part 61, Subpart A--General, Subpart B--Aircraft Ratings and special certificates, Subpart E--Commercial Pilots.

b. **Completion Standards.** The student will have successfully completed this lesson when, by oral or written examination and demonstration, he displays an adequate knowledge and understanding of the regulatory requirements of Part 61 of the FARs.
5. **LESSON NO. 3 - 8:00 HOURS.**

a. **Objective.** During this lesson the student will be instructed in the pertinent regulatory requirements of Parts 91 and 99, and the accident reporting rules of the NTSB Part 830 as related to commercial pilot operations.

**CONTENT:**

(1) FAR, Part 91; Subpart A--General, Subpart B--Flight Rules, general and visual, Subpart C--Maintenance, preventive maintenance, and alterations.

(2) FAR, Part 99; Subpart A--General, Subpart B--Designated Air Defense Identification Zones.

(3) NTSB, Title 14, Chapter III, Part 830.

(4) FAR 121 and 125.

b. **Completion Standards.** The student will have successfully completed this lesson when, by oral or written examination and demonstration, he displays an adequate knowledge and understanding of the regulatory requirements of Part 91 and 99 of the FARs and of the NTSB Part 830.
6. **LESSON NO. 4 - 4:00 HOURS.**

   a. **Objective.** During this lesson the student will be instructed in the pertinent regulatory requirements of Part 135 of the FARs.

   **CONTENT:**

   (1) FAR Part 135, Subpart A through E, including the privileges, limitations, and operations of a commercial pilot, and the operations for which a air taxi/commercial operator, agricultural aircraft operator, and external load operator certificate, waiver, or exemption is required.

   (2) FAR 137.

   b. **Completion Standards.** The student will have successfully completed this lesson when, by oral or written examination and demonstration, he displays an adequate knowledge, understanding, and ability to locate and use the information contained in FARs pertaining to Air Taxi Operations and commercial operations involving the use of small aircraft.

7. **STAGE ONE WRITTEN EXAMINATION - 1:00 HOUR.**
STAGE TWO - FLIGHT FUNDAMENTALS AND AIRPLANE SYSTEMS: 31:00 HOURS

1. **STAGE TWO OBJECTIVE.** To introduce the student to the aircraft, its systems and components, and the basic aerodynamics involved in piloting an airplane.

2. **STAGE TWO COMPLETION STANDARDS.** This stage will successfully be completed when the student completes the written exam and subsequently corrects the examination to 100%.

3. **LESSON NO. 1 - 7:00 HOURS.**

   a. **Objectives.** During this lesson the student will be instructed in the fundamentals of flight basic aerodynamics, including load factors.

   **CONTENT:**

   (1) Airfoil Terminology.
   (2) Forces acting on an airplane in flight.
   (a) Lift.
   (b) Weight.
   (c) Thrust.
   (d) Drag.
   (3) Airfoils.
   (a) Angle of incidence.
   (b) Angle of attack.
   (c) Bernoulli's Principle.
   (4) Factors affecting lift drag.
   (a) Wing area.
   (b) Airfoil shape.
   (c) Angle of attack.
   (d) Airspeed.
   (e) Air density.
   (5) Functions of the controls.
   (a) Axis of rotation - longitudinal, lateral and vertical.
   (b) Primary controls - ailerons, elevators, and rudder.

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(c) Secondary controls - trim tabs.
(d) Flaps and other high lift devices.

(6) Stability.
(a) Static stability.
(b) Dynamic stability.

(7) Loads and load factors.
(a) Effect of bank angle and stall speed.
(b) Effect of turbulence on load factor.
(c) Effect of speed on load factor.
(d) Effect of load factor on stall speed.

b. Completion Standards. This lesson will be successfully completed when, by oral or written examination, the student displays a basic understanding of the fundamentals of flight, basic aerodynamics, and load factors.
4. **LESSON NO. 2 - 7:00 HOURS.**

   a. **Objective.** During this lesson, the student will be instructed in the use of the owner's handbooks, flight manuals and weight and balance, and fundamental flight training maneuvers will be introduced.

   **CONTENT:**

   (1) Use of data in owner's handbook or FAA-approved Airplane Flight Manual.
   (a) Operating limitations.
   (b) High altitude operations.
   (c) Takeoff and landing distances.
   (d) Significance of the airplane performance speeds.
   (e) Computations involved in runway and obstacle clearance.
   (f) Fuel consumption and related charts.
   (g) Maximum range power settings; maximum endurance power settings.
   (h) Crosswind component considerations.
   (i) Cruise control.

   (2) Weight and balance.
   (a) Terms and definitions.
   (b) Loading computations:
   1. Effects of abnormal balance.
   2. Effects of being over max. gross weight.
   3. Finding loaded weight.
   4. Finding center of gravity: when weight is shifted, added, or removed.

   (3) Maneuvering at minimum controllable airspeed.
(4) Stalls.
   (a) Theory of stalls.
   (b) Imminent stalls - power on and power off.
   (c) Full stalls - power on and power off.

   b. **Completion Standards.** This lesson will be completed successfully when, by oral or written demonstration, the student has a basic knowledge of the owner's handbook, flight manual, weight and balance, and the fundamentals of basic flight training maneuvers.
5. **LESSON NO. 3 - 5:00 HOURS.**

a. **Objective.** The student will be instructed in flight training maneuvers, including an introduction to attitude instrument flying.

**CONTENT:**

(1) Review Lesson No. 2.
(2) Takeoffs and landings.
   (a) Normal and crosswind takeoffs and landings.
   (b) Soft-field takeoffs and landings.
   (c) Short-field takeoffs and landings.
   (d) Go-arounds or rejected landings.

(3) Introduction to basic attitude instrument flying. Maneuvering by reference to flight instruments - pitch, bank, power and trim control in the performance of basic maneuvers.

   (a) Straight and level flight.
   (b) Turns.
   (c) Climbs.
   (d) Descents.
   (e) Recovery from unusual attitudes.

b. **Completion Standards.** This lesson will be completed successfully when, by oral or written examination and demonstration, the student displays a basic knowledge of the fundamentals of flight training maneuvers and attitude instrument flying.
6. **LESSON NO. 4 - 8:00 HOURS.**

a. **Objective.** During this lesson the student will be instructed in systems and instruments.

**CONTENT:**

(1) *Airplane structures.*
   (a) Construction features.
   (b) Flight control systems.
   (c) Rigging.

(2) *Propellers.*
   (a) Fixed pitch.
   (b) Controllable.

(3) *Reciprocating airplane engines.*
   (a) Construction features.
   (b) Principle of operation - four stroke cycle.
   (c) Fuel system, including carburetors and fuel injectors.
   (d) Lubrication system.
   (e) Ignition system.
   (f) Engine instruments.
   (g) Operating limitations.
   (h) Malfunctions and remedial actions.

(4) *Airplane hydraulic system.*
   (a) Principle of hydraulics.
   (b) Use of hydraulics in airplanes.
   (c) Construction features of simple airplane hydraulic systems.
   (d) Retractable landing gear and flaps.
   (e) Malfunctions and remedial actions.

(5) *Airplane electrical systems.*
   (a) Fundamentals of electricity.
   (b) Operation of airplane electrical power system units.
   (c) Electrically operated flight instruments.
   (d) Retractable landing gear.
   (e) Flaps.
   (f) Fuses and circuit breakers.
   (g) Malfunctions and remedial actions.
(6) Pitot static system and instruments.
   (a) Airspeed indicator and markings.
   (b) Altimeter.
   (c) Vertical speed indicator.
(7) Vacuum system and instruments.
   (a) Attitude indicator.
   (b) Heading indicator.
   (c) Turn and slip indicator.
(8) Magnetic compass.
   (a) Errors in the magnetic compass.
   (b) Use of the magnetic compass.
(9) Pressurization and high altitude operations.

b. Completion Standards. This lesson will be successfully completed when, by oral or written examination, the student displays a basic understanding of the aircraft systems and instruments.
7. **LESSON NO. 5 - 2:00 HOURS.**

a. **Objective.** During this lesson the student will be instructed in the fundamentals of night flying. Previous lessons will be reviewed as necessary.

**CONTENT:**

(1) Review Lessons 1 through 5.

(2) Night flying.
   (a) Requirements of regulations.
   (b) Preparation.
   (c) Equipment.
   (d) Night vision.
   (e) Airport lighting.
   (f) Orientation.

(3) Partial and complete power failure.
   (a) Sample situations.
   (b) Recommended courses of action.

b. **Completions Standards.** The lesson will be completed successfully when the student, by oral or written examination and demonstration, displays a working knowledge of the fundamentals of night flying.

8. **STAGE TWO WRITTEN EXAMINATION - 1:00 HOUR.**
STAGE THREE - NAVIGATION: 20:00 HOURS

1. **STAGE THREE OBJECTIVE.** To develop the student's ability to plan and plot a VFR cross-country flight using pilotage, dead reckoning and radio navigation.

2. **STAGE THREE COMPLETION STANDARDS.** This stage will successfully be completed when the student completes the written exam and subsequently corrects the examination to 100%.

3. **LESSON NO. 1 - 4:00 HOURS.**

   a. **Objective.** During this lesson, the student will be instructed in the operation of aircraft radios and the use of radio phraseology with respect to air traffic control facilities. The flight computer will be introduced along with the basic use of aeronautical charts.

   CONTENT:
   
   (1) Radio communications. (Descriptions and procedures for operating within the National Airspace System)
   
   (a) Operation of the communications radio equipment.
   (b) Ground control.
   (c) Tower.
   (d) ATIS.
   (e) Flight service station.
   (f) UNICOM.
   (g) Technique and phraseology.
   (h) ATC light signals.

   (2) Flight computer - slide rule face.
   
   (a) Time.
   (b) Speed.
   (c) Distance.
   (d) Fuel consumption.

   (3) VFR navigation.
   
   (a) Aeronautical charts.
   (b) Measurement of courses.
   (c) Pilotage.

   b. **Completion Standards.** The student will have successfully completed the lesson when, by oral or written examination and demonstration, he has a basic knowledge of navigation and the use of radio aids. He will be able to solve fundamental and advanced problems on the flight computer.

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4. LESSON NO. 2 - 5:00 HOURS.

a. **Objective.** During this lesson, the student will be instructed in the fundamentals of navigation, the operation of navigational radio equipment, and advanced problems on the flight computer.

**CONTENT:**

(1) VFR navigation.
   (a) Pilotage.
   (b) Dead reckoning.

(2) Operation of the navigational radio equipment.
   (a) VOR.
   (b) ADF.
   (c) Use of radio aids.

(3) Flight computer - wind face.
   (a) Determination of wind correction angle and true heading.
   (b) Determination of ground speed.
   (c) Review time, speed, distance, and fuel consumption problems on the computer.

b. **Completion Standards.** The student will have successfully completed the lesson when, by oral or written examination and demonstration, he has a basic knowledge of navigation and the use of radio aids. He will be able to solve fundamental and advanced problems on the flight computer.
5. LESSON NO. 3 - 5:00 HOURS.

a. Objective. Lesson Two will be reviewed. Advanced radio navigational problems, emergency procedures with respect to cross-country flying and flight planning will be introduced.

CONTENT:
(1) Review Lesson 2.
(2) Use of ADF.
(3) Radar.
(4) Use of VOR, intercepting radials.
(5) Emergency procedures.
   (a) Diversion to an alternate.
   (b) Lost procedures, including use of radar and DF instructions.
   (c) In-flight emergencies, including forced landings.
(6) Transponder.
(7) DME.
(8) Review flight planning.
(9) Review computer.

b. Completion Standards. This lesson will be completed when, by oral or written examination and demonstration, the student has a working knowledge of advanced radio navigation procedures, emergency procedures and solving flight computer problems.
6. **LESSON NO. 4 - 5:00 HOURS.**

a. **Objective.** During this lesson, the student will be instructed in advanced flight planning, review of flight computer problems, and will be introduced to the medical factors related to flight and general safety precautions. At this time, the school procedures for cross-country training flights will be introduced.

**CONTENT:**

1. Flight planning.
2. Review computer.
3. Medical factors related to flight (physiological considerations).
   a. Fatigue, hypoxia, hyperventilation, alcohol, drugs, vertigo, carbon monoxide, high altitude operations and night operations.
   a. Safe and efficient operation of airplanes.
   b. Preflight inspection.
   c. Inspection and certification requirements.
   d. Collision avoidance precautions.
   e. Wake turbulence avoidance.
   f. Fire - in the air and on the ground.
   g. Use of fire extinguishers.
   h. Ground handling of aircraft.
   i. Aeronautical decision making and judgement
   j. Land and Hold Short Operations
   k. Runway Incursions
5. School procedures for dispatching flights after unscheduled stops.
6. Obtaining maintenance away from the home base.

b. **Completion Standards.** This lesson will be completed when, by oral or written examination and demonstration, the student displays knowledge of medical factors related to flight, general safety procedures, and school policy and procedures for cross-country training flights.

7. **STAGE THREE WRITTEN EXAMINATION - 1:00 HOUR.**

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STAGE FOUR - WEATHER: 20:00 HOURS

1. **STAGE FOUR OBJECTIVE.** To develop the ability to recognize critical weather situations from both the ground and in-flight, procedures and use of appropriate aeronautical weather reports and forecasts.

2. **STAGE FOUR COMPLETION STANDARDS.** This stage will successfully be completed when the student completes the written exam and subsequently corrects the examination to 100%.

3. **LESSON NO. 1 - 6:00 HOURS.**
   a. **Objective.** During this lesson, the student will be instructed in the fundamentals of weather with the operation of aircraft.

      **CONTENT:**

      (1) Aviation weather basics.
          (a) Atmospheric layers.
          (b) Pressure.
          (c) Circulation.
          (d) Temperature and moisture.
          (e) Stability and lapse rates.
          (f) Turbulence.
          (g) Clouds.

      (2) Air masses.
      (3) Fronts.
      (4) Aircraft icing.
      (5) Thunderstorms.
      (6) Windshear

   b. **Completion Standards.** This lesson will be completed when, by oral or written examination; the student demonstrates fundamental knowledge of aviation weather.

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4. **LESSON NO. 2 - 7:00 HOURS.**

a. **Objective.** Lesson One will be reviewed. The interpretation and use of weather reports, forecasts, aviation broadcasts and the obtaining of weather briefings will be introduced.

**CONTENT:**

(1) Review Lesson No. 1.
(2) Aviation weather reports.
   (a) METARs.
   (b) Special surface reports.
   (c) Pilot reports.
   (d) Radar reports.
(3) Aviation weather broadcasts.
   (a) Transcribed weather broadcasts.
   (b) In-flight weather advisories.
(4) Weather briefings.
(5) Review requirements of regulations for VFR flight.
(6) Aviation Weather forecasts.
   (a) Area forecasts.
   (b) TAFs.
   (c) Wind-aloft forecasts and reports.

b. **Completion Standards.** The lesson will be completed when, by oral or written examination and demonstration, the student can interpret and use aviation weather reports, forecasts, and can obtain a weather briefing.
5. **LESSON NO. 3 - 6:00 HOURS.**

   a. **Objective.** This lesson will consist of a review of the previous two lessons and instruction in the use of Zulu time, in-flight weather advisories and weather recognition.

   **CONTENT:**

   (1) Review Lessons No. 1 and 2.
   (2) Zulu time.
   (3) In-flight weather advisories.
   (4) Hazardous weather recognition.

   b. **Completion Standards.** This lesson will be completed when, by oral or written examination, the student has a working knowledge of Zulu time and in-flight aviation weather advisories.

6. **STAGE FOUR WRITTEN EXAMINATION - 1:00 HOUR.**
STAGE FIVE - REVIEW AND FINAL PREPARATION: 8:00 HOURS

1. **STAGE FIVE OBJECTIVE.** To ensure that the student meets at least the minimum knowledge requirements for the FAA Commercial Pilot Written Examination and to introduce the oral portion of the Commercial Pilot-Airplane Flight Examination in accordance with FARs Part 61 and Part 141, and the standards set by the school.

2. **STAGE FIVE COMPLETION STANDARDS:** This stage will successfully be completed when the student completes the written exam and subsequently corrects the examination to 100%.

3. **LESSON NO. 1 - 4:00 HOURS.**

   a. **Objective.** During this lesson, the student will be reviewed in the basic knowledge requirements for the Commercial Pilot Written Examination.

   **CONTENT:**

   (1) **Rules and Publications.**
   
   (a) The Federal Aviation Regulations applicable to commercial pilot privileges, limitations, and flight operations.
   
   (b) The rules of the National Transportation Safety Board pertaining to accident reporting.
   
   (c) The use of the Airman's Information Manual.
   
   (d) The FAA Advisory Circular System.

   (2) **VFR Navigation.**

   (a) Pilotage and dead reckoning.
   
   (b) Radio aids.

   (3) **Meteorology.**

   (a) The recognition of critical weather situations from the ground and in flight.
   
   (b) The procurement and use of aeronautical weather reports and forecasts.

   (4) **Aircraft operations.**

   (a) High density airports.
   
   (b) Collision avoidance precautions.
   
   (c) Radio communication procedures.

   b. **Completion Standards.** The lesson will be completed when, by oral or written examination and demonstration, the student displays at least the minimum knowledge requirements to pass the Commercial Pilot-Airplane Written Examination in accordance with the minimum standards of both the Federal Aviation Regulations and the standards set by the school.
4. **LESSON NO. 2 - 3:00 HOURS.**

a. **Objective.** During this lesson, the student will be introduced to the minimum basic knowledge requirements for the oral portion of the Commercial Pilot-Airplane Flight Examination.

**CONTENT:**

(1) **Preflight Operations.**
   (a) Preflight line inspection.
   (b) Weight and balance determination.
   (c) Starting and run-ups.
   (d) Airplane servicing.

(2) **Airport Operations.**
   (a) Airport and traffic pattern operations.
   (b) Operations at controlled airports.
   (c) Operations at uncontrolled airports.
   (d) Radio communications.

(3) **Flight Maneuvering by Reference to Ground Objects.**

(4) **Slow Flight and Stalls.**
   (a) Flight at critically slow airspeeds.
   (b) Recognition of imminent stalls.
   (c) Recovery from imminent and full stalls.

(5) **Normal and crosswind takeoff and landing procedures.**

(6) **Instrument reference procedures.**
   (a) Control and maneuvering an airplane solely by reference to instruments.
   (b) Emergency descents and climbs using radio aids or radar directives.

(7) **Cross-country flying.**
   (a) Pilotage and dead reckoning.
   (b) Radio aids.

(8) **Maximum performance takeoffs and landings.**
(9) Night flying.  
   (a) Basic flying and emergency procedures.   
   (b) VFR navigation.  

(10) Emergency Operations.  
   (a) Simulated equipment and aircraft malfunctions.  
   (b) Lost Procedures.  
   (c) Emergency go-arounds.  

b. Completion Standards.  This lesson will be completed when, by oral or written examination and demonstration, the student will be found to have been properly introduced to the basic knowledge requirements of the FARs for the oral portion of the Commercial Pilot-Airplane Flight Examination.  

5. **STAGE FIVE AND COURSE FINAL COMPREHENSIVE WRITTEN EXAM - 1:00 HOUR.**
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SOUTHEASTERN OKLAHOMA STATE UNIVERSITY

TRAINING COURSE OUTLINE
INSTRUMENT RATING COURSE

S.O.S.U.
Aviation Sciences Institute
Station A, Box 4136
Durant, OK  74701

This training course outline meets all of the curriculum requirements for the Instrument Rating Course contained in Appendix C of FAR Part 141.

The training syllabus herein contains a separate ground training course and a flight training course which will be taught concurrently.

COURSE OBJECTIVE: This course is designed to provide the ground and flight training necessary to successfully complete the required knowledge and skill tests for an FAA Instrument Rating with an Airplane Category Rating and a Single Engine Land Class Rating.

ENROLLMENT PREREQUISITES
   A. The Student must hold a Private Pilot certificate before beginning the flight portion of the commercial pilot certification course;
   B. Hold at least a third-class medical certificate; and
   C. Be at least seventeen years of age.

COMPLETION STANDARD: The student must demonstrate through oral tests, flight tests, and show through appropriate records that he meets the knowledge, skill, and experience requirements necessary to obtain an Instrument Rating with an airplane category rating and a single-engine land class rating. Each student should complete at least one stage of training every 90 days.

Revised 02-05-02
Facilities and Equipment: Southeastern Oklahoma State University’s Aviation Sciences Institute is located on Eaker Field, five miles south of Durant Oklahoma. This facility is the operations base for the institute’s administration, flight training, and aircraft maintenance.

Aviation Sciences Institute Administration (Northwest Side)
- ASI administration and faculty offices, including ASI director, Chief Flight Instructor, and Assistant Chief Flight Instructor.
- Staff flight instructor offices. These offices vary in size and may be occupied by one to three CFIs. Each instructor has a lockable desk, at least one student chair for pilot briefing, personal computer with internet, phone with voice mail, and a dry erase board.
- Laser grade testing center.
- Conference room
- Classroom that may be used for student briefing.
- Kitchen and restrooms.

Maintenance Hangar (Middle)
- Director of Aircraft Maintenance.
- All aircraft maintenance.

Flight Operations (Southeast Side)
- Aircraft dispatch and line crew office.
- Check instructor offices. Each check instructor is provided issued a private office with a lockable desk, at least one student chair for lesson briefing, personal computer with internet, phone with voice mail, and a dry erase board.
- WSI weather system.
- Pilot briefing room equipped with computers with internet and phones for contacting FSS.
- Lounge area with vending machines.
- Unicom station.
- Check ride office.
- Simulator room.
- Kitchen area and restrooms.

Airport: Eaker Field is an uncontrolled airport with AWOS and a 5,000ft hard surface runway. It meets the requirements of 14 CFR Part 141.38 for day and night operations. The airport has VOR and GPS instrument approach procedures for runways 17 and 35.

CLASSROOM INSTRUCTION: All ground-schools are taught in the Russell Building on Southeastern’s main campus. The Russell Building is a modern facility with classrooms large enough for 30-40 students. All classrooms meet the requirements of 14 CFR FAR 141.45. Classroom training aids include a media cart with computer, projector, and VCR, for power-point presentations and numerous aviation related videos and computer software.

This page revised September 2006
AIRCRAFT and FLIGHT TRAINING DEVICES: The C-150/152 or C-172, and a Precision
Flight Controls MFD (serial #51168) will be used for training in this course. All aircraft meet the
requirements of FAR 141.39 and FAR 91.205 (day and night VFR.) Radio equipment will
consist of at least one navigation/communication radio system (transceiver and VOR).

The Precision Flight Controls MFD is a twin and single engine-advanced ATD (AATD.)
Equipment includes: fuselage with full dual controls, 180 degree visual system and instruments
for flight, engines, and systems. The IFR avionics package includes Garmin 430 GPS/Nav/Com,
dual needle RMI, HSI. Full autopilot/flight director with altitude preselect is available, along
with worldwide navigational, and visual capabilities using Real World Frequencies; three needle
altimeter; toe brakes; adjustable seats (pilot and copilot); and cockpit lights. Additional
equipment includes a center trim console which provides manual controls for elevator trim, and
rudder trim in addition to selectors for fuel, cowl flaps, wing flaps and carburetor heat. The 180
degree visual system includes 5-50” color monitors. USGS 50 meter terrain data is used for the
continental US. This Flight Training Device meets all requirements of Appendices B and C; 14
CFR 141.41 (b).

Aviation majors have access to On Top PCATD software. This training aid has a yoke with
rudder pedals, a precision flight control quadrant, and an avionics control panel. This PCATD is
intended to be used as a training aid only and is not approved for any Part 141 curriculum.
Additionally, a KNL 94 GPS trainer is available for GPS demonstrations

Chief Flight Instructor:
Kyle V. Thomas
kthomas@sosu.edu
580.745.3246

Assistant Chief Flight Instructor:
George C. Jacox
gjacox@sosu.edu
580.745.3245

Instructors: Each Instructor used for ground or flight instruction must hold a flight instructor
certificate or ground instructor certificate, as appropriate, with ratings for the approved course of
training and all aircraft used in this course.

All instructors meet the experience requirements in FAR 141.33 (a) (3).

This page revised September 2006
# RECOMMENDED TIME TABLE
## INSTRUMENT FLIGHT TRAINING

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<th>STAGE ONE</th>
<th>Dual</th>
<th>X-C</th>
<th>Instrument</th>
<th>AATD</th>
</tr>
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<tr>
<td>1. Basic Instrument Flying</td>
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<td>2. Review</td>
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<td>3. Review and Partial Panel</td>
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<td>4. Advanced Maneuvers</td>
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<tr>
<td>5. Progress Check</td>
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<td>6. VOR Navigation</td>
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<td>7. ADF Navigation</td>
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<td>8. Localizer Navigation</td>
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<td>9. Intro to GPS, Review</td>
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<td>10. VOR Holding</td>
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<td>11. ADF Holding</td>
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<td>12. Additional Holds</td>
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<td>13. Holding Patterns</td>
<td>Airplane</td>
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<tr>
<td>14. Stage Check</td>
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</tr>
</tbody>
</table>

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- Instrument time is hood time, actual, or AATD.

- An airplane may be substituted for any AATD time.

- Students may use a C-172 or C-182RG for lessons requiring an airplane.

*This page revised June 2016*
### RECOMMENDED TIME TABLE

#### INSTRUMENT FLIGHT TRAINING

<table>
<thead>
<tr>
<th>Lesson</th>
<th>Dual</th>
<th>X-C</th>
<th>Instrument</th>
<th>AATD</th>
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</thead>
<tbody>
<tr>
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<td>2. Localizer Approaches</td>
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<td>3. ILS Approaches</td>
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<tr>
<td>4. Review and Practice</td>
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<tr>
<td>5. Review ADF</td>
<td>Sim</td>
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<tr>
<td>6. NDB and GPS IAPs</td>
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<tr>
<td>7. Review Approaches</td>
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<tr>
<td>8. Cross-Country</td>
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<tr>
<td>13. Cross-Country</td>
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<tr>
<td>14. Stage Check</td>
<td>Airplane</td>
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</table>

- The individual lesson times shown on this table are not mandatory; they are for instructor/student guidance only. Lesson times may vary because of individual student needs. **However, the minimum time listed for each stage will be attained at the completion to insure the student meets the minimum training requirements specified in FAR Part 141.**

- Instrument time is hood time, actual, or AATD.

- An airplane may be substituted for any AATD time.

- Students may use a C-172 or C-182RG for lessons requiring an airplane.

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*This page revised June 2016*
INSTRUMENT STAGE ONE: 15 HOURS

Stage One Objective
During Stage One the student should acquire the practice, experience, and proficiency necessary to conduct instrument flight and IFR radio navigation. He/she will also acquire proficiency at using partial panel instrument references. In addition, he/she will learn to file IFR flight plans, copy associated clearances, comply with departure instructions, and execute holding pattern procedures.

Completion Standard
At the completion of this stage, the student will demonstrate instrument pilot proficiency in attitude instrument flying and IFR radio navigation. In addition, he will be able to file IFR flight plans, receive and copy associated IFR clearances, and comply accurately with IFR departure and holding pattern instructions.

1. Lesson One: Basic Instrument Flying - Airplane (1.0 hr.)

   A. Objective
   To introduce the ground trainer and review, with the student, attitude instrument flight maneuvers to enable him to learn precision airplane control by instrument reference.

   Content
   1. Preflight briefing
   2. Flight maneuvers and procedures - New
      a. Instrument Cockpit Check
      b. Constant airspeed and rate climbs
         c. Level off procedure
         d. Straight-and-level flight
         e. Standard rate turns
         f. Constant airspeed and rate descents
         g. Flight at approach speed

   B. Completion Standard
   At the completion of this lesson, the student will be able to perform climbs while maintaining airspeed within 10 knots and vertical rates within 300 feet of that desired. He will be able to complete turns within 10 degrees of a predetermined heading and will maintain altitude within 150 feet of that assigned. Straight-and-level flight at cruise and approach speed will be performed while maintaining altitude within 150 feet and heading within 10 degrees of that assigned by the instructor.
2. **Lesson Two:** Review - Ground Trainer or Airplane (1 hr.)

A. **Objective**
   To review the listed maneuvers and procedures to increase the student's proficiency and to introduce advanced instrument maneuvers and procedures, emphasizing control and accurate maneuvering solely by reference to flight instruments. In addition, he will learn the importance of the IFR preflight inspection and checklist.

**Content**
1. Preflight briefing
2. Flight maneuvers and procedures - **review**
   a. Constant airspeed climbs
   b. Constant airspeed descents
   c. Straight-and-level flight
   d. Flight at approach speed
3. Flight maneuvers and procedures - **new**
   a. Steep power turns
   b. Power-on stalls (imminent)
   c. Power-off stalls (imminent)
   d. Accelerated stalls (imminent)
   e. Airspeed and configuration changes
   f. Pattern "A"
   g. Control and accurate maneuvering solely by Reference to flight instruments.
4. Post-flight critique and preview of next lesson

B. **Completion Standard**
   At the completion of this lesson, the student will demonstrate an understanding of the importance of IFR preflight activities and the attitudes and airspeeds required for the performance of the maneuvers listed for review. In addition, the student will perform steep power turns while maintaining altitudes within 200 feet and the desired bank angle within 10 degrees. During stall practice, he will recognize the first physical indication of the imminent stall and he will promptly recover before encountering a full stall.
3. **Lesson Three:** Review and Partial Panel - Ground Trainer or Airplane (1.0 hr.)

A. **Objective**
   The objective of lesson three is to review attitude instrument flight to gain proficiency and to teach the student the techniques used to control airplane attitude without the use of the attitude or heading indicators.

   **Content**
   1. Preflight briefing
   2. Flight maneuvers and procedures - **review**
      a. Airspeed changes (full panel)
      b. Maneuvering at approach speed (full panel)
      c. Pattern "A"
   3. Flight maneuvers and procedures - **new**
      a. Pattern "B"
      b. Partial panel instrument
         1. Straight-and-level flight
         2. Climbs and descents
         3. Timed turns to predetermined headings
         4. Climbing and descending turns
         5. Maneuvering at approach speed
   4. Post-flight critique and preview of next lesson

B. **Completion Standard**
   At the completion of this lesson, the student will demonstrate control of the airplane by partial panel instrument references holding altitude within 150 feet, airspeed within 15 knots, and heading within 15 degrees.
4. **Lesson Four**: Review and Advanced Maneuvers - Airplane (2.0 hrs.)

A. **Objective**
   To allow the student to increase his basic instrument flying proficiency through the practice of the listed maneuvers. In addition, this lesson will familiarize the student with timed turns and increase his proficiency of partial panel instrument flying.

**Content**
1. Preflight briefing
2. Flight maneuvers and procedures - **review**
   a. Full and partial panel
      1. Climbs
      2. Level off procedures
      3. Straight-and-level flight
      4. Descents
      5. Timed turns to predetermined headings
      6. Stalls
      7. Patterns "A" and "B"
3. Flight maneuvers and procedures - **new**
   a. Partial panel
      1. Introduction to needle, ball, and airspeed only
      2. Magnetic compass turns
      3. Recovery from critical flight attitudes
4. Post-flight critique and preview of next lesson

B. **Completion Standard**
   At the completion of this lesson, the student will be able to perform straight-and-level flight while maintaining altitude within 100 feet, heading within 10 degrees and airspeed within 10 knots during both full and partial panel instrument flight. During climbs and descents, the airspeed will be maintained within 10 knots and the vertical rate within 200 feet per minute of the value assigned. All turns will be performed using a standard rate turn and recoveries will be within 10 degrees of the desired heading during full panel flight. During partial panel flight, turns to headings will be within 15 degrees of that assigned. Stall recognition and recovery should be prompt and positive with a minimum loss of altitude and correct procedures will be used for each critical attitude recovery.
Lesson Five: Progress check - Attitude Instrument Flying - Airplane (1.0 hr.)

A. Objective:
During this lesson the Chief Flight Instructor or his assistant will conduct a stage check to determine the student's proficiency in controlling and maneuvering solely by reference to instruments.

Content
1. Preflight briefing
2. Flight maneuvers and procedures (full and partial panel) - review
   a. Straight-and-level flight
   b. Constant airspeed climbs and descents
   c. Turns - standard rate
   d. Steep power turns
   e. Power-on and power-off stalls (imminent)
   f. Airspeed and configuration changes
   g. Timed turns/compass turns to predetermined headings
   h. Recovery from critical flight attitudes
   i. Patterns "A" and "B"
3. Post-flight critique and preview of next lesson

B. Completion Standard
At the completion of this lesson, the student will be able to perform straight-and-level flight while maintaining altitude within 100 feet, heading within 10 degrees and airspeed within 10 knots during both full and partial panel instrument flight. During climbs and descents, the airspeed will be maintained within 10 knots and the vertical rate within 200 feet per minute of the value assigned. All turns will be performed using a standard rate turn and recoveries will be within 10 degrees of the desired heading during full panel flight. During partial panel flight, turns to headings will be within 15 degrees of that assigned. Stall recognition and recovery should be prompt and positive with a minimum loss of altitude and correct procedures will be used for each critical attitude recovery.
6. **Lesson Six:** VOR Navigation - Airplane Ground Trainer (1.0 hr.)

A. **Objective**
   To instruct the student in the use of VOR for safe accurate IFR navigation by the use of the VOR system.

B. **Content**
   1. Preflight briefing
   2. Flight maneuvers and procedures - new
      a. VOR accuracy checks
      b. VOR orientation procedures
      c. VOR tracking
      d. VOR cross-bearings and use of DME (if available)
      e. VOR speed, time, and distance to station computations
   3. Post-flight critique and preview of next lesson

B. **Completion Standard**
   This lesson will be completed when the student demonstrates the ability to make positive identification of position at all times using the VOR. He will be expected to intercept VOR radials both inbound and outbound from the VOR and track on the assigned radial with an accuracy of 5 degrees.
7. **Lesson Seven**: ADF Navigation - Ground Trainer or Airplane (1.0 hr.)

A. **Objective**
   The objective of lesson seven is to instruct the student in the use of the ADF for safe, accurate IFR navigation by the use of the ADF system.

**Content**
1. Preflight briefing
2. Flight maneuvers and procedures - **review**
   a. VOR orientation
   b. VOR tracking
3. Flight maneuvers and procedures - **new**
   a. ADF receiver checks
   b. ADF orientation procedures
   c. ADF homing
   d. ADF tracking
   e. ADF speed, time, and distance computations
4. Post-flight critique and preview of next lesson

B. **Completion Standard**
   This lesson will be completed when the student demonstrates the ability to make positive identification of his position using ADF indications and time and distance checks. He will be expected to intercept ADF bearings, track to the station with an accuracy of 10 degrees, and make outbound intercepts after passing the NDB station.
8. **Lesson Eight**: Review and Localizer Navigation - Ground Trainer or Airplane (1.0 hr.)

A. **Objective**
   The objective of the lesson is to review VOR and ADF navigation procedures and to introduce the use of the localizer and the outer and middle markers for safe, accurate navigation under instrument flight conditions.

**Content**
1. Preflight briefing
2. Flight maneuvers and procedures - **review**
   a. Partial panel air work as necessary
   b. VOR orientation
   c. ADF orientation
   d. VOR and ADF tracking
3. Flight maneuvers and procedures - **new**
   a. Localizer orientation
   b. Localizer tracking
   c. Outer and middle markers
   d. Use of radar vectors
4. Post-flight critique and preview of next lesson

B. **Completion Standard**
   At the completion of this lesson, the student will demonstrate that he can perform VOR and ADF receiver checks, orient his position from VOR’s and NDB’s quickly and accurately, and intercept and track predetermined VOR radials and NDB bearings. Additionally, the student will be able to promptly comply with controller instructions during vectoring and will be able to hold the assigned headings within 10 degrees, altitudes within 100 feet, and airspeed within 10 knots. He will understand that prompt but small heading corrections are needed to track a localizer.
9. **Lesson Nine:** Review - Airplane (1.0 hr.)

A. **Objective**
   This lesson is to afford the student an opportunity to review the listed procedures and maneuvers in an airplane to increase his proficiency and experience. Additionally, the student will be introduced to GPS operations.

**Content**
1. Preflight briefing
2. Flight maneuvers and procedures - **review**
   a. IFR preflight inspection
   b. IFR pre-takeoff check
   c. VOR tracking
   d. ADF tracking
3. GPS orientation and tracking - **new**

B. **Completion Standard**
   At the completion of this lesson, the student will demonstrate correct procedures for IFR preflight inspection and accurately utilize a pre-takeoff check. He or she will be able to consistently track predetermined VOR radials within 2 degrees and NDB bearings within 5 degrees. He or she will also be able to demonstrate their ability to use a GPS for tracking and orientation.

This page revised August 2004
10. **Lesson Ten:** VOR Holding - Ground Trainer or Airplane (1.0 hr.)

A. **Objective**
   The objective of the lesson is that the student will become familiar with the procedures for filing an IFR flight plan, obtaining a clearance, and complying with air traffic control instructions and procedures. Additionally, the student will learn the proper procedures for entering and flying holding patterns.

**Content**
1. Preflight briefing
2. Flight maneuvers and procedures - **new**
   a. Procedures for filing an IFR flight plan
   b. Obtaining an IFR clearance
   c. IFR holding
      1. Direct entry
      2. Teardrop entry
      3. Parallel entry
3. Post-flight critique and preview of next lesson

B. **Completion Standard**
   At the completion of this lesson, the student will know the procedures for filing an IFR flight plan, obtaining an IFR clearance, and complying with departure instructions. He will be able to determine the proper holding pattern entry within 10 degrees and explain the technique used to correct for wind drift while in the holding pattern, holding altitude within 150 feet, and airspeed within 15 knots.
11. **Lesson Eleven**: ADF Holding - Ground Trainer or Airplane (1.0 hr.)

A. **Objective**
   During this lesson the student will improve his holding pattern proficiency and relate the basic procedure to ADF holding.

**Content**
1. Preflight briefing
2. Flight maneuvers and procedures - **review**
   a. Filing an IFR flight plan procedure
   b. Copying and complying with an IFR clearance
   c. VOR holding
3. Flight maneuvers and procedures - **new**
   a. ADF holding
      1. Direct entries
      2. Teardrop entries
      3. Parallel entries
4. Post-flight critique and preview next lesson

B. **Completion Standard**
   At the completion of this lesson, the student will demonstrate the ability to file an IFR flight plan, receive and copy the IFR clearance, follow departure procedures, and perform VOR and ADF holding patterns using correct entry, and wind drift correction.
12. **Lesson Twelve**: Additional Holding Patterns - Ground Trainer or Airplane (1.0 hr.)

A. **Objective**
   To review holding patterns previously learned and to introduce the student to other types of holding patterns that an instrument pilot may encounter.

**Content**
1. Preflight briefing
2. Flight maneuvers and procedures - review
   a. VOR holding
   b. ADF holding
3. Flight maneuvers and procedures - new
   a. Intersection holding
   b. DME and/or localizer holding
4. Post-flight critique

B. **Completion Standard**
   At the completion of this lesson, the student will be able to determine the proper holding entry within 5 degrees, and he will correct for wind conditions to remain within the holding pattern and fly the inbound leg of the pattern within 30 seconds. He will also be able to demonstrate the procedures for performing intersection and DME and/or localizer holding patterns, holding altitude within 150 feet, and airspeed within 15 knots.
13. **Lesson Thirteen:** Holding Patterns - Airplane (1.0 hr.)

A. **Objective**
   The objective of lesson thirteen is to allow the student to review and practice the listed maneuvers and procedures to correct any areas of faulty performance. Additionally, the students will be introduced to GPS holding procedures.

B. **Completion Standard**
   At the completion of this lesson, the student will be able to conduct VOR accuracy checks, file an IFR flight plan, and copy the associated clearance. He will accurately and promptly comply with holding pattern instructions, using the correct pattern entry. Each pattern will be performed while maintaining altitude within 100 feet and holding airspeed within 10 knots of that assigned by the instructor.
14. **Lesson Fourteen: Stage Check** - Airplane (1.0 hr.)

A. **Objective**
   During this lesson the Chief Flight Instructor or his assistant will conduct a stage check to determine the student's proficiency in the performance of instrument navigation and holding patterns.

**Content**
1. Preflight briefing
2. Flight maneuvers and procedures - review
   a. VOR accuracy checks
   b. ADF receiver checks
   c. Copying and complying with an IFR clearance
   d. Holding procedures
   e. NDB, VOR, and GPS tracking and orientation
3. Post-flight critique and preview of next lesson

B. **Completion Standard**
   At the completion of this lesson, the student will demonstrate correct procedures for the conduct of VOR and ADF receiver checks. He will be able to file an IFR flight plan, copy the associated clearance, and comply with departure instructions. In addition, he will be able to execute appropriate holding pattern entries, and maintain altitude within 100 feet of that assigned during the hold. Finally, the student will demonstrate instrument pilot proficiency in NDB, VOR, and GPS navigation.

*This page revised August 2004*
STAGE TWO: 20 HOURS

Stage Two Objective
The objective of stage two is that the student review and practice IFR navigation and holding pattern procedures to increase his proficiency and experience. He will also learn to execute instrument approach procedures, to plan and conduct IFR cross-country operations, and to meet possible IFR emergencies.

Completion Standard
At the completion of stage two, the student will demonstrate FAA Instrument Pilot Practical Test Standards criteria in the execution of instrument approach procedures, IFR cross-country operations, and IFR emergency procedures.

1. **Lesson One**: Review and VOR Approaches - Ground Trainer or Airplane (1.0 hr.)

   A. **Objective**
   To review VOR procedures and instruct the student in the execution of safe and accurate VOR instrument approaches to published minimums, and to comply with published or directed missed approach procedures.

   **Content**
   1. Preflight briefing
   2. Flight maneuvers and procedures - review
      a. Attitude instrument flying
      b. VOR orientation
      c. VOR tracking
   3. Flight maneuvers and procedures - new
      a. VOR and/or VOR/DME approaches, DME arcs
      b. Missed approach procedures
   4. Post-flight critique and preview of next lesson

   B. **Completion Standard**
   At the completion of this lesson, the student will demonstrate an understanding of VOR and/or VOR/DME approach procedures and apply this knowledge during initial practice of these procedures. He will be able to follow published VOR and/or VOR/DME approach procedures to the minimum descent altitude and execute the missed approach procedure as outlined on the approach chart.

2. **Lesson Two**: Review and Localizer Approaches - Ground Trainer or Airplane (1.0 hr.)

   A. **Objective**
The objective of this lesson is to increase the student's proficiency in the performance of VOR approach and missed approach procedures.

Content
1. Preflight briefing
2. Flight maneuvers and procedures - review
   a. VOR holding
   b. DME arcs and VOR approaches to published minimums
   c. Missed approach procedures
3. Flight maneuvers and procedures - new
   a. Localizer approaches (front and back course)
4. Post-flight critique and preview of next lesson

B. Completion Standard
   At the completion of this lesson, the student will demonstrate the ability to hold altitude within 100 feet of prescribed minimum altitudes for the initial and intermediate approach segments. He will also understand the need for prompt, small corrections when tracking the localizer, and demonstrate operational knowledge of the information presented on the approach charts.
3. Lesson Three: Review and ILS Approaches - Ground Trainer or Airplane (1.0 hr.)

A. Objective
   To increase the student's proficiency in the listed approach procedures and to introduce
   the student to ILS approaches to published minimums.

Content
1. Preflight briefing
2. Flight maneuvers and procedures - review
   a. VOR and VOR/DME approaches
   b. Localizer approaches
3. Flight maneuvers and procedures - new
   a. ILS approaches to published minimums.
   b. Missed approach procedures
4. Post-flight critique and preview of next lesson

B. Completion Standard
   At the completion of this lesson, the student will demonstrate the ability to follow
   published VOR and/or VOR/DME and localizer approaches to the MDA. He should
   maintain altitude no more than 50 feet above specified minimum altitudes and should not
   descend below MDA unless a landing is authorized. Missed approach procedures should
   be executed promptly and accurately according to published procedures or controller
   instructions. In addition, the student will demonstrate ILS approaches and missed
   approach procedures.
4. **Lesson Four**: Review and Practice - Airplane (1.0 hr.)

   **A. Objective**
   To continue to practice the listed approach procedures to increase proficiency and experience and to teach the student to utilize holding pattern procedures in conjunction with instrument approaches.

   **Content**
   1. Preflight briefing
   2. Flight maneuvers and procedures - **review**
      a. ILS approach
      b. Localizer approach
      c. Missed approach procedures
      d. VOR and/or intersection holding
   3. Post-flight critique and preview of next lesson

   **B. Completion Standard**
   At the completion of this lesson, the student will demonstrate the execution of approaches from a holding pattern at the final approach fix and utilize holding patterns during missed approach procedures. The student will be able to complete the approach procedures unassisted and provide his own radio communications.
5. **Lesson Five**: Review ADF Procedures - Ground Trainer or Airplane (1.0 hr.)

A. **Objective**
   The objective of this lesson is to review ADF orientation, tracking, and holding to prepare him for introduction of NDB approaches to published minimums in the second part of this lesson.

**Content**
1. Preflight briefing
2. Flight maneuvers and procedures - **review**
   a. ADF orientation
   b. ADF tracking
   c. ADF holding
3. Flight maneuvers and procedures - **new**
   a. NDB approaches to published minimums
   b. Missed approach
4. Post-flight critique and preview of next lesson

B. **Completion Standard**
   At the completion of this lesson, the student will demonstrate increased proficiency in ADF navigation procedures. He will apply these procedures to the execution of NDB approaches. The NDB final approach course will be held within seven degrees, but will not exceed the airport boundaries.
6. **Lesson Six:** NDB and GPS approach procedures - Airplane (1 hr.)

**A. Objective**

During this lesson, the student will review ADF navigation and NDB approaches to increase his proficiency, and be introduced to GPS approach procedures.

**Content**

1. Preflight briefing
2. Flight maneuvers and procedures - **review**
   a. ADF tracking
   b. ADF holding
   c. NDB approaches
3. Flight maneuvers and procedures - **new**
   a. GPS approach procedures
4. Post-flight critique and preview next lesson

**B. Completion Standard**

At the completion of this lesson, the student will increase his or her proficiency in ADF navigation and NDB approaches. The final approach course will be maintained within five degrees, and the MDA will be reached and maintained prior to passing the missed approach point. In addition, the student will demonstrate an understanding of GPS approaches and be able to execute the IAP to prescribed minimums.

**This page revised August 2004**
7. **Lesson Seven**: Review of Approaches - Ground Trainer or Airplane (1.0 hr.)

A. **Objective**
   During this lesson the student will review and practice the listed approach procedures and demonstrate instrument pilot proficiency in their execution.

**Content**
1. Preflight briefing
2. Flight maneuvers and procedures - **review**
   a. ILS approaches
   b. Localizer approaches
   c. NDB approaches
3. Post-flight critique and preview next lesson

B. **Completion Standard**
   At the completion of this lesson, the student will demonstrate the execution of the listed approach procedures and meet the criteria published in the FAA Instrument Pilot Practical Test Standards.
8. **Lesson Eight**: Instrument Cross-Country - Airplane (2.0 hrs.)

A. **Objective**

During this lesson, the student will apply previously learned techniques and procedures to the planning and conduct of a cross-country flight in simulated or actual IFR conditions, with the route to be selected by the Instructor or Chief Flight Instructor. The instructor will assist the student verbally, as necessary, and the flight will be conducted with strict adherence to instrument flight rules.

**Content**

1. Preflight and ground briefing
   a. Route selection
   b. Weather evaluation
   c. Fuel requirements
   d. Aircraft performance and limitations
   e. Airman's Information Manual, Airport Facility Directory, Military training routes, and FDC NOTAMs
   f. Navigation
   g. FAA flight plan
2. Flight maneuvers and procedures - review
   a. IFR preflight inspection
   b. Obtaining and copying IFR clearance
   c. IFR pre-takeoff checklist
   d. IFR departure
3. Flight maneuvers and procedures - new
   a. En route
      1. VOR navigation
      2. Computing ETAs
      3. Communications
   b. Emergency procedures
      1. Lost communications
      2. Navigation and instrument failure
   c. Arrival
      1. Precision or non-precision approach
      2. Missed approach procedures
4. Post-flight critique and preview next lesson

B. **Completion Standard**

At the completion of this lesson, the student will demonstrate that he understands the integration of previously learned techniques and procedures required for the planning and conduct of an IFR cross-country flight. The flight will be completed with only verbal assistance from the instructor. The student will plan and file the flight plan subject to the approval of the instructor. He will receive and copy the clearance and provide his own ATC radio communications with few exceptions. He will comply with ATC instructions and published approach procedures and interpret IFR enroute charts. He will also demonstrate an understanding of IFR emergency procedures.

**A. Objective**

During Lesson nine, the student will attain the cross-country proficiency of an instrument pilot and meet the cross-country experience requirement of FAR 141 Appendix C by completing a cross-country flight, in actual or simulated IFR conditions, of at least 250 NM on Federal Airways or as routed by ATC with one segment of the flight consisting of a least a straight-line distance of 100 nautical miles between airports. The flight will include an instrument approach at each airport and involve three different kinds of approaches with the use of navigation systems. The route will be DUA-TUL-OKC-DUA or another route approved by the Chief Flight Instructor.

**Content**

1. Preflight and ground briefing
   a. Route selection
   b. Weather evaluation
   c. Fuel requirements
   d. Aircraft performance and limitations
   e. Airman's Information Manual, Airport Facility Directory, Military Training Routes, and FDC NOTAMs
   f. Navigation log
   g. FAA flight plan
   h. Weight and balance

2. Flight maneuvers and procedures
   a. IFRpreflight inspection
   b. Obtaining an IFR clearance
   c. IFR pre-takeoff checklist
   d. IFR departure
      1. Use of SIDs
      2. Use of radar vectors
   e. Enroute
      1. Radio navigation
      2. Computing ETAs
      3. Communications
      4. Course changes
      5. Revising flight plan
      6. Holding
   f. Emergency procedures appropriate to IFR flight:
      1. Lost communications
      2. Navigation and instrument failure
      3. Turbulence
      4. Icing
5. Engine failure  
6. Low fuel supply  
7. Other emergency procedures appropriate to the maneuvering of the airplane solely by reference to flight instruments.

g. Arrival  
1. Use of STARs  
2. Use of radar vectors  
3. ILS approach  
4. NDB approach  
5. VOR approach  
6. Missed approach procedures  
h. Planning and diverting to an alternate airport

3. Post-flight critique and preview next lesson

B. **Completion Standard**  
At the completion of this lesson, the student will demonstrate that he meets the FAA Instrument Pilot Practical Test Standards criteria for the execution of an IFR cross-country flight. The flight will be performed without instructor assistance to the first destination airport and the navigation log will show that estimated times of arrival at checkpoints did not vary more than five minutes from actual times of arrival. The student will also comply with ATC instructions and published approach procedures and demonstrate that he can successfully divert to a planned alternate airport.
10. **Lesson Ten**: Instrument Approaches, Complex Airplane (1.0 hr.)

A. **Objective**
   To afford the student the opportunity to practice, and demonstrate instrument pilot proficiency in the performance of instrument approaches and holding patterns in complex airplanes.

**Content**
1. Preflight briefing
2. Flight maneuvers and procedures - **review**
   a. IFR approaches, Precision and Non-Precision
   b. Holding
3. Post-flight critique and preview next lesson

B. **Completion Standard**
   At the completion of this lesson, the student will demonstrate that he can consistently comply with published instrument approach procedures. In addition, he will demonstrate correct entry, execution, and departure procedures holding patterns and maintain orientation, accuracy, and timing. He will not deviate from assigned altitudes in excess of 100 feet and will maintain assigned holding airspeeds within 10 knots. **Lesson must be completed in a Complex Airplane.**
11. **Lesson Eleven**: Review Attitude Instrument Flying - Ground Trainer or Airplane (1.0 hr.)

A. **Objective**
   To review and practice the listed maneuvers and procedures to maintain or increase his proficiency in attitude instrument flying using full and partial panel instrument references.

**Content**
1. Preflight briefing
2. Flight maneuvers and procedures - **review**
   a. Full and partial panel instrument flying
      1. Constant-rate descents and climbs
      2. Constant-airspeed climbs and descents
      3. Level-off procedures
      4. Standard-rate turns
      5. Timed and compass turns to predetermined headings
      6. Recovery from critical flight attitudes
      7. Power-on stalls (imminent)
      8. Power-off stalls (imminent)
3. Post-flight critique and preview next lesson

B. **Completion Standard**
   At the completion of this lesson, the student will be able to demonstrate attitude instrument flying by maintaining altitude within 100 feet, heading within 10 degrees and airspeed within 10 knots during straight-and-level flight. Turns will be completed within 10 degrees of the assigned heading while maintaining altitude within 100 feet. Climb and descent rates will be within 200 fpm of that desired and airspeeds will be within 10 knots. Stall recoveries will be prompt with a minimum loss of altitude.
Lesson Twelve: Review - Airplane (2.0 hrs.)

A. Objective
   During this lesson, the student will review and practice the listed maneuvers and procedures to maintain or increase his proficiency in preparation for the stage check.

Content
1. Preflight briefing
2. Flight maneuvers and procedures - review
   a. Precision and Non-precision approaches procedures
   b. Emergency procedures as selected by the instructor

B. Completion Standard
   At the completion of this lesson, the student will demonstrate that he can perform the listed maneuvers and procedures in accordance with the FAA Instrument Pilot Practical Test Standards criteria.

This page revised August 2004
13. **Lesson Thirteen**: Cross-country Review - Airplane (2.0 hrs.)

A. **Objective**
   The objective of this lesson is to review IFR cross-country operations in preparation for the Stage Eight flight check.

**Content**
1. Preflight and ground briefing
   a. Route selection (as determined by the Instructor)
   b. Weather evaluation
   c. Fuel requirements
   d. Aircraft performance and limitations
   e. Airman’s Information Manual, Airport Facility Directory, Military Training Routes, and FDC NOTAM
   f. Navigation log
   g. FAA flight plan
   h. Weight and balance
2. Flight maneuvers and procedures - **review**
   a. IFR preflight inspection
   b. Obtaining an IFR clearance
   c. IFR departure
   d. Enroute navigation procedures
   e. Arrival Procedures
      1. Approaches as necessary
      2. Missed approach procedures
3. Post-flight critique and preview next lesson

B. **Completion Standard**
   At the completion of this lesson, the student will demonstrate that he meets the FAA Instrument Pilot Practical Test Standards criteria for the execution of an IFR cross-country flight.
Lesson Fourteen: EOC Exam- Airplane (1.0 hr.)

A. Objective
During this lesson, the Chief Instructor or his assistant will evaluate the student's proficiency in the performance of IFR operations and instrument approaches.

Content
1. Preflight and ground handling
   a. IFR preflight planning
   b. Filing an IFR flight plan
2. Flight maneuvers and procedures - review
   a. IFR preflight inspection
   b. Obtaining an IFR clearance
   c. IFR departure
   d. Communications
   e. VOR orientation and tracking
   f. ADF orientation and tracking
   g. Holding procedures
   h. VOR and/or NDB approach and missed approach
   i. ILS approach and missed approach
   j. Attitude instrument flying
3. Post-flight critique

B. Completion Standard
At the completion of this lesson, the student will demonstrate that he or she meets the knowledge and proficiency requirements set forth within the current FAA Instrument rating Airmen Certification Standards.

This page revised June 2016
TRAINING COURSE OUTLINE -- TRAINING SYLLABUS

INSTRUMENT GROUND TRAINING  70:00 HOURS

1. **GROUND TRAINING COURSE OBJECTIVES.** The student will obtain the necessary aeronautical knowledge and meet the prerequisites specified in Part 61 and Part 141 of the Federal Aviation Regulations for the Instrument Rating - Airplane Written Examination.

2. **GROUND TRAINING COURSE COMPLETION STANDARDS.** The student has demonstrated through oral, written tests, and records that he meets the prerequisites specified in Part 61 and Part 141 of the Federal Aviation Regulations, and has the knowledge necessary to pass the Instrument Rating - Airplane Written Examination.
1. **STAGE ONE OBJECTIVE.** To introduce the student to the facilities, charts, procedures, and other basic principles involved in air navigation as related to instrument flight.

2. **STAGE ONE COMPLETION STANDARDS.** This stage will successfully be completed when the student completes the exam and subsequently corrects the examination to 100%.

3. **LESSON NO. 1 - 5:00 HOURS.**
   
   a. **Objectives.** During this lesson, the student will be instructed in the basic operating principles, characteristics, and limitations of ground and airborne navigation facilities.

   **CONTENT:**

   (1) VOR’S
   
   (a) Types.

   (b) Limitations.

   (2) Non Directional Beacons.

   (3) Commercial broadcast stations.

   (4) Radar facilities.
   
   (a) ASR.

   (b) PAR.

   (5) Radar beacon systems.

   (6) Distance measuring equipment.

   (7) Instrument landing systems.

   b. **Completion Standards.** This lesson will be successfully completed when, by oral or written examination, the student displays a basic understanding of the operating principles, characteristics, and limitations of ground and airborne navigation facilities.

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*This page revised February 5, 2002*
4. **LESSON NO. 2 - 5:00 HOURS.**

a. **Objectives.** During this lesson, the student will be instructed in the instrument radio navigation chart design, construction, and use.

**CONTENT:**

(1) Enroute low altitude charts.

(2) Low altitude area charts.

(3) Standard instrument departure charts.

(4) Standard terminal arrival route charts.

(5) Instrument approach and landing charts.

(6) Preferred routes.

b. **Completion Standards.** This lesson will be successfully completed when, by oral or written examination, the student displays a basic understanding of the instrument radio navigation chart design, construction, and use.
5. **LESSON NO. 3 - 5:00 HOURS.**

a. **Objectives.** During this lesson, the student will be instructed in the airway route system, direct flights, and other procedures.

**CONTENT:**

1. Dead reckoning appropriate to IFR navigation.

2. IFR navigation by radio aids using the VOR, ADF, and ILS systems.

3. Victor (VOR) airways.

   a. Limits; radials and bearings; route identification; altitude limits; reporting points; segment limits.
   b. VOR/ADF orientation, intercepting, tracking, time/distance.

4. Direct flights.

   a. Altitude/distance limits.

5. Other procedures.

   a. Radar vectors/approaches.
   b. ILS, VOR, ADF approaches.
   c. Area navigation.
   d. Contact and visual approaches.
   e. Distance measuring equipment.
   f. Visual approach slope indicator.

b. **Completion Standards.** This lesson will be successfully completed when, by oral or written examination, the student displays a basic understanding of the airway route system direct flights and other procedures.

6. **STAGE ONE WRITTEN EXAMINATION - 1:00 HOUR.**
STAGE TWO - FLIGHT PLANNING AND AIRCRAFT PERFORMANCE: 16:00 HOURS

1. **STAGE TWO OBJECTIVE.** During this lesson, the student will be instructed in instrument flight planning procedures.

2. **STAGE TWO COMPLETION STANDARDS** This stage will successfully be completed when the student completes the exam and subsequently corrects the examination to 100%.

3. **LESSON NO. 1 - 5:00 HOURS.**
   
a. **Objectives.** During this lesson, the student will be instructed in instrument flight planning procedures and aircraft performance chart usage.

   **CONTENT:**
   
   (1) Flight log calculations.
   
   (2) Preflight log for IFR flight.
   

   b. **Completion Standards.** This lesson will be successfully completed when, by oral or written examination, the student displays a basic understanding of instrument preflight planning procedures.

*This page revised February 5, 2002*
4. **LESSON NO. 2 - 5:00 HOURS**

a. **Objectives.** During this lesson, the student will be instructed in the safe and efficient operations of aircraft under instrument flight rules and conditions, and Crew resource management.

**CONTENT:**

(1) Aeronautical decision making and judgement

(2) Safe and efficient operations of aircraft under IFR conditions

(3) CRM, crew communication and coordination

b. **Completion Standards.** This lesson will be successfully completed when, by oral or written examination, the student displays a basic understanding Aeronautical decision making and judgement, safe and efficient operations under IFR conditions, and crew communication and coordination.
5. **LESSON NO. 3 - 5:00 HOURS.**

   a. **Objectives.** During this lesson, the student will be instructed in aircraft weight and balance procedures.

      **CONTENT:**

      (1) Calculation of gross weight.

      (2) Determining useful load and allowable fuel load.

      (3) Calculation of center-of-gravity, and effect on aircraft performance.

   b. **Completion Standards.** This lesson will be successfully completed when, by oral or written examination, the student displays a basic understanding of aircraft weight and balance procedures.

6. **STAGE TWO WRITTEN EXAMINATION - 1:00 HOUR.**
STAGE THREE - INTERPRETATION AND USE OF FLIGHT INSTRUMENTS:  7:00 HOURS

1. **STAGE THREE OBJECTIVE.** To introduce the student to the construction, operating principles, and limitations of flight instruments and attitude instrument flying.

2. **STAGE THREE COMPLETION STANDARDS.** This stage will successfully be completed when the student completes the exam and subsequently corrects the examination to 100%.

3. **LESSON NO. 1 - 2:00 HOURS.**

   a. **Objectives.** During this lesson, the student will be instructed in the construction, operating principles, and limitations of gyroscopic flight instruments.

      **CONTENT:**

      (1) Properties of gyroscopic action, power systems, construction, principles of operation, and operating limitations of:

      (a) Attitude indicator.

      (b) Turn/slip indicator.

      (c) Heading indicator.

   b. **Completion Standards.** This lesson will be successfully completed when, by oral or written examination, the student displays a basic understanding of gyroscopic flight instruments.
4. **LESSON NO. 2 - 2:00 HOURS**

a. **Objectives.** During this lesson, the student will be instructed in the construction, operating principles, limitations of pressure differential flight instruments and magnetic compass, and use of the transponder, radar, and radio aids to navigation.

**CONTENT:**

(1) Pitot-static system. Construction, principles of operation, and operating limitations of:

   (a) Altimeter.
   
   (b) Airspeed indicator.
   
   (c) Vertical velocity indicator.

(2) Magnetic compass.

(3) Function, use, and limitations of:

   (a) Transponders.
   
   (b) Radar.
   
   (c) Radio aids to navigation.

b. **Completion Standards.** This lesson will be successfully completed when, by oral or written examination, the student displays a basic understanding of pressure differential flight instruments and magnetic compass.
5. **LESSON NO. 3 - 2:00 HOURS.**

   a. **Objectives.** During this lesson, the student will be instructed in attitude instrument flying procedures and techniques.

      **CONTENT:**

      (1) Instruments: pitch, bank, power. Preflight instrument check. Basic maneuvers:

         (a) Straight and level, climbs, descents, and turns.

         (b) Unusual attitudes and recovery.

      (2) Safe and efficient operation of airplanes under instrument weather conditions.

   b. **Completion Standards.** This lesson will be successfully completed when, by oral or written examination, the student displays a basic understanding of attitude instrument flying procedures and techniques.

6. **STAGE THREE WRITTEN EXAMINATION - 1:00 HOUR.**
STAGE FOUR - AVIATION WEATHER: 14:00 HOURS

1. **STAGE FOUR OBJECTIVE:** Introduce the student to the basic principles of meteorology and interpretation of combined weather reports and forecasts.

2. **STAGE FOUR COMPLETION STANDARDS** This stage will successfully be completed when the student completes the exam and subsequently corrects the examination to 100%.

3. **LESSON NO. 1 - 5:00 HOURS.**

   a. **Objectives.** During this lesson, the student will be instructed in the basic principles of meteorology.

   **CONTENT:**

   (1) Properties of the atmosphere.

      (a) Composition; temperature; pressure; wind; moisture.

   (2) Stability.

      (a) Lapse rate; moisture content.

   (3) Air masses and fronts.

      (a) Source regions; classification; modifications; characteristics; associated clouds.

   (4) Recognition of critical weather situations and windshear avoidance.

   b. **Completion Standards.** This lesson will be successfully completed when, by oral or written examination, the student displays a basic understanding of basic principles of meteorology.

This page revised February 5, 2002
4. **LESSON NO. 2 - 5:00 HOURS.**

   a. **Objectives.** During this lesson, the student will be instructed in the procurement, interpretation and use of combined weather reports and forecasts.

   **CONTENT:**

   (1) Weather observations.

   (a) METARs; pilot weather reports (UA); weather radar observations (SD); upper air observations

   (2) Aviation weather forecasts.

   (a) TAFs; area (FA); winds aloft (FD); in-flight advisories (FL); severe weather forecasts (WW).

   (b) Elements of forecasting weather trends on the basis of weather reports and personal observations of weather conditions.

   (3) Weather charts.

   (a) Weather depiction; surface weather; constant pressures; radar summary; prognostic.

   b. **Completion Standards.** This lesson will be successfully completed when, by oral or written examination, the student displays a basic understanding of interpreting weather reports and forecasts.
5. **LESSON NO. 3 - 3:00 HOURS.**

   a. **Objectives.** During this lesson, the student will be instructed in the weather services available.

   **CONTENT:**

   (1) National weather services.

      (a) Telephone listings: weather bureau and flight service.

      (b) Scheduled broadcasts: ATIS and NAVAID facilities.

      (c) Unscheduled broadcasts: SIGMET and AIRMET.

   b. **Completion Standards.** This lesson will be successfully completed when, by oral or written examination, the student displays a basic understanding of weather services available.

6. **STAGE FOUR WRITTEN EXAMINATION - 1:00 HOUR.**
STAGE FIVE - FEDERAL AVIATION REGULATIONS & ATC PROCEDURES: 11:00 HOURS

1. **STAGE FIVE OBJECTIVE.** To introduce the student to the Federal Aviation Regulations and air traffic control procedures related to instrument flight certification and operating rules.

2. **STAGE FIVE COMPLETION STANDARDS.** This stage will successfully be completed when the student completes the exam and subsequently corrects the examination to 100%.

3. **LESSON NO. 1 - 3:00 HOURS.**

   a. **Objectives.** During this lesson, the student will be instructed in the certification of pilots and flight instructors prescribed in FAR Part 61.

      **CONTENT:**

      (1) FAR Part 61 - Certification; Pilots and Flight Instructors.

      (a) Subpart A - General; Subpart B - Aircraft Ratings and Special Certificates.

   b. **Completion Standards.** This lesson will be successfully completed when, by oral or written examination, the student displays a basic understanding of certification for instrument rating.

*This page revised February 5, 2002*
4. **LESSON NO. 2 - 3:00 HOURS**

a. **Objectives.** During this lesson, the student will be instructed in the general operation and flight rules prescribed in FAR Part 91.

**CONTENT:**

(1) FAR Part 91 - General Operation and Flight Rules that apply to flight under IFR conditions.

   (a) Subpart A - General; Subpart B - Flight Rules (IFR); Subpart C - Maintenance requirements.

(2) NTSB Regulation Part 830 - Aircraft Accidents.

   (a) Aircraft accident investigations, notification, and reports.

(3) The IFR air traffic system and procedures.
5. **LESSON NO. 3 - 4:00 HOURS.**

a. **Objectives.** During this lesson, the student will be instructed in the air traffic control procedures related to instrument flight including the provisions of the Airman's Information Manual (AIM) pertinent to IFR flight.

**CONTENT:**

(1) Takeoff and departure procedures (AIM).

   (a) Flight plan; ATIS; clearance delivery; departure control; SID.

(2) Enroute procedures (AIM).

   (a) Radar environment; non-radar environment; altitude assignment; preferred routes.

(3) Arrival procedures (AIM).

   (a) STAR; holding; approaches; missed approaches; emergencies.

b. **Completion Standards.** This lesson will be successfully completed when, by oral or written examination, the student displays a basic understanding of air traffic control procedures related to instrument flight.

6. **STAGE FIVE WRITTEN EXAMINATION - 1:00 HOUR.**
STAGE SIX - REVIEW AND FINAL PREPARATION:  6:00 HOURS

1. **STAGE SIX OBJECTIVE.** To ensure that the student meets at least the minimum knowledge requirements for the FAA Instrument Pilot Airplane Written Examination and to introduce the oral portion of the Instrument Rating Airplane flight examination in accordance with FAR’s Part 61 and Part 141, and the standards set by the school.

2. **STAGE SIX COMPLETION STANDARDS.** This stage will successfully be completed when the student completes the exam and subsequently corrects the examination to 100%.

3. **LESSON NO. 1 - 2:00 HOURS.**

   a. **Objectives.** During this lesson, the student will be reviewed in the basic knowledge requirements for the Instrument Rating Airplane Written Examination.

      **CONTENT:**

      (1) Rules and Publications.
          (a) Federal Aviation Regulations and Air Traffic Control procedures that apply to flight under IFR conditions.

      (2) IFR Navigation.
          (a) IFR flight planning procedures.
          (b) IFR navigation by radio aids.
          (c) IFR departure, enroute, and approach charts.

      (3) Meteorology.
          (a) Procurement and use of aviation weather reports, weather observations, and weather forecasts.

      (4) Instruments.
          (a) Construction, operation, and limitations of flight instruments.

   b. **Completion Standards.** The lesson will be completed when, by oral or written examination and demonstration, the student displays at least the minimum knowledge requirements to pass the Instrument Rating Airplane Written Examination in accordance with the minimum standards of both the Federal Aviation Regulations and the standards set by the school.

*This page revised February 5, 2002*
4. **LESSON NO. 2 - 2:00 HOURS.**

   a. **Objectives.** During this lesson, the student will be introduced to the minimum basic knowledge requirements for the oral portion of the Instrument Rating Airplane Flight Examination.

   **CONTENT:**

   (1) Flight planning; weight and balance computations; performance computations; communications; basic instruments (including partial panel).

   b. **Completion Standards.** This lesson will be completed when, by oral or written examination and demonstration, the student will be found to have been properly introduced to the basic knowledge requirements of the FAR's.

5. **STAGE SIX COURSE FINAL COMPREHENSIVE WRITTEN EXAM - 2:00 HOURS.**
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Introduction

Required Aeronautical Knowledge Areas

The Federal Aviation Regulations, 14 CFR Part 141, Appendix I, lists aeronautical knowledge areas that must be included in the ground training course for a Commercial Pilot certificate with an additional Multiengine Class Rating. FAR 141 requires 15 hours minimum, and this course will exceed that requirement. All required areas are covered in the Ground Training Course (AVIA 4562) and the Multi-Engine Flying Course (AVIA 4601), but they are distributed throughout the curriculum for subject area continuity. You will find these required topics included in flight lessons, flight briefings/debriefings, and the Multi-Engine Ground Training course.

Ground Training Course Completion Standard

In the Ground Training course, the student will demonstrate the necessary knowledge for safe and efficient operation of light twin-engine airplanes, which is listed in the multi-engine land section of the current FAA certification standards.

The multi-engine ground training course will be completed by a comprehensive final exam with the student scoring a minimum 70%. Each of three stages of ground training will end with a written exam, which will be reviewed and corrected to 100% in class.

All hours of classroom attendance are required for course completion. All ground training testing and attendance will be documented by the ground training instructor.

Required Ground Training Learning Objectives

The student will demonstrate proficient aeronautical knowledge of light twin-engine airplanes necessary for the additional class rating of Multi-Engine Land. The ground training objectives are listed with each lesson and comply with the current FAA certification standards for an additional class rating of Multi-Engine Land (MEL).

The C-310 is our primary multi engine trainer. This being so, the student will complete this ground training course with satisfactory knowledge of the C-310’s systems, operating characteristics and limitations, weight and balance procedures, and performance data. This will include normal and emergency procedures, checklists, and preflight procedures.

However, the learning objectives of this course are not intended to be connected exclusively to the C-310. The objectives serve to have each student, at the end of this course, possess a comprehensive knowledge that can be applied to the operation of all light twin aircraft.
**Ground Training Course Overview**

This course requires 29 hours of classroom instruction divided into three stages. A written exam follows each stage.

**Stage 1 = 10 hours**
1.1 Introduction: Human Factors and Resource Management 1 hr.
1.2 Light Twin-Engine aircraft systems 6 hrs.
1.3 Weight and Balance procedures 2 hrs.
1.4 Stage 1 Exam 1 hr.

**Stage 2 = 8 hours**
2.1 Aircraft performance charts 3 hrs.
   - Takeoff, climb, cruise, descent, and landing
2.2 Basic multi-engine aerodynamics & Engine-out Aerodynamics 3 hrs.
2.3 Normal Operations: Preflight and Procedures 1 hr.
2.4 Stage 2 Exam 1 hr.

**Stage 3 = 11 hours**
3.1 Normal Operations: Checklists and normal procedures 2 hrs.
3.2 Operating limitations and airspeed limits 1 hr.
3.3 Preflight preparation and takeoff planning 2 hrs.
3.4 Emergency procedures: Engine Failure 2 hrs.
3.5 Additional Emergency Procedures related to systems malfunctions 2 hrs.
3.6 Emergency Equipment and Survival Gear 1 hr.
3.7 Stage 3 Exam 1 hr.

Final Exam 4 2 hrs.
STAGE 1: Multi-Engine Ground Training

Lesson 1.1: (1 hour): Introduction: Human Factors and Resource Management

Learning Objectives

1. The student will demonstrate proficient knowledge of human factors and resource management that apply to operating light twin-engine aircraft to include the following subjects:

   1. Pilot-in-Command responsibility
   2. Effective communication
   3. Resource Use
   4. Effective workload management
   5. Effective situational awareness

Completion Standard

The student will have successfully completed the lesson by demonstrating satisfactory knowledge of all learning objectives as listed above. This will be accomplished by class participation and oral examination.
Lesson 1.2: (6 hours): Light Twin-Engine Aircraft Systems

**Learning Objectives**

1. The student will demonstrate proficient knowledge of light twin-engine aircraft systems to enable operation of the aircraft in all normal operations and the emergency procedures listed in the POH.

2. The student will be able to explain the operational controls and indicators of the following aircraft systems and subsystems:

   1. Powerplant systems
      - Engine type, design, and general description
      - Engine cooling systems
      - Engine control quadrant
      - Engine ignition and start systems
         - Engine primer system
      - Engine Indicators
         - Tachometer
         - Manifold pressure gauge
         - Cylinder head temperature
      - Engine Oil system
         - System description
         - Oil level
         - Oil specification and grade
         - Oil pressure and temperature indicators

   2. Fuel system and schematic
      - Fuel Tanks and fuel management
         - Auxiliary Fuel Pump
         - Transfer Pump
      - Fuel system controls and indicators
         - Fuel quantity indicators
         - Fuel Flow indicator
         - Fuel Tank Selector
      - Fuel injection systems
         - Engine-driven Fuel Pump
      - Fuel specification and grade
      - Fuel drainage system

   3. Propellers
      - Principle of constant-speed prop operation
      - Propeller pitch controls
4. Electrical system and schematic
   • Electrical Generation systems
     • Battery and External power
     • Alternators and respective switches
   • Distribution systems
     • Electrical Bus system
     • Avionics Master switch and Alternate Avionics Power switch
     • Circuit breakers
5. Flight control system
   • Aileron, Elevator, and Rudder System description
   • Function and purpose of the Control lock
   • Operation of aircraft trim controls
   • Operation of wing flaps
6. Landing gear system
   • System controls and indicators
     • Manually operated hand crank
     • Landing gear switch
     • Landing gear position lights
     • Landing gear warning horn
7. Nose Steering system
   • System description
   • Brake system
   • Parking brake system
8. Avionics and Flight Instruments
   • Turn and slip indicator
   • Pitot-static system
   • Vacuum system
     • Directional Gyro
     • Attitude Gyro
   • NAV / COMM radios
9. Cabin ventilation, heating, and air conditioning systems
   • System controls and indicators
   • Cabin ventilation system operation
   • Cabin heat system operation
   • Air Conditioning System
10. Oxygen and Pressurization systems
11. Aircraft lighting systems
12. Aircraft de-icing systems

**Completion Standard**

The student will have successfully completed the lesson by demonstrating satisfactory knowledge of all learning objectives as listed above. This will be accomplished by class participation and oral examination.
Lesson 1.3: (2 hours): Weight & Balance Procedures

Learning Objectives

1. The student will be able to:
   a) plan the airplane loading of passengers, fuel, and cargo/baggage,
   b) calculate the takeoff gross weight and CG, the landing gross weight and CG, the zero fuel weight and CG,
   c) calculate a new CG with a weight removal or movement (shift).

2. The student will demonstrate proficient knowledge of weight and balance procedures for light twin-engine aircraft to include the following subjects:

   1. Weight and Balance terminology
   2. Weight-specific maneuvering speeds (VA)
   3. Mean aerodynamic chord (MAC)
      a) LEMAC
      b) TEMAC
      c) Percent of MAC
   4. Center of Gravity Envelope
      a) Forward and aft limits
   5. CG computations when weight is shifted, added, or removed
   6. Aerodynamic effects of CG movement
      a) Center of lift vs. center of gravity
      b) Forward center of gravity
      c) Aft center of gravity
      d) Lateral CG issues with fuel imbalance

Completion Standard

The student will have successfully completed the lesson by demonstrating satisfactory knowledge of all learning objectives as listed above. This will be accomplished by class participation and oral examination.

Lesson 1.4: (1 hour): Stage 1 Exam

Stage 1 will be satisfactorily completed by a written examination and subsequently corrected to 100% in the classroom.
STAGE 2: Multi-Engine Ground Training

Lesson 2.1: (3 hours): Aircraft Performance: Takeoff, Climb, Cruise, Descent, Landing

Learning Objectives

1. The student will demonstrate proficient knowledge of light twin-engine aircraft performance to include the following:
   1. Introduction to aircraft performance subjects
      a) Effects of density altitude on performance
      b) Power Available vs. Power Required
      c) V-speed definitions: Engine-Failure Speed \( V_1 \), \( V_{YSE} \), \( V_{XSE} \)
      d) Engine-out climb performance issues
      e) Performance chart’s associated Conditions and Notes
   2. Takeoff performance calculations
      a) Normal Takeoff distance
      b) Maximum Performance Takeoff distance
      c) Accelerate stop distance
      d) Accelerate go distance
   3. Climb performance calculations
      a) Rate of Climb: Maximum Climb & Cruise Climb
      b) Rate of Climb: Single Engine
      c) Rate of climb calculations to clear obstacles or exceed minimum climb gradient
      d) Time, Fuel, Distance to Climb: Maximum Climb & Cruise Climb
   4. Cruise-planning and cruise-performance calculations
      a) Cruise Performance with Recommended Lean Mixture
      b) Fuel Flow Schedule
      c) Range Profile and Endurance Profile
      d) Service ceiling
      e) Single-Engine Ceilings
   5. Descent planning calculations
      a) Holding Time
      b) Time, Fuel, and Distance to Descend
   6. Approach and landing performance calculations
      a) Normal Landing Distance
      b) Rate of Climb: Balked Landing Climb
      c) Engine-Out Go-Around
      d) Engine-Out Landing Distance

Completion Standard

The student will have successfully completed the lesson by demonstrating satisfactory knowledge of all learning objectives as listed above. This will be accomplished by class participation and oral examination.
Lesson 2.2: (3 hours): Basic Multi-Engine Aerodynamics and Engine-Out Aerodynamics

Learning Objectives

1. The student will demonstrate proficient knowledge of light twin-engine aircraft to include basic multi-engine aerodynamics and engine-out aerodynamics.

The student knowledge subject areas are the following:
1. Define and explain laminar flow and turbulent flow within a boundary layer on top of the wing.
2. Define induced flow of a propeller-driven airplane.
3. Define and explain the critical engine concept on multi-engine aircraft.
4. Define $\text{V}_{\text{MC}}$ and explain its relationship to the following:
   - Factors affecting Vmc and manufacturer's considerations in determining Vmc
   - Engine-out asymmetrical thrust
   - Counter rotating props
   - Control and performance affected by airspeed, weight, CG, altitude, and configuration
   - A windmilling propeller and sideslip
5. Define $\text{V}_{\text{sse}}$ and its relationship to $\text{V}_{\text{MC}}$.
6. Define and explain the multi-engine performance speeds: $\text{V}_{\text{XSE}}$ and $\text{V}_{\text{YSE}}$.
7. List and describe the Engine Failure procedures for a light twin aircraft.

Completion Standard

The student will have successfully completed the lesson by demonstrating satisfactory knowledge of all learning objectives as listed above. This will be accomplished by class participation and oral examination.
Lesson 2.3: (1 hour): Preflight Operations and Procedures

Learning Objectives

1. The student will demonstrate proficient knowledge of light twin-engine aircraft preflight operations and procedures which includes the following:

   1. Certificates and documents
      a. Basic required documents in the airplane file and explanations
      b. Maintenance records and Minimum Equipment List (MEL): (handout)
      c. Required inspections and tests
   2. Preflight Inspection of the aircraft
      a. Interior inspection procedure and checklist
      b. Exterior inspection procedure and checklist

Completion Standard

The student will have successfully completed the lesson by demonstrating satisfactory knowledge of all learning objectives as listed above. This will be accomplished by class participation and oral examination.

Lesson 2.4: (1 hour): Stage 2 Exam

Stage 2 will be satisfactorily completed by a written examination and subsequently corrected to 100% in the classroom.
STAGE 3: Multi-Engine Ground Training

Lesson 3.1: (2 Hours): Normal Operations: Checklists & Procedures

Learning Objectives

1. The student will demonstrate proficient knowledge of the use of light twin-engine aircraft normal checklists and normal procedures to include:
   1. Airspeeds for safe operation
      - Takeoff and Climb to 50 feet (0° flaps)
      - All engines Best Angle of climb speed ($V_X$)
      - All engines Best Rate of climb speed ($V_Y$)
      - All engines Landing Approach speed (full flaps extended)
      - Maximum Demonstrated Crosswind Velocity
   2. Before Engine Starting checklist
   3. Engine Starting checklist and procedures
      - Engine operating procedures
   4. Before Taxiing checklist and procedures
   5. Taxiing checklist and procedures
   6. Before Takeoff checklist and procedures
      - Run-up checklist
   7. Takeoff checklists and procedures
      - Normal Takeoff checklist
         - Engine operating procedures during takeoff
      - Crosswind takeoff
      - Maximum Performance Takeoff checklist
         - Short field takeoff procedures
         - Obstruction clearance takeoff procedures
         - Climb gradients
   8. After Takeoff checklist and procedures
   9. Climb checklists and procedures
      - Cruise Climb checklist
      - Maximum Climb checklist
      - Maximum angle climb
   10. Cruise checklist and procedures
      - Normal cruise operations
   11. Descent checklist and procedures
      - Engine operations during descent to land
12. Before Landing checklist and procedures
   • Engine operating procedures during landings
   • Short field approaches and landings
   • Crosswind approach and landing
   • Obstacle clearance approaches
   • Balked Landing checklist and procedures
     • Go-Around and Rejected Landing procedures

13. After Landing checklist and procedures
   • Engine idling procedures

14. Shutdown checklist and procedures

**Completion Standard**

The student will have successfully completed the lesson by demonstrating satisfactory knowledge of all learning objectives as listed above. This will be accomplished by class participation and oral examination.
Lesson 3.2: (1 hour): Operating Limitations and Applicable Airspeeds

Learning Objectives

1. The student will demonstrate proficient knowledge of the operating limitations and applicable airspeeds related to light twin-engine aircraft to include:

   1. Authorized operations
   2. Normal category maneuvers
      - Maximum gross weight
      - Maximum load factors
   3. Airspeed limitations
      - Maneuvering Speed \( (V_A) \)
      - Never Exceed Speed \( (V_{NE}) \)
      - Maximum Structural Cruise Speed \( (V_{NO}) \)
      - Maximum Flap Extended Speed \( (V_{FE}) \)
      - Maximum Gear Operating Speed \( (V_{LO}) \)
      - Maximum Gear Extended Speed \( (V_{LE}) \)
      - Air Minimum Control Speed \( (V_{MCA}) \)
      - Best Single-Engine Rate of Climb Speed \( (V_{YSE}) \)
      - Airspeed Indicator
         - Yellow Arc: Caution range
         - Green Arc: Normal operating range
   4. Engine operation limitations
      - Engine instrument markings
      - Oil temperature
      - Oil pressure
      - Manifold pressure
      - Cylinder head temperature
      - Tachometer
      - Fuel Flow
   5. Fuel Limitations
      - Fuel pressure
      - Fuel Grade
      - Total Fuel Tank capacity and usable fuel
   6. Weight Limits
      - Maximum Aircraft weights
      - Center of Gravity limits (refer to weight and moment tables)
      - Maximum Baggage Compartment weights

Completion Standard

The student will have successfully completed the lesson by demonstrating satisfactory knowledge of all learning objectives as listed above. This will be accomplished by class participation and oral examination.
Lesson 3.3: (2 hours): Preflight Preparation: Takeoff Planning

**Learning Objectives**

1. The student will demonstrate proficient knowledge of takeoff planning for light twin-engine aircraft to include:
   
   1. Factors affecting takeoff
      a) Density altitude
      b) Single-engine service ceiling
      c) Aircraft loading
      d) Runway surface condition
      e) Runway length and obstacles
      f) Runway slope
      g) Surface wind
      h) Pilot technique

2. Max Performance Takeoff and Maximum Climb
   a) Short-Field Takeoff
   b) Obstruction clearance takeoff procedures
   c) Climb gradient

3. Engine Failure Planning
   a) Takeoff briefing
   b) Accelerate stop distance
   c) Accelerate go distance
   d) Below $V_{MC}$ airspeed
   e) After liftoff
   f) Area of decision
   g) Use of checklists

**Completion Standard**

The student will have successfully completed the lesson by demonstrating satisfactory knowledge of all learning objectives as listed above. This will be accomplished by class participation and oral examination.
Lesson 3.4: (2 Hours): Emergency Procedures: Engine Failure

*Learning Objectives*

1. The student will demonstrate proficient knowledge and diagnosis of engine malfunctions related to light twin-engine aircraft with reciprocating engines.
2. The student will demonstrate proficient knowledge of the engine failure emergency procedures related to light twin-engine aircraft to include:

   1. Engine malfunctions and precautionary engine shutdown
      • Rough operation or power loss
      • Carburetion
      • Impact ice
      • Mixture Control
      • Fuel management
      • Ignition
      • Loss of engine oil pressure
      • Engine malfunctions and decision-making

   2. Engine Failure procedures
      • Takeoff and Climb
      • Cruise or Enroute
        • Failure during flight
        • Restarting engine in flight
      • Descent and Approach

   3. Engine Inoperative Landing
      • Approach for landing
      • Engine-out instrument approach

   4. Engine-Inoperative go-around

*Completion Standard*

The student will have successfully completed the lesson by demonstrating satisfactory knowledge of all learning objectives as listed above. This will be accomplished by class participation and oral examination.
Lesson 3.5: (2 hours): Additional Emergency Procedures

**Learning Objectives**

3. The student will demonstrate proficient knowledge and diagnosis of additional light twin-engine emergency procedures to include:

1. Fire on the ground
   - Engine starting
   - Engine already in operation
2. Fire airborne
   - Recognition and location
   - Fire extinguishing methods
   - What to do when fire cannot be extinguished
3. Emergency Descent
4. Forced landing
   - Precautionary landing with power
   - Complete engine failure
5. Landing Gear malfunction
   - Main Gear Tires
   - Nose Gear Tire
   - Landing Gear Will Not Extend
   - Landing Gear Will Not Retract
6. Manual landing gear extension procedure
7. Emergency Landings
   - Flaps at 0°
   - Ditching
   - Emergency equipment and survival gear
8. Fuel System Emergencies
9. Electrical System Emergencies
10. Flight Instrument Emergencies
11. Air Inlet and Filter Icing
12. Emergency Exit Window

**Completion Standard**

The student will have successfully completed the lesson by demonstrating satisfactory knowledge of all learning objectives as listed above. This will be accomplished by class participation and oral examination.
Lesson 3.6: (1 hour): Emergency Equipment and Survival Gear

Learning Objectives

1. The student will demonstrate proficient knowledge of light twin-engine aircraft emergency equipment and survival gear to include the following

   1. Equipment required onboard
   2. Portable Fire extinguishers
   3. Emergency escape windows and doors
   4. Life Rafts and flotation devices
   5. Emergency Locator Transmitter (ELT)

Completion Standard

The student will have successfully completed the lesson by demonstrating satisfactory knowledge of all learning objectives as listed above. This will be accomplished by class participation and oral examination.

Lesson 3.7: (1 hour): Stage 3 Exam

Stage 3 will be satisfactorily completed by a written examination and subsequently corrected to 100% in the classroom.

Final Exam 4: (2 hours)

The comprehensive final exam requires a minimum score of 70% to qualify for the certificate of Multi-Engine Ground Training Course completion. The course must be completed to attain the additional rating of Multi-Engine Land.
SOUTHEASTERN OKLAHOMA STATE UNIVERSITY
TRAINING COURSE OUTLINE

Additional Rating Course-Airplane, Multi-Engine Land

Southeastern Oklahoma State University, Department of Aerospace, is located on the Southeastern Oklahoma State University campus and Eaker Field, which is located south of Durant, Oklahoma.

The mailing address is:

S.O.S.U.
Dept. of Aerospace
Station A, Box 4136
Durant, OK  74701

The training syllabus herein contains a separate ground training course and a flight training course which will be taught concurrently.

COURSE OBJECTIVE: This course is designed to provide the ground and flight training necessary to successfully complete the required knowledge and skill tests for an Multi-engine Land Class Rating and an Instrument - Airplane rating.

ENROLLMENT PREREQUISITES:
A. The Student must hold a Commercial Pilot certificate with an Instrument Rating before beginning the flight portion of the Multi-Engine certification course,
B. Hold at least a third-class medical certificate; and
C. Be at least Eighteen years of age.

COMPLETION STANDARD: The student must demonstrate through written tests, flight tests, and show through appropriate records that he meets the knowledge, skill, and experience requirements necessary to obtain a airplane category rating and, multi-engine land class rating and an instrument-airplane rating. The student should complete at least one stage every 90 days.

This Page Revised January 28, 2002
Facilities and Equipment: Southeastern Oklahoma State University’s Aviation Sciences Institute is located on Eaker Field, five miles south of Durant Oklahoma. This facility is the operations base for the institute’s administration, flight training, and aircraft maintenance.

Aviation Sciences Institute Administration (Northwest Side)
- ASI administration and faculty offices, including ASI director, Chief Flight Instructor, and Assistant Chief Flight Instructor.
- Staff flight instructor offices. These offices very in size and may be occupied by one to three CFIs. Each instructor has a lockable desk, at least one student chair for pilot briefing, personal computer with internet, phone with voice mail, and a dry erase board.
- Laser grade testing center.
- Conference room
- Classroom that may be used for student briefing.
- Kitchen and restrooms.

Maintenance Hangar (Middle)
- Director of Aircraft Maintenance.
- All aircraft maintenance.

Flight Operations (Southeast Side)
- Aircraft dispatch and line crew office.
- Check instructor offices. Each check instructor is provided issued a private office with a lockable desk, at least one student chair for lesson briefing, personal computer with internet, phone with voice mail, and a dry erase board.
- WSI weather system.
- Pilot briefing room equipped with computers with internet and phones for contacting FSS.
- Lounge area with vending machines.
- Unicom station.
- Check ride office.
- Simulator room.
- Kitchen area and restrooms.

Airport: Eaker Field is an uncontrolled airport with AWOS and a 5,000ft hard surface runway. It meets the requirements of 14 CFR Part 141.38 for day and night operations. The airport has VOR and GPS instrument approach procedures for runways 17 and 35.

CLASSROOM INSTRUCTION: All ground-schools are taught in the Russell Building on Southeastern’s main campus. The Russell Building is a modern facility with classrooms large enough for 30-40 students. All classrooms meet the requirements of 14 CFR FAR 141.45. Classroom training aids include a media cart with computer, projector, and VCR, for power-point presentations and numerous aviation related videos and computer software.

This page revised September 2006
AIRCRAFT and FLIGHT TRAINING DEVICES: The C-150/152 or C-172, and a Precision Flight Controls MFD (serial #51168) will be used for training in this course. All aircraft meet the requirements of FAR 141.39 and FAR 91.205 (day and night VFR.) Radio equipment will consist of at least one navigation/communication radio system (transceiver and VOR).

Although not part of the approved curriculum, a PFC Advanced Aviation Training System is available for student practice and demonstrations. The Precision Flight Controls MFD is a twin and single engine-advanced ATD (AATD.) Equipment includes: fuselage with full dual controls, 180 degree visual system and instruments for flight, engines, and systems. The IFR avionics package includes Garmin 430 GPS/Nav/Com, dual needle RMI, HSI. Full autopilot/flight director with altitude preselect is available, along with worldwide navigational, and visual capabilities using Real World Frequencies; three needle altimeter; toe brakes; adjustable seats (pilot and copilot); and cockpit lights. Additional equipment includes a center trim console which provides manual controls for elevator trim, and rudder trim in addition to selectors for fuel, cowl flaps, wing flaps and carburetor heat. The 180 degree visual system includes 5-50” color monitors. USGS 50 meter terrain data is used for the continental US. This Flight Training Device meets all requirements of Appendices B and C; 14 CFR 141.41 (b).

Aviation majors have access to On Top PCATD software. This training aid has a yoke with rudder pedals, a precision flight control quadrant, and an avionics control panel. This PCATD is intended to be used as a training aid only and is not approved for any Part 141 curriculum. Additionally, a KNL 94 GPS trainer is available for GPS demonstrations

Chief Flight Instructor:
Kyle V. Thomas
kthomas@sosu.edu
580.745.3246

Assistant Chief Flight Instructor:
George C. Jacox
gjacox@sosu.edu
580.745.3245

Instructors: Each Instructor used for ground or flight instruction must hold a flight instructor certificate or ground instructor certificate, as appropriate, with ratings for the approved course of training and all aircraft used in this course.

All instructors meet the experience requirements in FAR 141.33 (a) (3).

This page revised September 2006
# Multi-Engine Land Certification

## Flight Training Outline

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<td>2. MCA, Stalls, Steep Turns</td>
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<tr>
<td></td>
<td>3. Stop and Go’s, Max. Performance</td>
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<td>Stage II</td>
<td>1. Into to Engine-out procedures</td>
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<td>2. Vmc and Drag Demonstrations</td>
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<td>3. System and Equipment Malfunctions</td>
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<td>4. Basic Attitude and IFR</td>
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<td>5. Engine-out IFR</td>
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<td>6. Approach (Both and Engine-out)</td>
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<td>7. Stage II Check</td>
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Stage I

Stage I Objectives
During this stage, the applicant will become familiar with the Multi-engine airplane used in the training course. Additionally, through the introduction and review of Multi-engine maneuvers and procedures, the applicant will learn to fly the Multi-engine airplane during normal two-engine operations.

Completion Standard
The applicant must successfully complete each of the lessons in Stage I. The applicant will be able to demonstrate the procedures for each of the ground and flight operations listed in this stage in accordance with the criteria set forth in the multi-engine land sections of the current FAA Commercial Pilot Practical Test Standards.

Lesson I-1

Lesson Objective
During this lesson, the applicant will become acquainted with the training airplane. Additionally, the applicant will learn the attitudes, power settings, and configurations required for the performance of the listed maneuvers and procedures. Training will include both visual references and instrument references.

Lesson Introduction
Preflight Preparation
Certificates and Documents
Obtaining Weather Information
Cross-country Flight Planning
Night Flight Operations
Aeromedical Factors
Multi-Engine Operations
Operation of Airplane System
Determining Performance and Limitations
Emergency Procedure
Ground Operations
Visual Inspection
Completion Standards
At the completion of this lesson, the applicant will be able to perform the listed ground operations. The applicant will demonstrate the knowledge of attitudes, power settings, and configurations necessary to perform the listed maneuvers and procedures by maintaining altitude within 100 feet, heading within 10 deg. and airspeeds within 10 knots as set forth in the current FAA Commercial Practical Test Standards.
Lesson I-2

Lesson Objective
During this lesson, the applicant will review the maneuvers listed in lesson I-1. In addition, the applicant will be introduced to Stalls and flight at critically slow airspeeds to become familiar with the flight characteristics of the airplane.

Lesson Introduction

Review of Lesson I-1

Flight at Critically Slow Airspeeds
  Maneuvering during Slow Flight

Stalls
  Gear and Flaps Down
  Gear Down and Approach Flaps
  Gear and Flaps Up

Steep Power Turns

Completion Standards
At the Completion of this lesson, the applicant will be able to perform all the listed procedures in lesson I-1 and I-2. During takeoff and landing, the applicant will demonstrate good directional control and maintain liftoff, climb, approach, and touchdown airspeed within 10 knots of the correct speed. In addition, the applicant will be able to demonstrate the correct flight procedures for maneuvering during slow flight, steep power turns, and the correct entry and recovery procedures for stalls. All maneuvers at critically slow airspeed must be completed no lower than 3,000 feet AGL as set forth in the current FAA Commercial Practical Test Standards.
Lesson I-3

Lesson Objective
During this lesson, the applicant will practice each of the assigned review maneuvers and procedures to increase proficiency and experience. The applicant will be introduced to crosswind and maximum performance approaches and landings, and go-arounds from rejected (balked) landings.

Lesson Introduction
Review of previous lessons

Crosswind Takeoff and Climb

Crosswind Approach and Landing

Maximum Performance Takeoff and Climb

Maximum Performance Approach and Landing

Go-Around from Rejected (Balked) Landing

Emergency Descent

Completion Standards
At the completion of this lesson, the applicant will perform all the maneuvers and procedures listed for review at a proficiency level that meets or exceeds the criteria set forth in the multi-engine land sections of the current FAA Commercial Pilot Practical Test Standards. The maneuvers and procedures will be evaluated on the adherence to proper procedures, operation techniques, coordination, smoothness, and understanding as set forth in the current FAA Commercial Practical Test Standards.
Lesson I-4

Stage Check

Lesson Objective
During this lesson, the Chief Flight Instructor or designated Assistant will evaluate the applicant's ability to fly the Multi-Engine airplane during normal two-engine operations.

Lesson Content
Multi-Engine Operations
Ground Operations
Takeoff and Climbs
  Normal
  Crosswind
  Maximum Performance
Traffic Pattern Operations
Visual Scanning and Collision Avoidance
Straight and Level Flight (IFR and VFR)
Turns (IFR and VFR)
Climbs (IFR and VFR)
Descents (IFR and VFR)
Approaches and Landings
  Normal
  Crosswind
  Maximum Performance
  Go Around from Rejected (Balked) landing
Flight at Critically Slow Airspeeds
Stalls
Steep Power Turns
Emergency Procedures
Emergency Descent
After Landing Procedures

Completion Standards
At the completion of this lesson, the applicant will be able to demonstrate the performance of each of the listed maneuvers and procedures at a proficiency level which meets or exceeds those criteria outlined in the Multi-Engine Land Sections of the current FAA Commercial Pilot Practical Test Standards.
Stage II

Stage II Objectives
During this stage, the applicant will learn the techniques and procedures required for the performance of Engine-out operations in the multi-engine airplane. In addition, the applicant will learn the emergency operation of airplane systems and conduct a review of the maneuvers and procedures performed in Stage I. The applicant will also acquire the pilot proficiency in IFR operations and procedures in the Multi-engine airplane.

Completion Standard
The applicant must successfully complete each of the lessons in Stage II. At the completion of the stage, the applicant will be able to demonstrate each of the listed maneuvers and procedures at a proficiency level that meets or exceeds those criteria outlined in the Multi-Engine land sections of the current FAA Commercial Pilot Practical Test Standards.

Lesson II-1

Lesson Objective
During this lesson, the applicant will practice the review maneuvers and procedures to maintain or gain proficiency. The applicant will be introduced to engine-out procedures and will learn to identify the inoperative engine, initiate appropriate corrective procedures, and maneuver the airplane with one engine inoperative. The instructor will demonstrate engine inoperative loss of directional control and the recovery technique so the applicant may learn the significance of this airspeed limitation.

Lesson Introduction
Lesson Review (Review any lesson in Stage I, as necessary)
Emergency Operations (Engine-Out)
   Flight Principles (Engine Inoperative)
   Identification of Inoperative Engine
   Use of Controls to Counteract Yaw and Roll
   Procedures for Shutdown and Feathering
Maneuvering with One Engine Inoperative
   Straight and Level Flight
   Turns in Both Directions
   Climbs and Descents
   Effects of Various Airspeeds and Configurations
Engine Inoperative Loss of Directional Control (VMC Demo)
Use of Minimum Equipment List

Completion Standards
At the completion of this lesson, the applicant will be able to identify the inoperative engine and use the correct control inputs to maintain straight flight. The applicant will have a complete and accurate knowledge of the cause, effect, and significance of engine-out minimum control speed (Vmc) and recognize the imminent loss of control. All engine inoperative loss of directional control demonstration must be completed no lower than 3,000 feet AGL as set forth in the current FAA
Commercial Practical Test Standards.
Lesson II-2

Lesson Objective
During this lesson, the applicant will practice the maneuvers and procedures to maintain or gain proficiency. The applicant will be introduced to engine failure on Takeoff and Climb, Enroute, and approaches and Landings, as well as, Drag Demonstration.

Lesson Introduction

Lesson Review (Review any lesson as necessary)

Emergency Operations (Engine-Out)
  Engine Failure before Vmc
  Area of Decision
  Engine Failure After Liftoff
  Engine Failure Enroute
  Approach and Landing with Inoperative Engine

Engine Inoperative Loss of Directional Control (Vmc Demo)

Drag Demonstration

Full Feather and Inflight Restart

Completion Standards
At the completion of this lesson, the applicant will be able to maneuver the airplane in level flight with one engine inoperative. During simulated engine failure, the applicant will be able to promptly identify the inoperative engine and demonstrate the correct procedure for engine failure. Additionally, the applicant will Demonstrate Engine Inoperative Loss of Directional Control (Vmc Demo) and Drag Demonstration as set forth in the current FAA Commercial Test Standards.
Lesson II-3

Lesson Objective
During this lesson, the applicant will review the maneuvers and procedures to gain proficiency in Engine-Out Operations. In addition, the applicant will be introduced to emergency operation of airplane systems.

Lesson Introduction

Lesson Review (Review of any lesson as necessary)

Systems and Equipment Malfunctions
Manual Landing Gear Extension
Closing Door in Flight
Aircraft Fire
   On Ground
   In Flight
Inop. Flaps (Landing)
Partial Landing Gear Failure Landings
Fuel System Emergency
Electrical System Emergency
Avionics Bus Failure

Completion Standards
At the completion of this lesson, the applicant will demonstrate the ability to recognize systems and equipment malfunctions and take the appropriate actions. Also, the applicant will be able to demonstrate each of the listed areas of operation at a proficiency level that meets or exceeds those criteria outlined in the Multi-Engine Land Sections of the current FAA Commercial Pilot Practical Test Standards.
Lesson II-4

Lesson Objective
During this lesson, the applicant will be introduced to VOR and ADF holding procedures, and ILS, VOR, and ADF approach in the Multi-Engine airplane.

Lesson Introduction

Lesson Review (Review of any lesson as necessary)

Basic Attitude
   Straight and Level
   Climbs
   Descents
   Turns

VOR and ADF Tracking

VOR and ADF Holding

ILS Approach

VOR Approach

NDB Approach

Completion Standards
At the completion of this lesson, the applicant will be able to Hold over a VOR and ADF, as well as, be proficient shooting an ILS, VOR, and ADF approach as set forth in the current FAA Commercial Pilot Practical Test Standards and Instrument Rating Test Standards.
Lesson II-5

Lesson Objective
During this lesson, the applicant will be introduced to engine-out maneuvers and procedures as it pertains to IFR flight.

Lesson Introduction

Lesson Review (Review any lesson as necessary)

Emergency Operation (Engine-Out)
  Identification of Inoperative Engine (IFR)
  Procedures for Shutdown and Feathering (IFR)
  Engine Failure (IFR)
    Straight and Level
    Climbs
    Descents

Completion Standards
At the completion of this lesson, the applicant will demonstrate attitude instrument flight while maintaining altitude within 100 feet and headings within 10 deg. during Single Engine Operations. During engine-out operations, the applicant will be able to readily identify the inoperative engine and simulate shutdown and feathering while maintaining altitude within 100 feet and headings within 10 deg as set forth in the current FAA Commercial Pilot Practical Test Standards and Instrument Rating Test Standards.
Lesson II-6

Lesson Objective
During this lesson, the applicant will practice each of the assigned review procedures to gain proficiency. In addition, the applicant will learn the procedures required for an engine-out ILS approach and VOR and NDB approach.

Lesson Introduction
Lesson Review (Review any lesson as necessary)
Engine-Out
  ILS approach
  VOR approach
  NDB approach
  Holds
    VOR
    NDB

Completion Standards
At the completion of this lesson, the applicant will demonstrate the ability to perform each of the listed maneuvers and procedures at a proficiency level that meets or exceeds those criteria outlined in the Multi-Engine Sections of the current FAA Commercial Pilot Practical Test Standards and Instrument Rating Practical Test Standards.
Final Stage Check
Lesson II-7

Lesson Objective
During this lesson, the Chief Instructor or designated assistant will determine that the applicant meets the proficiency requirements for a Multi-Engine land class rating with the required IFR operations and procedures to successfully complete the current FAA Commercial Practical Test Standards and Instrument Rating Practical Test Standards.

Lesson Content
Multi-Engine Operations
Ground Operations
Takeoffs and Climbs
Traffic Pattern Operations
Visual Scanning and Collision Avoidance
Approaches and Landings
   Single-Engine and Both-Engines
Flight at Critically Slow Airspeeds
Emergency Operations (Engine-Out)
System and Equipment Malfunctions
Drag Demonstration
Vmc Demonstration
Approaches (Normal and Single Engine)
   VOR
   ILS
   NDB
Holds (Normal and Single Engine)
   VOR
   NDB
After Landing Procedures

Completion Standards
At the completion of this lesson, the applicant will be able to demonstrate each of the listed areas of operations at a proficiency level that meets or exceeds those criteria outlined in the Multi-Engine sections of the current FAA Commercial Pilot Practical Test Standards and Instrument Rating Practical Test Standards.
ORIE 1002.11
College Success (Aviation) - Fall 2016
M-W 11:00 - 11:50    Russell Building, Room 221 (R-221)

GENERAL INFORMATION
Instructors: Dr. Stan Alluisi (salluisi@se.edu) 580-745-3241
Offices: Eaker Field: Room 103
Office Hours: M-W 13:00 - 16:00;
T-T 13:00 - 15:00;
and by appointment.

PREREQUISITES   Major in Aviation. That’s all!

COURSE OBJECTIVES
The objective of this class (and every other class you take) is to change the way you think. Hopefully for the better. We created this “aviation only” College Success class in order to address some of the problems we see every day with our students. Hopefully, by addressing these potential problem areas early and in mass, each of you will enjoy an easier and more productive college career. In addition, we hope that this class will also make our lives easier by filling in the collective gaps in our student’s knowledge. At the end of this class all of you should possess the basic skills necessary to more safely and efficiently complete your aviation degree program.

COURSE OBJECTIVES
-Professionalism
  Paying Attention to Detail
  Efficient, Precise and Professional Communication
  The Conservative Nature of the Aviation Industry

-Computer Skills
  Email
  BlackBoard
  MS Word & Excel

-Planning Concepts
  Time Management
  Budgeting Resources (time, money, fuel and other resources)

-School and Department Policies
  Standard Operating Procedures (SOP)
  Catalog - How to graduate, grading procedures and “Incomplete” grades
  Academic Honesty - Cheating, plagiarism, academic misconduct

-Campus Facilities & Services
  Health Services, Police, Counseling, Registrar, etc.

-Math Skills
  Interpolation, Percentages, Units! Mental Estimates, Modulo 60 and 360 Arithmetic

-Writing Skills
  Clear, concise and grammatically correct communication

-Research Skills
  Library - Research & Resources available
  Proper citations for research papers

-Human Behavior

-Scientific Thought v. Magical Thinking
TEXT  Outliers: The Story of Success by Malcolm Gladwell available at the campus book store or elsewhere.

STYLE OF TEACHING  There will be numerous lectures, guest lectures, and visits around the campus. In addition, there will be class discussions and a great deal of self study through the completion of a number of short research and writing assignments, homework and in-class assignments.

DROP POLICY  Same as University policy, so look it up!

DISABILITY ACCOMMODATIONS: Any student needing special accommodations due to a disability should contact the Office of Compliance and Safety, Administration Building, Suite 311 or call (580) 745-3090 (TDD# 745–2704). It is the responsibility of each student who anticipates or experiences barriers to their academic experience to make an official request for disability related accommodations in a timely manner.

MENTAL & EMOTIONAL HEALTH  Any student experiencing mental or emotional issues who desires free, confidential, clinical counseling is encouraged to contact the SE Counseling Center at (580) 745-2988 to schedule an appointment during normal working hours Monday-Friday, 8:00AM to 5:00PM. For after-hours mental health emergencies, please call SE Campus Police at (580) 745-2911 or the Mental Health Crisis Hotline at 1- (800) 522-1090.

EQUITY & NON-DISCRIMINATION STATEMENT: Southeastern Oklahoma State University, in compliance with all applicable federal and state laws and regulations, does not discriminate on the basis of race, color, religion, national origin, sex, age, disability, sexual orientation, gender identity, or status as a veteran in any of its policies, practices, procedures, or programs. This includes, but is not limited to: admissions, employment, financial aid, and educational services. Inquiries regarding non-discrimination and equity policies may be directed to: Michael Davis, Director of Compliance and Safety & Title IX Coordinator, (580) 745-3090, or mdavis@se.edu.

CELL PHONE /ELECTRONIC DEVICE POLICY  The use of cell phones and other electronic devices in class will not be permitted unless specifically called for. And I will occasionally call for it! If you bring a cell phone or tablet to class, SILENCE THE RINGER, and place it out of sight. DO NOT ANSWER calls in class! If your cell phone or other electronic device rings during class it will be confiscated and added to my collection! Note: You will NOT be allowed to use a calculator of any kind during the Mental Math exercise, including cell phones or other portable devices. Hence the term “MENTAL” math.

If you have a special need that requires you to be available via cell phone during in class (e.g. fire or EMS personnel), contact the instructors BEFORE class. These requests will be evaluated on a case by case basis.

PARTICIPATION & ATTENDANCE POLICY:  You MUST attend and you MUST participate in many aspects of this class in order to pass! You cannot simply come to class a few times a month, sit back, watch, and take a multiple-choice test and expect to pass. Aviation is an active, participatory career. Each time you attend class you will earn 10 points. You must sign the sign-in sheet in order to earn the ten points. If you neglect to sign the attendance roster - then you were not in class for attendance!

If you expect to become a safe and competent professional pilot or manager and succeed in the aviation field you must become assertive, outgoing, punctual and professional. We expect you to develop and hone those skills in this class and during your time here at Southeastern. You might as well start now!
E-MAIL GRADING POLICY:

All email sent to Dr. Alluisi for any purpose (turning in a required assignment, asking a question, sending funny pictures of cute animals, etc.) will be critiqued as follows:

1. All email must have an appropriate subject (as given by the assignment or of your choice, as appropriate);
2. All email must begin with a salutation (e.g. Greetings, Dear Dr. Alluisi, To whom it may concern, etc.);
3. All email must include at least one (or more) grammatically and syntactically complete sentences;
4. All emails must be spelled and punctuated correctly (Especially “Alluisi,” ”Jacob,” & “Van Bebber”);
5. All emails must close with a signature block with your contact information;
6. All emails must be spelled correctly, use proper punctuation and capitalization;

Any email received by Dr. Alluisi which does not contain a SUBJECT will be assumed to be SPAM and deleted immediately. Any email which does not conform to the above specifications will result in five (5) points deleted from their overall grade up to a maximum 100 point deduction.

Here’s why I do this:

Every email you send out to the world is a reflection of you. People who have never met you will judge you based upon your email and text messages. Therefore, assume every email you send is being read by your next boss! It may be.

GRADED ITEMS

ORIE-1002 College Success - Aviation - 2016 Assignment & Grade Sheet

| GRADED ITEMS |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Attendance (30 class dates) | Each | 10 | Points | 30 | Total | 300 |
| One-on-one meeting with Dr. Alluisi | Each | 25 | Points | 1 | Total | 25 |
| Print and bring in a copy of the ASI SOP (Even if you aren’t flying) | Each | 20 | Points | 1 | Total | 20 |
| Print and bring in a copy of the ORIE 1002.11 syllabus | Each | 20 | Points | 1 | Total | 20 |
| Log onto BlackBoard and change your password & email Dr. Alluisi | Each | 20 | Points | 1 | Total | 20 |
| Bring in a copy of your complete class schedule | Each | 20 | Points | 1 | Total | 20 |
| Bring in a signed copy of the ORIE-1002.14 Class Contract | Each | 20 | Points | 1 | Total | 20 |
| Mental Math Quizes (x15) | Each | 10 | Points | 15 | Total | 150 |
| Outliers Chapter Writing Assignments (x11) | Each | 20 | Points | 11 | Total | 220 |
| Outliers Epilog Writing Assignments | Each | 20 | Points | 1 | Total | 20 |
| SOSU Catalog Quiz | Each | 20 | Points | 1 | Total | 20 |
| Research Assignment - In-Library Research | Each | 25 | Points | 1 | Total | 25 |
| Research Assignment - Final Library Assignment | Each | 25 | Points | 1 | Total | 25 |
| Reliable and unreliable web sites assignment | Each | 25 | Points | 1 | Total | 25 |
| Scholarship Assignment | Each | 10 | Points | 1 | Total | 10 |
| Scavanger Hunt | Each | 100 | Points | 1 | Total | 100 |

1020 Total Points
### ORIE 1002 Fall 2016 College Success Schedule

**Note:** Specific events subject to change! So keep an eye on BlackBoard!

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Activity &amp; Important Dates</th>
<th>Assignments Due</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>15 August</td>
<td>Intro, Standards, Syllabus &amp; SOP, Safety, Blackboard Blackboard &amp; Faculty Web Pages</td>
<td>Buy/rent <em>Outliers</em> book!</td>
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<td></td>
<td>17 August</td>
<td><strong>19 August - Last day to drop or add a class</strong></td>
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<tr>
<td>2</td>
<td>22 August</td>
<td>ASI Policies &amp; SOP &amp; <em>Outliers</em> Intro</td>
<td>Syllabus, SOP, ClassContract, Syllabi, Schedules &amp; BB password changed</td>
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<td>24 August</td>
<td>Behavior in class &amp; airport &amp; Mental Math Intro</td>
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<td>29 August</td>
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<td>31 August</td>
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<td>4</td>
<td>5 September</td>
<td><strong>Labor Day: No Class</strong></td>
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<td>7 September</td>
<td>Library Orientation Day 1</td>
<td><strong>Scavenger Hunt Due!</strong></td>
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<td>5</td>
<td>12 September</td>
<td>Library Orientation Day 2</td>
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<td><strong>14 September</strong></td>
<td>Library Orientation Day 3</td>
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<td>6</td>
<td>19 September</td>
<td>Catalog &amp; Syllabi</td>
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<td>21 September</td>
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<td><strong>Homecoming! 23-24 September!</strong></td>
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<td>7</td>
<td>26 September</td>
<td>Student Organizations - Flight Team, AEP, WAI</td>
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<td>28 September</td>
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<td>8</td>
<td>3 October</td>
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<td>Assessment Testing: No Class!</td>
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<td>5 October</td>
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<td><strong>12 October</strong></td>
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<td>17 October</td>
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<td></td>
<td>19 October</td>
<td><strong>20-21 October: Fall Break</strong></td>
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<td>11</td>
<td>24 October</td>
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<td>9 November</td>
<td><strong>11 Nov: Last day to drop with a “P” or “F”</strong></td>
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<td><strong>23 November</strong></td>
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<td><strong>23 - 25 November: Thanksgiving Break</strong></td>
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<td>16</td>
<td>28 November</td>
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<td>30 November</td>
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<td>5 December through 9 December</td>
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<td><strong>Finals Week</strong></td>
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<td><strong>Final: Wednesday- 7 December from 11:00 - 1:00 PM</strong></td>
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</table>
ORIE 1002.11
College Success - Fall 2016
Class Contract

I_________________________________________have read the syllabus for this class and
understand the grading policy, the schedule and the requirements for all the assignments. In
addition, I understand that I alone am responsible for any material that I miss when I am not able
to attend class and that should I miss an examination, a quiz or a due date for any assignment
without giving prior notice and a reasonable explanation, that I will receive a zero (0) for that
examination, quiz or assignment, with very limited exceptions for truly unavoidable or tragic
situations. Finally, If I ever have any questions concerning the content of this class, the grading
procedures or the requirements for any assignment and cannot find the answer in the syllabus I
understand that all of my instructors are available via office hours, email, and telephone for con-
sultation. There is no excuse for my questions, however trivial, to go unanswered.

Finally, I have read and understand the ASI Academic Honesty Policy and agree to abide
by it.

The ASI Academic Honesty Policy available at:

http://homepages.se.edu/aviation/files/2012/02/academic_honesty_policy.pdf

SIGN AND RETURN IN THIS COPY

signaturedate
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(But now it isn’t blank anymore!)

Shut UP!
ORIE 1002.11  
College Success - Fall 2016  
Class Contract

I ________________________________ have read the syllabus for this class and understand the grading policy, the schedule and the requirements for all the assignments. In addition, I understand that I alone am responsible for any material that I miss when I am not able to attend class and that should I miss an examination, a quiz or a due date for any assignment without giving prior notice and a reasonable explanation, that I will receive a zero (0) for that examination, quiz or assignment, with very limited exceptions for truly unavoidable or tragic situations. Finally, If I ever have any questions concerning the content of this class, the grading procedures or the requirements for any assignment and cannot find the answer in the syllabus I understand that all of my instructors are available via office hours, email, and telephone for consultation. There is no excuse for my questions, however trivial, to go unanswered.

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http://homepages.se.edu/aviation/files/2012/02/academic_honesty_policy.pdf

**KEEP THIS COPY FOR YOUR RECORDS**

signature                  date
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Shut UP!
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This Page Revised June 2016
SOUTHEASTERN OKLAHOMA STATE UNIVERSITY
TRAINING COURSE OUTLINE

PRIVATE PILOT CERTIFICATION COURSE - AIRPLANE, SINGLE-ENGINE LAND

Southeastern Oklahoma State University, Department of Aerospace, is located on the Southeastern Oklahoma State University campus and Eaker Field, which is located south of Durant, Oklahoma.

The mailing address is:

Southeastern Oklahoma State University
Aviation Sciences Institute
425 W. University Boulevard
Durant, OK 74701

This training course outline meets all of the curriculum requirements for the Private Pilot Certification Course contained in Appendix B of FAR Part 141.

The training syllabus herein contains a separate ground-training course and a flight training course which will be taught concurrently.

COURSE OBJECTIVE: This course is designed to provide the ground and flight training necessary to successfully complete the required knowledge and skill tests for an FAA Private Pilot Certificate with an Airplane Category Rating and a Single-engine land class Rating.

ENROLLMENT PREREQUISITES

A person must have a pending Student Pilot Certificate via IACRA. Additionally, a student must hold a student pilot certificate before beginning the solo flight phase of this course.

COMPLETION STANDARD: The student must demonstrate through written tests, flight tests, and show through appropriate records that he or she meets the knowledge, skill, and experience requirements necessary to obtain a Private Pilot Certificate with an airplane category rating and a single-engine land class rating. The student should complete at least one stage every 90 days.

This Page Revised July 2016
Facilities and Equipment: Southeastern Oklahoma State University’s Aviation Sciences Institute is located on Eaker Field, five miles south of Durant Oklahoma. This facility is the operations base for the institute’s administration, flight training, and aircraft maintenance.

Aviation Sciences Institute Administration (Northwest Side)
- ASI administration and faculty offices, including ASI director, Chief Flight Instructor, and Assistant Chief Flight Instructor.
- Staff flight instructor offices. These offices vary in size and may be occupied by one to three CFIs. Each instructor has a lockable desk, at least one student chair for pilot briefing, personal computer with internet, phone with voice mail, and a dry erase board.
- Laser grade testing center.
- Conference room
- Classroom that may be used for student briefing.
- Kitchen and restrooms.

Maintenance Hangar (Middle)
- Director of Aircraft Maintenance.
- All aircraft maintenance.

Flight Operations (Southeast Side)
- Aircraft dispatch and line crew office.
- Check instructor offices. Each check instructor is provided issued a private office with a lockable desk, at least one student chair for lesson briefing, personal computer with internet, phone with voice mail, and a dry erase board.
- WSI weather system.
- Pilot briefing room equipped with computers with internet and phones for contacting FSS.
- Lounge area with vending machines.
- Unicom station.
- Check ride office.
- Simulator room.
- Kitchen area and restrooms.

Airport: Eaker Field is an uncontrolled airport with AWOS and 5,000ft hard surface runway. It meets the requirements of 14 CFR Part 141.38 for day and night operations. The airport has VOR and GPS instrument approach procedures for runways 17 and 35.

CLASSROOM INSTRUCTION: All ground-schools are taught in the Russell Building on Southeastern’s main campus. The Russell Building is a modern facility with classrooms large enough for 30-40 students. All classrooms meet the requirements of 14 CFR FAR 141.45. Classroom training aids include a media cart with computer, projector, and VCR, for power-point presentations and numerous aviation related videos and computer software.

This page revised July 2016
AIRCRAFT and FLIGHT TRAINING DEVICES: The C-150/152 or C-172 will be used for training in this course. All aircraft meet the requirements of FAR 141.39 and FAR 91.205 (day and night VFR.) Radio equipment will consist of at least one navigation/communication radio system (transceiver and VOR).

A Precision Flight Controls MFD (AATD) may be used as an instructional aid only. Authorized instructors are encouraged to use it as a supplement to individual lessons. However, in no case will training time in the AATD be substituted for time in the aircraft.

The Precision Flight Controls MFD is a twin and single engine-advanced ATD (AATD.) Equipment includes: fuselage with full dual controls, 180 degree visual system and instruments for flight, engines, and systems. The IFR avionics package includes Garmin 430 GPS/Nav/Com, dual needle RMI, HSI. Full autopilot/flight director with altitude preselect is available, along with worldwide navigational, and visual capabilities using Real World Frequencies; three needle altimeter; toe brakes; adjustable seats (pilot and copilot); and cockpit lights. Additional equipment includes a center trim console which provides manual controls for elevator trim, and rudder trim in addition to selectors for fuel, cowl flaps, wing flaps and carburetor heat. The 180 degree visual system includes 5-50” color monitors. USGS 50 meter terrain data is used for the continental US. This Flight Training Device meets all requirements of Appendices B and C; 14 CFR 141.41 (b).

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Instructors: Each Instructor used for ground or flight instruction must hold a flight instructor certificate or ground instructor certificate, as appropriate, with ratings for the approved course of training and all aircraft used in this course.

All instructors meet the experience requirements in FAR 141.33 (a) (3).

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This Page Revised May 30, 2000
## Required Time Table

### Private Pilot Certification

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**TOTAL** | 20 | 15 | 15.5 | 3.0 | 3.0 |

The individual times shown on this table are not mandatory; they are for instructor/student guidance only. Lesson times may vary because of individual student needs. **However, the minimum time listed for each stage will be attained at the completion to insure the student meets the minimum training requirements of FAR Part 141.**
1. **Enrollment Prerequisites**
   Students enrolling in this flight course must possess a valid student pilot certificate and hold at least a current third-class medical certificate.

2. **Flight Training Course Objective**
   The objective of this flight training course is to provide the student with the aeronautical skill and experience necessary to meet the requirements of a private pilot certificate with an airplane category rating and a single-engine land class rating.

3. **Completion Standard**
   To meet the flight training course completion requirement, the student will demonstrate through flight tests and school records that he/she has the necessary aeronautical skill and experience to obtain a private pilot certificate with an airplane category rating and a single-engine land class rating.

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**STATEMENT**

The words "he", "his", or "him" is intended to include both the masculine and the feminine genders. Any exceptions to this will be so noted.

The Chief Flight Instructor may authorize sequential changes to the curriculum as necessary due to student needs, WX, etc. However, at completion the student will meet the minimum training requirements specified in FAR Part 141.
STAGE ONE: 9.5 HOURS

Stage One Objective
The student will be instructed in the basic flying procedures and skill necessary for the first solo flight.

Stage One Completion Standard
This stage will be successfully completed when the student satisfactorily passes the stage one check and is able to conduct solo flight safely.

1. Lesson One - familiarization, ground operations, four fundamentals of flight - one ground period, three flight periods.

   A. Objective
      To familiarize the student with the training airplane, its operation characteristics, cabin controls, the concept of attitude flying, and the sensations of flight. The student will be instructed in preflight activities; including obtaining weather, and determining the airworthiness of the airplane. He/she will also be familiarized with the proper starting procedures and cautions, taxi procedures, and the use of radio communications. The student will be taught the four fundamentals of flight and various combinations of them.

Content

1. Period One - Ground Instruction
   a. Introduction to program
   b. Textbooks and materials required
   c. Aircraft systems
   d. Preflight inspection
   e. Control functions
   f. Concept of attitude flying
   g. Safety
   h. Cabin familiarization
   i. Use of checklists
   j. Power plant operations
   k. Proper manuals and documents
   l. Weight and balance determination

2. Period Two – Dual (1.0 hr.)
   a. Preflight discussion and review as necessary
   b. Use of checklist.
   c. Engine Starting and Power plant operation.
   d. Taxiing, pre-takeoff, and takeoff procedures.
      1. Torque and P-factor, their effects and corrections
   e. Use and effect of controls
   f. Pitch references
      1. Introduce altimeter, attitude indicator, and airspeed indicator
      2. Explain use of power in climbs and descents

This Lesson Revised June 2016
g. Bank references
   1. Introduce heading indicator and compass rose, attitude indicator, turn coordinator
h. Introduce straight-and-level flight
   1. Integrated flight instruction (reference chapter 6, Flight Training Handbook)
i. Introduce climbs and descents
   1. Integrated flight instruction (reference chapter 6, Flight Training Handbook)
j. Introduce turns to heading
   1. Integrated flight instruction (reference chapter 6, Flight Training Handbook)
k. Introduce climbing and descending turns
l. Introduce normal landing procedures
m. Engine Shutdown

3. Period Three - Dual (1.0 hr.)
   a. Pre-flight discussion and review as necessary
   b. Preflight inspection
   c. Airport operations and procedures
   d. Practice area orientation
   e. Collision avoidance
   f. Shallow and medium turns in both directions
   g. Glides
   h. Level-off procedures
   i. Radio communication procedures
   j. Normal takeoff and landing
   k. Engine shutdown and post-flight inspection
   l. Aircraft servicing and securing
   m. Post-flight critique and preview next period

4. Period Four - Dual (1.0 hr.)
   a. Pre-flight discussion
   b. Review as necessary
   c. Four fundamentals of flight VR/IR (Visual Reference/ Instrument Reference)
   d. Climbing turns VR/IR
   e. Gliding turns VR/IR
   f. Coordination exercises
   g. Normal takeoffs and landings
   h. Post-flight critique and preview next period

B. Completion Standard
   This lesson will be completed when the student can demonstrate reasonable knowledge of the airplane, the forces acting on the airplane in flight, the control functions and movement about the axis, the instruments, proper use of the controls, and ability to use course materials. The student will be required to conduct a preflight inspection of the aircraft, and check the weather to determine the advisability of starting the flight. He will be expected to start and taxi the aircraft and use the radio communications. He will be expected to perform the four basic flight maneuvers without assistance, and be able to control altitude within 200 feet, headings within 15 degrees, and airspeeds within 10 knots.

This Lesson Revised May 30, 2000
2. **Lesson Two** - Flight at Reduced Airspeeds, Stalls, Emergency Operations - Two Periods

A. **Objective**
   To familiarize the student with the effects that reduced airspeeds and stalls have on the aircraft. The instructor will teach the student flight at reduced airspeeds, use of flaps, and entry and recovery procedures from stalls that may occur in normally anticipated flight attitudes.

**Content**

1. **Period Five** - Dual (1.0 hr.)
   a. Pre-flight discussion
   b. Review as necessary previous period
   c. Takeoff and pattern departure
   d. Coordination exercises
   e. Flight at various airspeeds from cruising to minimum controllable airspeed
   f. Use of flaps
   g. Slow flight (with and without flaps)
   h. Flight at critically slow airspeed
   i. Clearing turns
   j. Power off stalls (imminent) - recognition and recovery from straight flight and from turns
   k. Power on stalls (imminent) - recognition and recovery from straight flight and from turns
   l. Demonstration of forced landing
   m. Pattern entry and departure procedures
   n. Takeoffs and landings - normal and crosswind
   o. Weight and balance determination
   p. Post-flight critique and review next period

2. **Period Six** - Dual (1.0 hr.)
   a. Pre-flight discussion
   b. Review as necessary previous period
   c. Power on stalls (full) - recognition and recovery from straight flight and from turns
   d. Power off stalls (full) - recognition and recovery from straight flight and from turns
   e. Accelerated stall (imminent)
   f. Stall entries from various flight attitudes and power combinations with recovery initiated at the first indication of a stall
g. Descents with and without turns using high and low drag configurations
h. Forced landing
i. Steep turns in both directions
j. Traffic pattern entry and departure procedures
k. Post-flight critique and preview next period

B. **Completion Standard**

This lesson will be completed when the student can demonstrate a reasonable knowledge of the effects on the aircraft that reduced speeds have, the purpose of flaps, stalls and their causes, and proper entry/recovery technique. The student will be expected to perform slow flight, stalls, and steep turns without assistance and with reasonable proficiency. During steady flight conditions, the student should be able to control altitude within 100 feet, and airspeed within 10 knots.
3. **Lesson Three** - Ground Reference Maneuvers, Ground and Traffic Rules - One Period

**A. Objective**
During this lesson the student will learn the effect of wind on the aircraft in flight; the proper wind drift correction for both straight and circular tracking, and standard ground reference maneuvers. He will also learn pertinent FAR's and local ground and air traffic rules and procedures, and various emergency procedures including radio failure and use of light signals.

**Content**
1. **Period Seven** - Dual (1.0 hr.)
   a. Pre-flight discussion
      1. Effect of wind on ground track
      2. Proper drift correction
      3. Ground reference maneuvers
      4. Various emergency situations
      5. Light signals and use
   b. Review previous periods as necessary
   c. Forced landing on takeoff
   d. Drift correction and circular track
   e. Turn around-a-point
   f. S-turns across a road
   g. Rectangular course
   h. Forced landing procedures initiated on takeoff, during initial climb, cruise, descent, and in the landing pattern
   i. Traffic pattern and spacing
   j. Collision avoidance
   k. Post-flight critique and preview next period

**B. Completion Standard**
This lesson will be completed when the student demonstrates an acceptable knowledge of the effect of wind on an aircraft in flight, is able to illustrate and explain the various ground reference maneuvers and proper drift correction, and is able to perform, without assistance and with reasonable proficiency, straight tracking, turns around-a-point, and rectangular course. He will be expected to display a basic knowledge of elementary emergency situations and maintain altitude within 150 feet and airspeed within 10 knots.
4. **Lesson Four** - Traffic Pattern, Landings and Takeoffs - Two Periods

**A. Objective**
To instruct the student in traffic pattern procedures, takeoffs and landings, and safe operating practices around airports. The student will learn the elements of normal and crosswind takeoffs and landings, corrections for improper approaches, go-around procedures and faulty landings. Proper traffic pattern procedures will be taught and various emergency procedures will be practiced.

**Content**
1. **Period Eight** - Dual (1.0 hr.)
   a. Pre-flight discussion
   b. Review procedures and maneuvers as necessary
   c. Takeoffs
   d. Approaches to the landing area with engine power
      at idle and with partial power
   e. Landings: full stop or touch-and-go
   f. Recovery from faulty approaches and landings
   g. Traffic pattern procedures and collision avoidance precautions
   h. Wake turbulence avoidance
   i. Post-flight critique and review next period
2. **Period Nine** - Dual (1.0 hr.)
   a. Pre-flight discussion
   b. Review as necessary
   c. Takeoffs: normal and crosswind
   d. Landings: normal and crosswind
   e. Slips to a landing
   f. Faulty approach corrections
   g. Go-around from final approach and from the landing
      flare in various flight configurations including turns
   h. Power approach and Landing
   i. Engine failure in pattern
   j. Emergency procedures
      1. Aircraft systems and equipment malfunction
      2. Emergency go-around
   k. Climbs: best angle and best rate VR/IR
   l. Post-flight critique and preview next period

**B. Completion Standard**
This lesson will be completed when the student is able to make consistently safe landings and takeoffs and to recover from poor approaches and landings without assistance or direction. The student must pass a pre-solo written exam which complies with FAR 61.87 (b) prior to moving on to Lesson Five. He will be expected to solve all ordinary problems and emergency encounters in the traffic pattern. He should be able to maintain altitude within 100 feet, heading within 10 degrees, and airspeed within 10 knots of preselected airspeeds.
5. **Lesson Five** - Supervised Solo - One Period

A. **Objective**
   During this lesson the student will accomplish his first supervised solo flight if he displayed the required level of safety and competence, and will have the opportunity to experience the joy and confidence of solo flight.

B. **Completion Standard**
   The student should display the ability to successfully perform his first supervised solo flight.


Lesson Six - Stage Check - One Period (.5 hr.)

A. **Objective**
   During this flight, the chief flight instructor or his assistant will determine if the student can safely conduct solo flight and exercise the privileges associated with the solo operation of the airplane.

B. **Completion Standard**
   This lesson will be completed when the student demonstrates a reasonable knowledge of all the material covered in Stage One. He will be expected to perform all pre-flight operations, and ground and flight activities. He should be able to maintain altitude within 100 feet, heading within 10 degrees, and airspeed within 5 knots of desired speed.
STAGE TWO - 14.5 HOURS - AREA CHECKOUT, SHORT/SOFT FIELD OPERATIONS, NIGHT AND CROSS-COUNTRY OPERATIONS

Stage Two Objectives
To instruct the student in the conduct of local and cross-country flights and in night flight operations. The student will be instructed in the principles and procedures used in preparing and executing safe cross-country flights, including the use of pilotage, dead reckoning, and radio navigation. Each cross-country flight will involve a landing at a point more than 50 NM from the original departure point. He or she will be instructed in the proper operating procedures at controlled and uncontrolled airports and in operations within the ATC environment under VFR conditions.

Stage Two Completion Standard
This stage will be completed when the student has demonstrated through stage check, solo flight and records that he can safely conduct solo cross-country flight in an airplane using pilotage, dead reckoning and radio navigation under visual flight rules; and that he can respond satisfactorily to normally anticipate emergency situations that can arise during cross-country operations.
1. **Lesson One** - Solo and Area Checkout - Three Periods

A. **Objective**
   
   To afford the student additional solo practice in the local area such that he can safely pilot the airplanes to, from and in the practice area. The instructor will review the practice area boundaries, teach the student orientation, and proper procedures to be followed if he should get lost or encounter deteriorating weather. The instructor will teach VOR orientation, and continue the student training in IR operations to include at least the four fundamentals.

B. **Completion Standard**
   
   This lesson will be completed when the student demonstrates a satisfactory knowledge of local operations, the use of VOR for orientation, and solo review and practice of basic and precision flight maneuvers in addition to those maneuvers specified by the flight instructor. The student will be expected to determine his position within 2 miles using VOR navigation.

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Content

1. **Period One** - Dual (.5 hr.)
   a. Pre-flight discussion
   b. Review as necessary
   c. Four fundamentals of flight VR/IR
   d. Steep turns VR/IR
   e. Flight at critically slow airspeeds VR/IR
   f. Basic radio navigation, VOR position finding and VOR tracking
   g. Solo flight within traffic pattern
   h. Post-flight critique and preview next period

2. **Periods Two and Three** - Solo (1.5 hrs.)
   a. Pre-flight discussion
   b. Flight at critically slow airspeed
   c. Stalls, power-on and power-off (imminent)
   d. S-turns across-a-road
   e. Normal and/or cross-wind landings
   f. Maneuvers specified by the flight instructor
   g. Post-flight critique and preview next period
2. **Lesson Two** - Basic Maneuvers, Short and Soft Field Takeoffs and Landings - Two Periods

A. **Objective**
   To review basic and advanced stalls, and to teach the student the principles and procedures involved in operations into short and soft fields.

**Content**
1. **Period Four** - Dual (1.0 hr.)
   a. Pre-flight discussion
   b. Review as necessary
   c. Full stalls VR/IR
   d. Short and soft-field takeoffs (max. performance)
   e. Short and soft-field landings (max. performance)
   f. Post-flight critique and preview next period

2. **Period Five** - Solo (1.0 hr.)
   a. Pre-flight discussion
   b. Review as necessary (with instructor approval)
   c. Short and soft-field takeoffs
   d. Short and soft-field landings
   e. Maneuvers specified by the flight instructor
   f. Post-flight critique and preview next period

B. **Completion Standard**
   At the completion of this lesson the student will be able to obtain maximum performance during short and soft field takeoffs and landings with reasonable proficiency. All basic maneuvers will be performed at an acceptable level; altitudes within 100 feet, headings within 10 degrees, airspeeds within 5 knots, and with positive control and coordination through all maneuvers.
3. **Lesson Three** - Cross-Country Operation - Two Periods

   **A. Objective**
   To familiarize the student with operational data which he or she must apply to make safe cross-country flights, and to teach pilotage, dead reckoning and radio navigation. He or she will be able to compute fuel consumption, and ETA to checkpoints and destinations. During the second period, the student will be required to perform all navigation procedures, display the ability to divert to an alternate prior to arrival at the destination, and display the ability to safely conduct solo cross-country flights. Recommended routes selected for the dual cross-country flights are DUA-GVT-DTO-DUA, or DUA-DAL-PRX-DUA (Durant-Dallas Love-Paris-Durant). The airports selected will comply with FAR 141. **One flight must be at least 2 hours in length.**

   **Content**
   1. **Period Six** - Dual (2.0 hrs.)
      a. Pre-flight discussion and preparation
         1. Weather analysis
         2. Cross-country planning log **(Three-leg cross-country flight)**
         3. Airports
         4. Aircraft
         5. FAA flight plan
         6. Controlled airports and Class B or Class C airspace environments
      b. Pilotage navigation - all three legs
      c. Dead reckoning navigation - all three legs
      d. VOR navigation on Federal Airways (preferably last two legs)
      e. Control and maneuvering an airplane solely by reference to instruments, including emergency descents and climbs using radio aids or radar directives
      f. Controlled airport operations
      g. Light gun signals usage
      h. Compute ETA's and fuel consumption
         i. Departure procedures
         j. En route procedures
         k. Arrival Procedures
         l. Emergency procedures: simulated equipment and aircraft malfunction, lost procedures, weather emergencies, and radio malfunction
      m. Post-flight critique and preview next lesson period

   2. **Period Seven** - Dual (1.5 hrs.)
      a. Pre-flight discussion and preparation
      b. Review as necessary
         1. Pilotage, dead reckoning and radio navigation
         2. Computing ETA's and fuel consumption

   This Lesson Revised June 2016
3. Emergency (including lost) procedures
4. Emergency climbs
5. Departure procedures
6. En route procedures
7. Arrival procedures
8. Crosswind takeoffs and landings
9. Instrument work as necessary
c. Diversion to alternate airport
d. Emergency computation of flight course
e. Determining position by VOR
f. Post-flight critique and preview of next period

B. Completion Standard

The student will be expected to demonstrate the ability to conduct cross-country flight using various means of navigation. He should display a thorough knowledge of cross-country flight planning, weather analysis, and use of proper publications. He should be able to compute ETA's, fuel consumption, and other computer problems associated with cross-country planning. He should be able to maintain altitude within 200 feet, and heading within 10 degrees. He should be able to maintain his planned course within one mile. In addition, he should be able to identify his position at all times and cope with possible emergencies encountered during cross-country flights.
4. **Lesson Four** - Night Operations, Night Cross-Country - Two Periods

A. **Objective**
   To develop the student's ability to a level which will allow him, in an emergency, to make safe night flight operations to a suitable airport where a landing could be made. The student will be instructed in such aspects of night operations as: cross-country flight, night vision, night orientation, judgement of distance, use of cockpit lights, position and landing lights, and night emergency procedures.

**Content**
1. **Period Eight** - Dual (1.0 hr.)
   a. Pre-flight discussion
      1. Night vision and vertigo
      2. Orientation in local area
      3. Judgement of distance
      4. Aircraft lights
      5. Airport lights
      6. Taxi-techniques
      7. Take-off and landing technique
      8. Collision avoidance
      9. Unusual Attitude recovery
      10. VFR night navigation
      11. Emergencies
   b. Night line inspection
   c. Use of cockpit lights
   d. Taxi technique
   e. Takeoff and departure procedures
   f. Area orientation
   g. Interpretation of aircraft and airport lights
   h. Recovery from unusual attitudes VR/IR
   i. Radio communications
   j. Traffic pattern
   k. Power approaches and full stop landings (5 min.)
   l. Loss of visual lights
   m. Use of landing lights
   n. VFR night navigation
   o. Simulated electrical failure to include at least one landing light failure
   p. Post-flight critique and preview next lesson

2. **Period Nine** - Dual (2.0 hrs)
   1. Preflight briefing
   2. Ground procedures
      a. Route selection (Route must be more than 100-nautical-miles total distance.)
      b. Weather evaluation
c. Fuel requirements
d. Aircraft performance and limitations
e. Airman’s Information Manual
f. Navigation log
g. Flight plan
h. Weight and balance

3. Flight maneuvers and procedures
   a. Area departure
   b. Opening flight plan
   c. Course interception
   d. Navigation
      1. Pilotage
      2. Dead Reckoning
      3. Radio Navigation
e. Fuel Management
f. Emergency procedures
   1. Lost procedures
   2. Low fuel supply
   3. Adverse weather
   4. Radio and instrument failure
   5. Engine failure procedures
g. Airport operations

B. Completion Standard
The student will have successfully completed this lesson when he performs 10 takeoffs and landings, to a full stop, as sole manipulator of the flight controls, and displays the ability to maintain orientation in the local flying area and traffic pattern, can accurately interpret aircraft and runway lights, and can competently fly the traffic pattern and perform takeoffs and landings. Furthermore, at the completion of this lesson, the student will have demonstrated that he/she can conduct night cross-country flights as pilot-in-command. He/she will also display an understanding of the added operational considerations necessitated by the night environment and the correct analysis and handling of the simulated emergency situations.
5. Lesson Five - Solo Cross-country Flight Operations - One Period

A. Objective
During this lesson, the student will conduct a three-leg solo cross-country flight using pilotage, dead reckoning, and radio navigation. This cross-country flight may be over the same course used in a dual cross-country period of training. The cross-country flight will be selected from the Approved Airport list.

Content
1. Period Ten - Solo Cross-Country (3.0 hrs.)
   a. Pre-flight discussion
      1. Preparation
      2. Weather analysis
      3. Flight Log
      4. Proper endorsements
   b. Solo cross-country flight
   c. Post-flight critique and preview next lesson

B. Completion Standard
This student will have completed this lesson when he has conducted the assigned solo cross-country flight using pilotage, dead reckoning, and radio navigation.
6. **Lesson Six - Cross-Country Stage Check - One Period (1.0 hr.)**

A. **Objective**
   To determine that the student has the knowledge, skill, and judgement to adequately prepare and conduct safe VFR cross-country flight using normally available aids and facilities; and can recognize and cope promptly and correctly with emergencies which might occur during En route flight, including diversion to an alternate airport. This stage check will be conducted by the Chief Flight Instructor, or his assistant.

B. **Completion Standard**
   The student will be expected to demonstrate the ability to safely conduct cross-country flight operations and should display a thorough knowledge of proper pre-flight action, flight planning, weather analysis and publications available. He should perform all duties of pilot-in-command with smoothness, accuracy and competence. He should be able to divert to an alternate airport and give a reasonable estimate of his arrival time and remaining fuel. Prior to arrival at the alternate airport, he will be placed under the hood until ETA to the alternate has lapsed. The student should be able to locate himself within three miles without aid from the instructor by using all of the means available.

   The student will:

   1. Establish and maintain headings required to stay on course;
   2. Correctly identify his position at any time by various means;
   3. Provide reasonable estimates of ETA's with an apparent error of not more than ten minutes.
   4. Maintain altitude within ± 200 feet; and
   5. Establish a course to an alternate, and within a reasonable time, give an acceptable estimate of the time and required fuel to the alternate.
STAGE THREE: 11 HOURS

Stage Three Objectives
The student will complete his solo cross-country practice, receive further instruction in preparation for the private pilot airplane flight test, and complete the flight training requirements of FAR 141.

Stage Three Completion Standard
This stage will be completed when the student demonstrates he has the knowledge, experience, skill of a private pilot and satisfactorily completes the final stage for this course.

1. Lesson One - Solo Cross-Country Operations - Two Periods
   A. Objective
      To further increase the students proficiency in solo cross-country flights by completing two solo cross-countries. The last flight (Period Two) will be at least 300 NM with landings at a minimum of three points, one of which is at least 100 NM from the original departure point. The cross-country airports will be selected from the Approved Airport list.

   Content
   1. Period One - Solo Cross-Country (3.0 hrs.)
      a. Pre-flight discussion
         1. Preparation
         2. Weather analysis
         3. Flight log
         4. Proper endorsements
      b. Solo cross-country flight

   2. Period Two - Long Solo Cross-Country (4.0 hrs.)
      a. Pre-flight discussion
         1. Preparation
         2. Weather analysis
         3. Flight log
         4. Proper endorsement
      b. Solo cross-country flight
      c. Three takeoffs and landings to a full-stop at a controlled field
      d. Post-flight critique and preview next period

   B. Completion Standard
      The student will have successfully completed two solo cross-country flights with stops at each airport. The instructor will determine how well the cross-country flights were conducted through oral examination after each flight, and check to ensure all required flight log entries have been made. The student will have demonstrated his ability to safely conduct solo cross-country flights.

This Lesson Revised May 30, 2000
2. Lesson Two - Review Private Pilot Operations - Three Periods

A. Objective
To direct the student practice of VR and IR flight operations necessary to conduct safe flight operations as a private pilot. The instructor will guide the student's development to prepare him for the private flight test, assure the student will be able to operate his airplane in a safe manner, and inspire him with a deep sense of responsibility to himself, his passengers, and his fellow airman.

Content
1. Period One - Dual (1.0 hr.)
   a. Pre-flight discussion
   b. Review of previously covered maneuvers and procedures in preparation for final stage check
   c. Post-flight critique and preview next period

2. Period Two - Solo (1.0 hr.)
   a. Pre-flight discussion
   b. Performance of assigned maneuvers
   c. Post-flight critique and preview next period

3. Period Three - Solo (1.0 hr.)
   a. Pre-flight discussion
   b. Performance of assigned maneuvers
   c. Post-flight critique and preview next period

B. Completion Standard
At the completion of this lesson the student will be expected to demonstrate the understanding and skill of a safe private pilot. The student's performance of all maneuvers and procedures should be at the proficiency level of a private pilot.
3. **Lesson Three** - Stage Three, **End of Course** Exam- One Period (1.0 hr.)

   A. **Objective**
   
   To determine the student’s ability to demonstrate the knowledge and flight proficiency as required by the current Private Pilot- Airman Certification Standards.

   **Content**
   
   1. **Period One** - Dual
      
      c. Post-flight critique

   B. **Complections Standard**
   
   The student will meet or exceed the standards set forth within the most current Private Pilot-Airman Certification Standards.


This Lesson Revised June 2016
1. **GROUND TRAINING COURSE OBJECTIVES:** The student will obtain the necessary aeronautical knowledge and meet the prerequisites specified in Part 61 of the FAR for a private pilot written test.

2. **GROUND TRAINING COURSE COMPLETION STANDARDS:** The ground training portion of the Private Pilot Certification Course will successfully be completed when the student:

   1. Completes all written exams and subsequently corrects the examinations to 100% and
   2. Passes a comprehensive final with a score of 70% or higher.
STAGE ONE--HOW AN AIRPLANE WORKS: 20 HOURS

1. **STAGE ONE OBJECTIVE.** To develop the student's knowledge of private pilot certification, aircraft weight and balance, aerodynamics, power plant, flight instruments, and performance capabilities.

2. **STAGE ONE COMPLETION STANDARD.** This stage will successfully be completed when the student completes the written exam and subsequently corrects the examination to 100%.

3. **LEsson NO. 1 - 1:00 HOUR**

   a. **Objective.** During this lesson, the student will be introduced to the private pilot privileges and responsibilities, classification of aircraft, and qualifications of a private pilot.

   **CONTENT:**

   1. Classification of Aircraft
   2. Pilot Training Process
      a. Flight instruction
      b. Ground instruction
      c. FAA Medical Exam and Student Pilot Certificate
   3. Training Program
      a. Presolo instruction
      b. Flying solo
      c. Going cross-country
      d. Flying at night
   4. Qualification for your Pilot Certificate
      a. Written exam
      b. Dual and solo flight time
      c. Practical test
      d. Private pilot privileges and responsibilities

   b. **Completions Standard.** The student will have successfully completed the lesson when, by oral or written quiz, he displays a working knowledge of the private pilot privileges and responsibilities, classification of aircraft, and qualifications of a private pilot.
4. LESSON NO. 2 - 4:00 HOURS

a. Objective. During this lesson, the student will be introduced to aerodynamics, aircraft controls, and stability.

CONTENT:

1. Forces Acting on an Airplane in Flight
   a. Forces of flight
   b. Creation of lift
   c. Creation of drag
   d. Factors that influence lift and drag

2. Aircraft Controls
   a. Use of flight controls
   b. Coordinated flight
   c. Turns and load factors
   d. Maneuvering Speed
   e. Wing flaps
   f. Trim tabs

3. Stability

4. Special Flight Situations
   a. Ground effect
   b. Wake turbulence
   c. Propeller effects
   d. Stall awareness
   e. Spins entry, spins, and spin recovery techniques

b. Completion Standard. The student will have successfully completed the lesson when, by oral or written quiz, he displays a working knowledge of aerodynamics, aircraft, and stability.
5. LESSON NO. 3 - 3:00 HOURS

a. Objective. During this lesson, the student will be introduced to the power plant and airplane system.

CONTENT:

1. Reciprocating Engines
   a. Anatomy of a reciprocating engine
   b. Converting torque into thrust
   c. Types of Propellers
   d. Power plant controls
   e. Engine cooling

2. Oil System

3. Airplane Fuels and Fuel System
   a. Fueling operations
   b. Fuel system

4. Ignition system
   a. Dual ignition
   b. Ignition controls

5. The Electrical System
   a. The principles of electricity
   b. Airplane electrical systems

6. Power Plant Operations
   a. Preflight operations
   b. Starting the engine and warm-up operations
   c. Takeoff and climb
   d. Cruise
   e. Descent and landing
   f. The role of good judgement in power plant operations

b. Completion Standards. The student will have successfully completed the lesson when, by oral or written quiz, he displays a working knowledge of the power plant and airplane systems.
6. **LESSON NO. 4 - 4:00 HOURS**

a. **Objectives.** During this lesson, the student will be introduced to the pitot-static system, vacuum system, magnetic compass, and gyroscopic instruments

**CONTENT:**

1. **Pitot-Static System**
   a. Airspeed indicator
   b. Types of airspeed
   c. Altimeter
   d. Vertical speed indicator

2. **Magnetic Compass**

3. **Outside Air Temperature Gauge**

4. **Gyroscopic Instruments**
   a. Attitude indicator
   b. Turn coordinator
   c. Slips and skids
   d. Turn and slip indicator
   e. Heading indicator
   f. Vacuum system

b. **Completion Standards.** The student will have successfully completed the lesson when, by oral or written quiz, he displays a working knowledge of the pitot-static system, vacuum system, magnetic compass, and gyroscopic instruments.
7. LESSON NO. 5 - 3:00 HOURS

a. **Objective.** During this lesson, the student will be introduced to the principles of weight and balance, and determine gross weight and center of gravity.

**CONTENT:**

1. Principles of Weight and Balance  
   a. Weight and balance terms  
   b. Calculating the position of the CG  
   c. Shifting weight to move the CG

2. Determining Gross Weight and Center of Gravity  
   a. Computation method  
   b. Tabular method  
   c. Graphic method  
   d. Operations at high gross weights  
   e. Flight at various CG positions

b. **Completion Standards.** The student will have successfully completed the lesson when, by oral or written quiz, he displays a working knowledge of the principles of weight and balance, and determine gross weight and center of gravity.
8. LESSON NO. 6 - 4:00 HOURS

a. Objective. During this lesson, the student will be introduced to the source of performance data, influence of air density on performance, calculating takeoff performance, climb performance, cruise performance, and landing performance.

CONTENT:

1. Source of Performance Data

2. Influence of Air Density on Performance

3. Takeoff Performance
   a. Computing takeoff performance
   b. Computing headwinds and crosswinds
   c. Effects of density altitude on takeoff performance

4. Climb Performance
   a. Best angle of climb
   b. Best rate of climb
   c. Effects of density altitude on climb performance
   d. Computing climb performance
   e. Climb airspeed considerations

5. Cruise Performance
   a. Power and speed effects
   b. Altitude effects
   c. Computing cruise performance

6. Landing Performance

2. Completion Standards. The student will have successfully completed the lesson when, by oral or written quiz, he displays a working knowledge of the source of performance data, influence of air density on performance, calculating takeoff performance, climb performance, cruise performance, and landing performance.

9. STAGE ONE FINAL WRITTEN EXAMINATION - 1:00 HOUR
1. **STAGE TWO OBJECTIVE.** To develop the student's knowledge of the flying environment, weather, and published material.

2. **STAGE TWO COMPLETION STANDARDS.** This stage will successfully be completed when the student completes the written exam and subsequently corrects the examination to 100%.

3. **LESSON NO. 1 - 4:00 HOURS**

   a. **Objective.** During this lesson, the student will be introduced to airports, airspace, and local flying.

   **CONTENT:**

   1. Airports and Runway Markings and Identification
      a. Taxiways
      b. Runways
      c. Airport lighting

   2. Traffic Patterns
      a. Segmented circle
      b. Visual landing aids
      c. Uncontrolled airports
      d. Controlled airports and supporting services
      5. Safe engine operation
      6. High density airport operations
      7. Collision avoidance precautions

   3. Controlled and Uncontrolled Airspace
      a. VFR weather minimums
      b. Types of controlled airspace
      c. Air Defense Identification Zone (ADIZ)
      d. Distant Early Warning Identification Zone
4. Radio Communication Procedures
   a. How aeronautical radios work
   b. How to use the microphone
   c. Radiotelephone accent

5. Flying at Night
   a. Illumination system
   b. Advantages and disadvantages of night flying

6. Noise Abatement

7. Planning and Conducting a Local Flight

b. Completion Standards. The student will have successfully completed the lesson when, by oral or written quiz, he displays a working knowledge of airports, airspace, and local flying.
4. LESSON NO. 2 - 4:00 HOURS

a. Objectives. During this lesson, the student will be introduced to the atmosphere, aviation weather, clouds, air masses, and fronts.

CONTENT:

1. Atmosphere Defined
   a. Composition of the atmosphere
   b. Structure of the atmosphere
   c. Atmospheric pressure
   d. Atmospheric moisture
   e. Atmospheric temperature
   f. Transfer of atmospheric heat

2. Atmosphere in Motion
   a. Global circulation of the Atmosphere
   b. Effect of pressure gradients
   c. Three-cell circulation
   d. Other forces acting on winds

3. Aviation Weather
   a. Sky cover and ceiling
   b. Restrictions to visibility
   c. Icing
   d. Turbulence
   e. Recognition of Critical Weather Situations from the ground and in-flight

4. Clouds
   a. Cumulonimbus
   b. Thunderstorm mechanics
   c. Flying in the vicinity of thunderstorms

5. Air Masses and Fronts
   a. Air mass characteristics
   b. Fronts

b. Completion Standards. The student will have successfully completed the lesson when, by oral or written quiz, he displays a working knowledge of the atmosphere, aviation weather, clouds, air masses and fronts.
5. LESSON NO. 3 - 8:00 HOURS

a. **Objective.** During this lesson, the student will be introduced to the sources of weather information, weather-charts, weather reports and forecasts, preflight weather briefing, getting inflight weather information, and using weather services.

**CONTENT:**

1. Sources of Weather Information
2. Interpreting Weather Charts
   a. METARs
   b. Weather depiction charts
   c. Low-level prognosis charts
   d. Radar summary charts
3. Aeronautical Weather Reports and Forecasts
   a. Surface aviation weather report
   b. Pilot reports
   c. Runway visual range
   d. Notices to airmen
   e. TAFs
   f. Area forecasts
   g. Winds and temperatures aloft forecast
   h. Inflight advisories
4. The Preflight Weather Briefing
5. Getting Inflight Weather Information
   a. Flight service stations
   b. Transcribed Weather Broadcast (TWEB)
   c. En Route Flight Advisory Service (Flight Watch)
6. Using Weather Services
   a. Approaching a warm front
   b. Approaching a cold front

b. **Completion Standard.** The student will have successfully completed the lesson when, by oral or written quiz, he displays a working knowledge of the sources of weather information, weather charts, weather reports and forecasts, preflight weather briefing, getting inflight weather information, and using weather services.

6. STAGE TWO FINAL WRITTEN EXAMINATION - 1:00 HOUR
STAGE THREE--REGULATION
6:00 HOURS

1. STAGE THREE OBJECTIVE. To develop the student's knowledge of Federal Aviation Regulations.

2. STAGE TWO COMPLETION STANDARDS. This stage will successfully be completed when the student completes the written exam and subsequently corrects the examination to 100%.

6. LESSON NO. 1 - 2:00 HOURS
   a. Objective. During this lesson, the student will be introduced to flight information publications.

   CONTENT:
   1. Regulatory Publications
   2. Non-regulatory and Supplemental Publications
   3. Aeronautical Charts
   4. Operational Publications
      a. Airman's information manual
      b. Airport/Facility Directory
      c. Notices to Airmen (NOTAMs)
      d. Advisory Circulars
   5. Using Flight Information
   6. Other Aviation Reading

   b. Completion Standards. The student will have successfully completed the lesson when, by oral or written quiz, he displays a working knowledge of flight information publications.

This Page Revised January 8, 2002
7. LESSON NO. 2 - 3:00 HOURS

a. **Objective.** During this lesson, the student will be introduced to the Federal Aviation Regulations.

**CONTENT:**

1. FAR Part 1: Definitions and Abbreviations

2. FAR Part 61: Certification: Pilots and Flight Instructors
   a. Subpart A-General
   b. Subpart B-Aircraft Ratings and Special Certificates
   c. Subpart C-Student Pilots
   d. Subpart D-Private Pilots
      1. Privileges
      2. Limitations
      3. Flight Operations

3. FAR Part 67: Medical Standards and Certification

4. FAR Part 91: General Operating and Flight Rules
   a. Subpart A-General
   b. Subpart B-Flight Rules: General
   d. Subpart E-Maintenance, Preventive Maintenance, and Alterations

5. FAR Part 830: National Transportation Safety Board Rules
   a. Subpart A-General
   b. Subpart B-Initial Notification of Aircraft Accidents, Incidents, and Overdue Aircraft
   c. Subpart C-Preservation of Aircraft Wreckage, Mail, Cargo, and Records
   d. Subpart D-Reporting of Aircraft Accidents, Incidents, and Overdue Aircraft

6. **Violation of FAR's**

b. **Completion Standards.** The student will have successfully completed the lesson when, by oral or written quiz, he displays a working knowledge of the Federal Aviation Regulations.

8. **STAGE THREE FINAL WRITTEN EXAMINATION - 1:00 HOUR**

This Page Revised January 8, 2002
STAGE FOUR--NAVIGATION AND MEDICAL ASPECTS AND EMERGENCIES

1. **STAGE FOUR OBJECTIVE.** To develop the student's knowledge of navigation and medical aspects and emergencies.

2. **STAGE FOUR COMPLETION STANDARD.** This stage will successfully be completed when the student completes the written exam and subsequently corrects the examination to 100%.

3. **LESSON NO. 1 - 8:00 HOURS**
   a. **Objective.** During this lesson, the student will be introduced to the basics of air navigation.

   **CONTENT:**

   1. Methods of VFR Navigation
   2. Longitude and Latitude
      a. Geographic coordinate system
      b. Great and small circles
      c. Time zones
      d. From circular coordinates to flat maps
   3. Aeronautical Charts
   4. Art of Pilotage
      a. Flight planning by pilotage
      b. Limitations of pilotage
   5. Dead Reckoning Navigation
      a. Measuring true course
      b. Determining the effect of wind
      c. Magnetic heading
   6. Flight Computers
      a. Time-speed-distances relationships
      b. Fuel consumption
      c. Proportional problems
      d. Speed and fuel calculations
      e. True airspeed problems
      f. True altitude problems
      g. Density-altitude problems
      h. Conversions
      i. Computing wind effects with the computer
   b. **Completion Standards.** The student will have successfully completed the lesson when, by oral or written quiz, he displays a working knowledge of basic air navigation.
4. LESSON NO. 2 – 4:00 HOURS

a. Objective. During this lesson, the student will be introduced to the VOR navigation, ADF navigation, area navigation, radar assistance available to VFR pilots, and flight planning with radio navaids.

CONTENT:

1. VOR Navigation
   a. Chart Depiction
   b. Radio Communication Information
   c. Airborne VOR Equipment
   d. Advantages and Disadvantages of VOR
   e. Tuning and Identifying
   d. Proceeding Direct
   f. Course Interception
   g. Station Passage
   h. Two-Station VOR Fixes
   i. Navigation Receiver Checks

4. Distance Measuring Equipment

5. Automatic Direction Finding (ADF)
   a. Ground Facilities and Chart Depictions
   b. Cockpit Instrumentation

6. Area Navigation

7. Radar Assistance Available to VFR Pilots
   a. Limitations of Radar Services
   b. Using the Transponder
   c. Emergency Use of Radar Services

8. Flight Planning with Radio Navaids

Completion Standards. The student will have successfully completed the lesson when, by oral or written quiz, he displays a working knowledge of VOR navigation, ADF navigation, area navigation, radar assistance available to VFR pilots, and flight planning with radio navaids.
5. LESSON NO. 3 - 8:00 HOURS

a. Objective. During this lesson, the student will be introduced to composite navigation.

CONTENT:

1. Overview of Flight Planning Process
   a. General Planning, including, aeronautical decision making and judgement
   b. Preflight Planning, including how to obtain information on runway lengths at airports of intended use, data on takeoff and landing distances, weather reports and forecast, and fuel requirements
   c. Aircraft Preflight Inspection
   d. Departure
   e. En Route Navigation
   f. Re-planning En Route, including how to plan for alternatives if the planned flight cannot be completed or delays are encountered
   g. Arrival
   h. Postflight Activities

2. Going Cross-Country
   a. Preflight Briefing
   b. General Briefing
   c. Preflight Planning
   d. Airplane Preflight Preparations
   e. En Route Navigation
   f. Arrival Procedures
   g. Postflight Activities

b. Completion Standards. The students will have successfully completed the lesson when, by oral or written quiz, they display a working knowledge of navigation.
6. LESSON NO. 4 - 1:00 HOUR

a. Objective. During this lesson, the student will be introduced to the physiology of flight.

CONTENT:

1. Determining Your Fitness to Fly

2. Effects of Altitude on the Human Body
   a. Respiration
   b. Breathing and atmospheric pressure
   c. Hypoxia
   d. Hyperventilation
   e. Hypoxia or Hyperventilation?
   f. Carbon Monoxide Poisoning
   g. Altitude and Trapped Gas

3. Effect of Motion
   a. Gs and circulation
   b. Motion sensing and spatial orientation
   c. Vertigo
   d. Motion-related disorientation
   e. Airsickness

4. Night Vision
   a. Adaptation Period
   b. Rods and Cones

5. Effects of Noise

6. Drugs

7. Effects of Stress on the Human Body
   a. Mechanisms of Stress
   b. Relaxation Response
   c. Physiology of Panic
   d. Get Home Syndrome

b. Completion Standards. The student will have successfully completed the lesson when, by oral or written quiz, he displays a working knowledge of the physiology of flight.
7. LESSON NO. 5 - 1:00 HOUR

a. Objective. During this lesson, the student will be introduced to airborne emergencies.

CONTENT:

1. Maintaining Emergency Skills
   a. Common Causes of Emergencies
   b. Compound Emergencies

2. Emergency Landings

3. Recognizing and Handling and Emergency
   a. Verifying instrument Indications
   b. Radio Malfunctions
   c. In-flight Fires
   d. Fire Extinguisher

4. Thinking Safety
   a. Value of a Filed Flight Plan
   b. Forced Landing Procedures
   c. Emergency Locator Transmitter
   d. Ground-to-Air Visual Signals
   e. Survival Procedures and Equipment
   f. Parachutes

5. Assistance for Lost Pilots
   a. Direction-Finding steers
   b. Feelings about being lost

6. Communications During Emergencies
   a. Content of an emergency message
   b. Role of the Transponder

b. Completion Standards. The student will have successfully completed the lesson when, by oral or written quiz, he displays a working knowledge of airborne emergencies.

8. STAGE FOUR FINAL WRITTEN EXAMINATION - 1:00 HOUR

9. FINAL COMPREHENSIVE WRITTEN EXAMINATION - 2:00 HOURS
ACADEMIC HONESTY POLICY
for the
AVIATION SCIENCES INSTITUTE
SOUTHEASTERN OKLAHOMA STATE UNIVERSITY

I. STATEMENT OF PRINCIPLES

Academic honesty and ethical behavior are essential to the existence and growth of an academic community. These twin principles are central concepts in the educational experience of the student enrolled in the Aviation Sciences Institute (ASI). A School’s intellectual reputation rests on the development and adherence to the highest standards of intellectual ethics and honesty. A commitment to these standards by a student attending any course in the Aviation Sciences Institute is an expectation and requirement for a passing grade. Any breach of the expectations of academic honesty and academic ethics will be considered unacceptable and will merit censure.

Breaches of academic honesty and ethical behavior include: cheating; plagiarism; the unauthorized possession of exams, papers, computer applications or other class materials that have not been formally released by the instructor; and submission of one paper or project to meet the requirements of two different classes without express permission of the instructor. Academic dishonesty can be simply stated as misrepresenting another’s ideas and efforts as one’s own. These efforts may take the form of examinations, written assignments, computer applications, research or any other work product required of the student.

The Aviation Sciences Institute will support the Faculty in their attempts to enforce a rigorous standard of academic honesty and academic ethics in all classes and at all levels of academic standing.

II. DEFINITIONS OF VIOLATIONS

A. CHEATING

Cheating may be defined as using unauthorized materials or giving or receiving unauthorized assistance during an examination or other academic exercise. Examples may include (but are not limited to):

• Copying the work of another student during an examination or other academic exercise (including computer exercises), or permitting another student to copy one’s work;

• Taking an examination for another student, or allowing another student to take one’s examination; possessing unauthorized notes, study sheets or other material during an examination or other academic exercise;

• Falsifying or tampering with examination results or final grades;

• Completing, copying, or using the results of any other student’s computer assignments.
B. PLAGIARISM

Plagiarism may be defined as the use of another’s ideas or words without acknowledgment.

- Failing to use quotation marks when quoting from a source;
- Failing to document distinctive ideas from a source;
- Fabrication or invention of sources.

C. UNAUTHORIZED POSSESSION, DISPOSITION OR USE OF ACADEMIC MATERIALS

Unauthorized possession, disposition or use of academic materials may include:

- Selling or purchasing examinations or other academic work;
- Taking another student’s academic work without permission or offering your own work to others for unethical purposes;
- Possessing examinations or other assignments not formally released by an instructor,
- Submitting the same paper for two different classes without express permission of both instructors.

III. SANCTIONS

Breaches of academic honesty or academic ethics will result in disciplinary measures that may include:

- Failing grade for a particular assignment or examination;
- Failing grade for a particular course;
- Suspension from the Aviation Sciences Institute at any level;
- Application by the Aviation Sciences Institute to the Vice President of Student Affairs of the University for the offending student’s suspension for various lengths of time or permanent expulsion from Southeastern Oklahoma State University.

IV. PROCEDURES

A. If a student is accused of a breach of the Academic Honesty Policy, the faculty member affected will notify the student or students accused of the specific behavior that is alleged to be a violation of said policy. The information of the violation of policy may be a result of direct observations of the faculty member or through information received by the faculty member. The faculty member should give the student an opportunity to explain any extenuating circumstances. If the faculty member reasonably believes that the behavior is a violation of the Policy of Aca-
demic Honesty and that the student is responsible for said violation, then the faculty member will discuss with the student the sanction that she/he will assess for this infraction. If the student agrees with the sanction, a memorandum of the matter and its results should be prepared, and both the faculty member and the student should sign it. A copy of the memorandum will be forwarded to the Department Chair and a copy will be placed in the student’s advisor file. Copies may also be forwarded to the Director of the Aviation Sciences Institute and the Vice President for Student Affairs if this remedy is called for in the memorandum.

B. If the student does not agree to the sanction imposed, the student and the faculty member will meet with the Department Chair at the earliest time reasonably available. At this meeting the student and the faculty member will be given the opportunity to discuss the infraction. Every reasonable effort should be made to allow the student an opportunity to respond to the allegations.

C. Within fourteen (14) days, the Department Chair will make a decision on the matter and inform both the faculty member and the student in writing of the decision.

D. If the student wishes to appeal the decision, he/she may petition the Aviation Sciences Institute Director for a Grievance Hearing.

E. Any disciplinary actions and decisions should be documented and filed with the Dean of Students.

Dated: 7 January, 2002
**Southeastern Oklahoma State University - Aviation Sciences Institute**

**Bachelor of Science - Aviation**

**Professional Pilot (Major/Minor) Degree Plan & Clearance Letter**

Last Name: 
First Name: 
Student #: 

**Graduation:** 

**Most Recent Changes:** 

**GPA in Major:** 0.00 

**Professional Pilot Major/Minor**

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**Total Credits:** 64

**Specified General Education**

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<th>Substitution</th>
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<td>PHYS 1114</td>
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<td>#General Physics I</td>
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<tr>
<td>MATH 2143</td>
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<td>#Brief Calculus w/Applic</td>
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</tbody>
</table>

- Tinker AFB Student - Request waiver of Liberal Arts & Sciences requirement
- Earned an AS/AA degree from an Oklahoma college

Based on my review of this student's transcripts, already completed coursework and classes that they will have completed at Southeastern, they satisfy the Aviation - Professional Pilot degree requirements of the Aviation Sciences Institute with the substitutions noted above.

Advisor: 
Date: 
Department Chair: 
Date: 

Ver 5.7
<table>
<thead>
<tr>
<th>SOSU Course</th>
<th>Substitution Course</th>
<th>School</th>
<th>Semester Taken</th>
<th>Year Taken</th>
<th>Substitution Authorized by</th>
<th>Date</th>
<th>Grade in Course</th>
<th>Credit if Different</th>
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</tbody>
</table>

**Notes and Instructions:** Annotate which courses are being substituted for and note if the credit granted for the substituted class is different from the credit granted for the original class.
Southeastern Oklahoma State University - Aviation Sciences Institute
Bachelor of Science - Aviation Management
Business - AM-1 (Major/Minor) Degree Plan & Clearance Letter

Last Name: [Redacted]  First Name: [Redacted]  Email: [Redacted]  Student #: [Redacted]  Phone: [Redacted]

Business AM-1 Major/Minor

<table>
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<th>Year Taken</th>
<th>Substitution</th>
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<tr>
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<td>Primary Ground Instruction</td>
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<td>AVIA 3143</td>
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<td>3</td>
<td>Fundamentals Of Financial Accounting</td>
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<td>MNGT 3113</td>
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<td>Management and Organizational Behavior</td>
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<td>ENG 3903</td>
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<td>Technical &amp; Professional Writing</td>
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<td>Legal Environment of Business</td>
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<td>Principles of Microeconomics</td>
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<td>Aviation Legal Problems</td>
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Total Credits: 55

Specified General Education

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<th>Course</th>
<th>Credits</th>
<th>Semester Taken</th>
<th>Year Taken</th>
<th>Substitution</th>
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</thead>
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<tr>
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<td>ECON 2113</td>
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<td>Principles of Macroeconomics</td>
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<td>PHYS 1114</td>
<td>3</td>
<td>General Physics I</td>
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<tr>
<td>MATH 2143</td>
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<td>#Brief Calculus w/Applic</td>
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</tbody>
</table>

Tinker AFB Student - Request waiver of Liberal Arts & Sciences requirement
Earned an AS/AA degree from an Oklahoma college

Based on my review of this student's transcripts, already completed course work and classes that they will have completed at Southeastern, they satisfy the Aviation Management - Business degree requirements of the Aviation Sciences Institute with the substitutions noted above.

Advisor  Date  Department Chair  Date
### Course Substitutions

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<th>SOSU Course</th>
<th>Substitution Course</th>
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<th>Year Taken</th>
<th>Substitution Authorized by</th>
<th>Date</th>
<th>Grade in Course</th>
<th>Credit if Different</th>
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</table>

**Notes and Instructions**: Annotate which courses are being substituted for and note if the credit granted for the substituted class is different from the credit granted for the original class.
This is your copy of the safety procedures, practices, and policies as established by the Aviation Sciences Institute. You should become very familiar with this document and our Safety Management System, referencing both during the course of your training at Southeastern.

Our goal is to give you the finest and safest flight training available. In all cases the training at Southeastern meets or exceeds those standards set forth by the Federal Aviation Administration.

*Revised August 13, 2015- Photography and Video Recording Equipment in the Airplane*
*Revised December 18, 2011-Ground School prerequisites*
*Revised December 18, 2011-Aircraft Dispatching, Required reading of Pilot Bulletins.*
*Revised December 18, 2011- Revised Criteria for solo cross country destinations.*
*Revised August 10, 2010-Table of contents*
*Revised August 10, 2010-Added statement concerning SMS and Blackboard Academic suites.*
*Revised August 10, 2010-Added section on Security Badges*
*Revised August 11, 2008-Flight Training Grading Criteria*
*Revised August 15, 2007—Added section on ground school attendance and Part 141 Flight Training*
*Revised August 15, 2005 – Amended section on transferring credit via Advanced Standing*
*Revised July 6, 2005 – Added section on FAA Medical*
*Revised January 8, 2005 – Guidelines for receiving credit for previous flight training, amendments to minimum flight account balances, TSA requirements*
*Revised October 14, 2004 - Added Grass Strip Training at Cedar Mills (3T0)*
*Revised August 17, 2004*
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Flight Accounts  

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FAA Medicals  
FAA Written/Knowledge Exams  

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Cancelations and No-shows  
Part 141 Flight Training  
Flight Training Attendance  

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Attendance in Ground Schools  
Stage Checks  
Flight Course Grading and Incompletes  

Page 7  Graduation, How to apply  
Flight Training Grading Criteria  
Transfer of Credit and Advanced Standing Examinations  

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ASI Security Badges  
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Aircraft Documents, Approach Plates and En-route Charts  
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Page 11  Taxiing  
Discrepancies and Write offs  
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Unscheduled Landings  

Page 13  Securing Aircraft  
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Practice Areas  

Page 14  Flights over the Town of Durant  
Riders of Board  
Traffic Pattern Procedures  

Page 15  Appropriate Dress  
Grass Strip Training at Cedar Mills  
Suspension of Terminations  

Page 16  Photography and Video Recording Equipment in the Airplane
Assignment of Flight Instructors

Students are required to complete the following prior to being assigned to a flight instructor:

1. Enroll in the proper flight course.
2. Obtain a first class medical certificate/Student Pilot Certificate.
3. Establish a flight account with a minimum balance of $2,000.00.
4. After completing the above, students must submit to the Department Chair the following documentation:
   i. U.S. Citizens, in accordance with the Transportation Security Administration’s 49 CFR Part 1552, must provide proof of U.S. citizenship or nationality. To establish U.S. citizenship or nationality, students must present a valid U.S. passport or an original raised seal U.S. birth certificate and government issued picture identifications.
   ii. Non-U.S. citizens should make an appointment with the department chair to determine steps to remain in compliance with 49 CFR Part 1552.
5. Two availability forms completed in their entirety. Students will find availability forms at http://aviation.se.edu/availability_form.htm.
6. A completed SOP quiz. All students will take this exam once a year.
7. A copy of all pilot certificates, medicals, and FAA knowledge exam results that are not already on file within the Chief Flight Instructor’s office.

All paper work should be submitted at the same time.

Flight Accounts

Students must initially deposit $2000.00 in a flight account when they enter the flight program and they must maintain a balance of at least $200.00. If the account balance drops below $200.00 at any time, the student will be removed from the flight schedule. If the account drops below $0.00, the account balance must be restored to $2000.00 or the balance needed to complete the present flight course. Only after showing proof (copy of the receipt) that this additional deposit has been made, will the student be allowed to resume his or her flight training. It is the student’s responsibility to maintain the minimum account balance.

In addition to the initial deposit of $2,000.00, student account balances must be at least $2,000.00 before beginning a new course of training.

These special charges can be paid at the Business Office or the Auxiliary Business Office on the main campus. Flight accounts are non-interest bearing.
Closing a Flight Account

You must complete a form for closing ASI flight accounts, at which time you will not be eligible to continue flight training. Any ASI flight account balance will first be applied to outstanding balances owed to the university.

The student may complete a flight account withdrawal one time each semester. However, you may only resume flight training upon verification of deposit of $2,000.00 into your flight account. The student will not be allowed to reopen their flight account until the following semester, if a second withdrawal is made.

FAA Medicals

As per the Southeastern Oklahoma State University undergraduate catalog, all Professional Pilot majors must obtain an FAA first class medical certificate/Student Pilot Certificate prior to beginning their flight training. Aviation Management majors must obtain a third class medical/Student Pilot Certificate if they elect to enroll in flight classes. Aviation minors and non-majors, if they elect to enroll in flight classes, must also obtain a third class medical certificate.

Note: Should a flight student develop any medical condition that would have originally disqualified them from obtaining their medical certificate, or that would prevent them from legally exercising the privileges of their medical certificate, the flight student is required to report this condition to the Chief Flight Instructor prior to their next flight. Disqualifying conditions are found in 14 CFR Part 67.

FAA Written Exams

No student will be allowed to continue flying on a particular course unless he/she has passed the FAA written exam required by FAR’s for that certificate or rating by the following stage:

<table>
<thead>
<tr>
<th>Certificate</th>
<th>Stage Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private Pilot</td>
<td>Before the End of Stage II</td>
</tr>
<tr>
<td>Commercial Pilot</td>
<td>Before the End of Stage II</td>
</tr>
<tr>
<td>Instrument Rating</td>
<td>Before the End of Stage I</td>
</tr>
<tr>
<td>Flight Instructor</td>
<td>Before the End of Stage I</td>
</tr>
<tr>
<td>Instrument Instructor</td>
<td>Before the End of Stage I</td>
</tr>
</tbody>
</table>

Students who have not completed the appropriate ground school may meet with the Chief Flight Instructor to discuss their exemption from the above policy. However, unless prior permission is granted, stage checks will not be given to those students who do not comply with the above policy.
**Flight Scheduling**

Flight schedules may be accessed from the Aviation Sciences Institute’s web page at [http://aviation.se.edu/probooklogin.html](http://aviation.se.edu/probooklogin.html). Flights are typically scheduled approximately 1 week in advance with each student being scheduled at least 3 times a week. Students are responsible for knowing their flight schedule.

You must be available for at least three flights a week in order to obtain the most from your training and complete the course in a reasonable length of time. Check the schedule in person by Monday for that week to see when you are scheduled.

**Cancellations and No-Shows**

Students may cancel flights anytime earlier than six hours before the scheduled time without financial penalty. However, if the flight is canceled within six hours prior to the scheduled time a No-Show will be charged. If the student believes he or she has a valid reason for the cancellation, that student may talk with the Department Chair. The Department Chair will then decide to either accept the cancellation (in which case the No-Show will be canceled) or reject the cancellation (the No-Show will stand).

You must be dispatched and ready for your flight at the scheduled time. Tardiness will result in a no-show. Currently, the “No-Show fee” is $50.00 for local flights and $100.00 for cross-country.

Excessive no-shows or flight cancellations will be reviewed by the Chief Flight Instructor and may result in suspension from the flight schedule.

**Part 141 Flight Training**

Flight students, after issuance of their 14 CFR Part 141 enrollment certificate, must complete the associated flight training under the Part 141 approved curriculum.

**Flight Training Attendance**

You will be placed on the flight schedule a minimum of three times a week. Students who do not fly three times a week will be considered absent.

All cancellations must be pre-approved by your instructor or the Chief Flight Instructor. Excessive no-shows and student cancellations will result in your removal from the flight schedule.

Poor attendance will be reported to the registrar’s office— “poor attendance” being more than three unexcused absences in one semester.
Flight courses are no different than courses taken on campus. **Attendance is mandatory.** You must be available to fly three times a week.

**Ground School Prerequisites**

Many aviation courses have prerequisites. These are listed below:

<table>
<thead>
<tr>
<th>COURSE</th>
<th>Prerequisites</th>
<th>Ground School Prerequisites</th>
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</thead>
<tbody>
<tr>
<td>Commercial Perf. &amp; Regs</td>
<td>at least in Private 2</td>
<td>Private Pilot Knowledge Exam</td>
</tr>
<tr>
<td>Commercial Operations</td>
<td>at least in Commercial 1</td>
<td>Commercial Pilot Knowledge Exam</td>
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<tr>
<td>Instrument Ground</td>
<td>at least in Commercial 2</td>
<td>Commercial Pilot Knowledge Exam</td>
</tr>
<tr>
<td>Fund. of Instructing</td>
<td>at least in Instrument 2</td>
<td>Commercial Pilot Knowledge Exam</td>
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<td>Flight Instructor GND</td>
<td>at least in Instrument 2</td>
<td>Commercial Pilot Knowledge Exam</td>
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<td>Must be Instrument Rated</td>
<td>FOI and FIA Knowledge Exams</td>
</tr>
<tr>
<td>Multi Ground</td>
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<td>Commercial Pilot Knowledge Exam</td>
</tr>
</tbody>
</table>

**Attendance Ground School**

The Federal Aviation Administration, per 14 CFR Part 141, requires a minimum contact time as stated in the approved curriculum. Therefore, all class absences must be made-up on an hour for-hour basis. This must be accomplished by an approved ASI Staff Flight instructor at the student’s expense. Scheduling and completion of this requirement is the responsibility of the student.

**Stage Checks and End of Course Exams**

The Chief Flight Instructor or his designated assistant will periodically conduct stage checks and end of course exams with each student. These progress checks will be given at predetermined stages during your flight training. There will also be a Final Stage Check prior to graduation from flight each course. To take the Final Stage Check the student must have taken and passed the corresponding FAA written test.

**Flight Course Grading and Incompletes**

All final grades will be issued in accordance with procedures set forth by Southeastern Oklahoma State University. All flying course are graded as Pass (P) or Fail (F). Should you not have completed a flight course at the end of the semester you will receive a grade of “incomplete” (“I”). After completing the certificate or rating the “I” will be converted to a “P” or an “F”. **However, the “I” will become permanent one year after posting; at which time you must reenroll in the course in order to obtain a passing grade, continue flying, and receive credit for the course.**
Again, all incompletes in Aviation courses will become permanent and remain an “I” after one year in accordance to the policy in the current Southeastern course catalog. The only exception will be AVIA 3164-COMMERCIAL FLYING since it usually takes longer than one year to complete this course.

**GRADUATION**

Before an Aviation student can apply for graduation in the Registrar’s Office, they must present a “Graduation Clearance Note” from their major advisor. This clearance note will be required before the student can proceed with the graduation process (i.e. name in commencement program, diploma order, etc.).

Students must apply in their final semester by the graduation application deadline in order to be considered for honors graduate status. The deadlines are usually around November 1, April 1, and July 1.

**Southeastern Flight Training Grading Criteria**

All Southeastern Flight Instructors will use the following interpretation of the numerical grading system.

1. **Describe** - Instructor assistance is required to successfully execute the maneuver. At the completion of the scenario, the student will be able to describe the physical characteristics and cognitive element of the activity.

2. **Explain** - Instructor assistance is required to successfully execute the maneuver. At the completion of the scenario, the student will be able to describe the activity and understand the underlying concepts, principles, and procedures that comprise the activity.

3. **Practice** - Coaching, instruction, and /or assistance from the CFI will correct deviations and errors identified by the CFI. At the completion of the activity the student will be able to plan and execute the scenario.

4. At no time will the successful outcome of the activity be in doubt. (“Perform” will be used to signify that the student is satisfactorily demonstrating proficiency in traditional piloting and systems operations skills.)

**Transfer of Credit and Advanced Standing Examinations**

Effective January 1, 2000, after enrolling at Southeastern, credit will only be granted for that flight training accomplished with the ASI or another approved and accredited collegiate aviation program.

According to Southeastern admissions policies “work taken at junior or community colleges cannot be counted in meeting the upper-division requirements of Southeastern Oklahoma State University. Upper-division requirements relate to junior and senior (3000/4000 level) courses of study. Students who believe that their courses taken at a junior college are equivalent to courses taught at
Southeastern Oklahoma State University may take an Advance Standing examination to validate that level of achievement.” Please refer to the SOSU undergraduate catalog for additional information.

In order to earn college credit through advance standing, the student must hold that certificate or rating (FAA) prior to enrollment at Southeastern. Students may not apply for advance standing credit until their final semester of their senior year. This will be accomplished in conjunction with their graduation clearance letter.

**Credit for Previous Flight Training**

Student who would like college credit for previous flight training must contact the Chief Flight Instructor to schedule an evaluation. Evaluation sessions will contain both a ground and flight component and must be completed before the student begins their flight training within the Aviation Sciences Institute. These sessions will be completed on a first come first serve basis and will be scheduled at time suitable to the Chief Flight Instructor.

Once a flight student is admitted to Southeastern Oklahoma State University’s Aviation Sciences Institute, all flight training credit must be completed in residence or, with prior approval of the Department Chair, through another university aviation program.

Every attempt will be made to minimize the need to repeat previous training. In all cases, the amount and type of credit granted is at the complete discretion of the Chief Flight Instructor.

**ASI Security Badges**

ASI security badges must be worn and properly displayed by each aviation student, faculty and staff member, and visitor, who enters the aviation facility or tarmac. Visitors should request a security badge in room 101.

One security badge will be issued to each student once a year. Lost or stolen badges will be reissued for a nominal fee.

**Aircraft Dispatching**

An Aircraft Dispatch Form must be completed prior to each flight then endorsed by an authorized flight instructor. Aircraft keys will not be issued without this form and the instructor’s signature.

As part of their dispatching procedure, students are required to review the appropriate aircraft discrepancy log and all Pilot Bulletins. Pilot Bulletins are located on the ASI Safety Management System web site at [http://blackboard.se.edu/](http://blackboard.se.edu/).
Aircraft Availability and Bumps

You will be scheduled according to your availability and that of the aircraft needed for your particular course. Occasionally you may be bumped because the aircraft needed is not available. When this occurs your instructor will make every effort to reschedule you at the earliest possible time.

Aircraft rental for personal use is not permitted.

Weekend Flights

You will be required fly on weekends. Instructors and aircraft are available. All flights on weekends require a dispatch form signed by an authorized flight instructor.

Weather Minimums

When weather conditions force the cancellation of training flights your instructor will reschedule you at the earliest possible time. If you are in doubt as to the weather conditions, contact your instructor. Do not fail to show up for a lesson just because you assumed the weather was too bad to fly.

VFR:
- Solo Flights (Pattern only) – 1,500 ft. ceiling, 3 miles visibility
- Solo flights (local) – 1,500 ft. ceiling, 5 miles visibility
- Solo night flight – 5,000 ft. ceiling, 8 miles visibility
- Solo cross-country – 5,000 ft. ceiling, 8 miles visibility
- Dual local flights – 1,500 ft. ceiling, 3 miles visibility
- Dual cross country - Instructor’s decision

IFR: 800ft. ceiling and 2 miles visibility at the point of departure, En-route and at the destination.

No IFR training will be conducted if thunderstorms or icing conditions are present anywhere along the route of flight.

Maximum Winds and Crosswind Limitations

The maximum allowable wind for solo flights is 20 knots for student pilots and 30 knots for other solos. Students are not allowed to fly solo when the wind has a crosswind component in excess of the demonstrated crosswind component of the aircraft. Under all wind conditions, instructors will take into consideration the students experience and his/her capabilities before authorizing any solo flights.
Night Flight

Solo night flights will only be conducted during designated evenings. All solo night flying is accomplished in the traffic patterns at Eaker Field, Grayson County and Ardmore Municipal. Flight plans must be filed and activated for all flights to and from Ardmore Municipal.

Solo night flights to Ardmore and Grayson County require 5,000 ft ceilings and 8 miles visibility.

Formation flying and any other operations that compromise safety during night flight are prohibited and are grounds for suspension.

Aircraft Documents, Approach Plates, and En route Charts

Students will not remove any required documents from any aircraft unless authorized by a staff flight instructor or directed to do so by an authorized representative from the FAA.

Aircraft and engine logbooks and original weight and balance papers are on file in the ASI Maintenance Department. Only those persons authorized to do so may remove these documents.

Approach plates and En route Charts are assigned to different Flight Instructors.

Starting Procedures

Before each and every flight you will make a complete and thorough preflight inspection of the aircraft. Always use the appropriate checklist provided in each aircraft. If you experience difficulty in starting the aircraft discontinue the starting attempt, shut the aircraft down using the appropriate checklist, and see your instructor or a line-crew member for help.

Make sure the aircraft is positioned in such a way so as not to blast other aircraft, persons on the ramp or the maintenance hangar. If necessary, reposition the aircraft before starting using the tow bar provided. All aircraft should be positioned parallel to taxi lines before start up and shut down.

Airplanes should be pulled out and away from their tie-down spot before starting.

Taxiing
Taxiing should be slow (brisk walk). Common sense and courtesy should prevail. Should another aircraft be encountered, move to the right of the taxiway to allow room to pass.

Taxiing should be accomplished with 1000 RPM or less and the proper crosswind taxi technique should always be used.

Do not Taxi your aircraft in or out of the T-Hangars.

Airplanes should be shut down before crossing the red lines at the fuel pumps, the entrance to the maintenance hangar and T-hangar.

**Discrepancies and Write Offs**

If during the preflight inspection, taxi, or the flight itself, you encounter a condition which may render the aircraft un-airworthy, discontinue the flight and report the condition to a mechanic or a member of the line-crew. Any other mechanical irregularities (radios included) should be noted on the appropriate Squawk sheet and given to the Line Crew or Maintenance Personnel.

**Fuel Reserves**

Fuel reserves represent the amount of fuel beyond what is forecast to be required for the planned flight. The following reserves are required for each flight:

- Solo......................... One-hour reserve (1:00)
- Dual......................... Thirty minutes reserve (0:30)
- Solo Cross-Country..... One and One-half hour reserve (1:30)
- IFR Flight............... As per FAR’s

**Off Limits**

The flight line office (in the dispatch area) is OFF LIMITS to all students. When transiting through the maintenance hangar all students must remain within the designated walkway indicated by the red line.

**Minimum Altitudes**

1,200ft MSL is the minimum altitude designated for Southeastern’s practice areas. Additionally, minimum altitudes set forth in FARs will be complied with at all times. Stalls will not be initiated at less than 3,000 ft MSL.
During MEL training, engines will not be feathered unless within gliding distances of the airport and above 3,000ft AGL. Furthermore, only throttles should be used to simulate engine failures while below 3,000ft AGL.

Discontinue all practice forced landings above 500ft AGL.

**Collision Avoidance**

Be alert for other aircraft at all times, even under ideal weather conditions. It is your responsibility to constantly be on the watch for other aircraft.

Always scan the approach area for possible traffic before taking the active runway. Clear the left and right before making any turns. Make 90 degrees clearing turns both left and right before commencing any training maneuver.

Anti-collision lights will be on anytime the aircraft is in operation. Landing lights are to be on while operating within 5 miles of any airport.

Any near miss, accident, or incident will be reported to your flight instructor and to the Chief Flight Instructor immediately.

**Cross Country Flights**

Destination airports must have a runway that is paved and at least 3000’X50’. Additionally, the airport’s fuel prices may be no higher than the South Central US average, as listed on [www.100LL.com](http://www.100LL.com). Students are expected to research airport conditions and fuel prices as part of their cross-country planning.

Flight plans will be filed and activated for all cross-country flights and all solo cross-country flights must return to Durant no later than one hour before dark.

No solo cross-country flight will be undertaken unless the cross-country portion of the dispatch form has been completed then endorsed by a staff flight instructor.

**Unscheduled Landings**

Should an unscheduled landing become necessary for any reason, the student will contact the flight department via toll-free phone call before proceeding. (800) 435-1327 x3271.

Should an emergency landing occur notify the flight department for instructions. Under no circumstances, will a student attempt to takeoff after an unscheduled landing.
Contact the flight department should it become necessary to cancel or delay a flight at any point during the flight.

**Securing Aircraft**

The aircraft will be secured after each flight. The key will then be returned to the line office. Post flight inspections are required after every flight. If the aircraft requires fueling (less than half tanks) the aircraft will be parked at the pumps with the gust lock installed, the aircraft chocked, and the line crew advised as to the need for fuel.

Aircraft are not to be driven into parking spots. If help is needed to move or park an aircraft the line crew will assist. Use a tow-bar to maneuver the aircraft if necessary. Never move an airplane by pushing down on the tail.

The following applies when securing aircraft at all airports:
1. Gust lock installed
2. Chocks installed
3. Tie-downs used if available
4. Park into the wind if possible
5. Lock aircraft
6. Pitot cover installed
7. Post flight inspection

**Fire Precautions and Procedures**

Before you solo in any aircraft your flight instructor will instruct you in the precautions against ground and in-flight fires and the procedures to be taken should a fire occur either on the ground or in flight. These procedures will coincide with those procedures outlined in the emergency section of the Operators Manual.

**Practice Areas**

You should be familiar with the location and boundaries of all practice areas.

Practice areas must be designated for all local training flights. Indicate your practice area by marking it on the magnetic board located next to the dispatch area.

Before you are allowed to take an aircraft solo you will be briefed by your instructor with regard to the location and limits of the practice area. The instructor will assign the practice area to be used.
Lake Texoma Airport is off limits to solo students and all night flights. Operations into this airport must be limited to DAY VFR/DUAL flights. Pay special attention to density altitude and aircraft performance limitations while operating at Lake Texoma.

Southwest Practice Area:
Is bordered on the east by highway 69/75 from Durant to the Red River, on the west by Lake Texoma, and on the North by a line perpendicular to Runway 17/35 from Lake Texoma to Durant

Southeast Practice Area:
Is bordered on the east by the Bokchito - Yuba highway, extends down across the Red River to just east of Ravenna in Texas, on the South by highway 273 from Ravenna to Denison, Texas, On the West by highway 69/75 from Denison to Durant, and on North by a line perpendicular to Runway 17/35 from Durant to Bokchito.

Northwest Practice Area is bordered on the east by highway 69/75 from Durant to Caddo, on the South by a line perpendicular to Runway 17/35 from Lake Texoma to Durant, on the West by Lake Texoma, on the North by Highway 22 from Lake Texoma to Caddo.

Northeast Practice Area is bordered on the West by highway 69/75 from Durant to Tushka, on the South by a line perpendicular to Runway 17/35 from Durant, on the North by a line from Tushka to Lane, on the East by a line from Lane to Bennington.

Flights Over The Town of Durant

Flights over the town of Durant, except those required for immediate departures from the traffic pattern, are prohibited.

Riders on Board

The ASI strictly forbids students from taking unapproved passengers on training flights. Students who take passengers, other than their flight instructor, will be removed from the program.

Traffic Pattern Procedures

Guidelines from the Aeronautical Information Manual should always be used while operating in the vicinity of ANY traffic pattern unless otherwise noted. These include the following:

- Enter pattern in level flight, abeam the midpoint of the runway, at pattern altitude.
  (1,000’ AGL)
- Maintain pattern altitude until abeam approach end of the landing runway on downwind leg.
- Complete turn to final at least ¼ mile from the runway.
- While departing, continue ahead until beyond departure end of the runway.
• If remaining in the traffic pattern, commence turn to crosswind leg beyond the departure end of the runway within 300 feet of pattern altitude.
• If departing, continue straight out, or exit with a 45-degree turn to the left; beyond the departure end of the runway, after reaching pattern altitude.
• Use the radio communication procedures appropriate for the type of airport from which you are operating.

Additionally, the traffic pattern should always be entered from a 45 degree angle to downwind. If approaching from the opposite direction, cross Eaker Field at 2,700’ MSL then enter the pattern from a 45-degree angle.

**Appropriate Dress**

Wear clothes that are comfortable and appropriate for the season. During winter months, consider bringing a hat, gloves and other warm clothing in case of an off airport landing. This is especially important for cross-country training.

Students may not fly with open-toe shoes. *(e.g. Sandals and flip-flops)*

**Grass Strip Training at Cedar Mills (3T0)**

Cedar Mills Airport, a public use airfield located 3 miles north of Gordonville, Texas, is the only grass strip approved for student training. Staff instructors should become familiar with all available pertinent information before using the grass strip for student training. This information includes but is not limited to current runway conditions, weather conditions, and obstruction information. Pay special attention to runway conditions after periods of recent precipitation and prevailing crosswinds.

If needed, call 903-523-4222 ext. 238 for current runway conditions at Cedar Mills. Additional information can be found at [http://www.airnav.com/airport/3T0](http://www.airnav.com/airport/3T0).

**Cedar Mills is off limits to all solo students.**

**Suspension or Termination**

A student may be suspended or terminated from the flight training program for any of the following reasons:

1. Violation of FAR’s and/or ASI policy and procedures.
3. Poor attitudes, progress, or attendance.
4. Violation of any drug or alcohol laws.
5. Three or more no-shows and/or unexcused absences within one semester.
6. Use of tobacco products in SOSU aircraft.
7. Formation flying.
8. Failure to file and activate a flight plan
9. Reckless, poor or unsafe judgment.
10. Unauthorized use of school equipment.
11. Mistreatment of school equipment.

Reinstatement to flight training will be at the discretion of the Chief Flight Instructor and Department Chair. Termination of a student from the program will be the decision of the Chief Flight Instructor subject to approval by the Department Chairman.

**Photography and Video Recording Equipment in the Airplane**

The use of photography and video recording equipment such as GoPros during training flights may only be authorized via permission from the Chief Flight Instructor or Department Chair.
Accident and Injury Report Form

To be completed by the Safety Officer or appropriate Safety Representative for all accidents and injuries which have seriously endangered people, aircraft, vehicles, or equipment.

Name of person that completed this report: ____________________________
Position: ___________________________ Email: ___________________________
Telephone number: ___________________________
Date of Accident/Injury: ___________________________
Time: ___________________________
Location: ___________________________
Date of Report: ___________________________

Names of Witnesses

Witness 1
Name: ____________________________
Address: ____________________________
Telephone: ____________________________

Witness 2
Name: ____________________________
Address: ____________________________
Telephone: ____________________________

Witness 3
Name: ____________________________
Address: ____________________________
Telephone: ____________________________
Details

Details of the accident/injury: (Include details of people involved, aircraft, vehicles, and equipment. Include details of what took place that contributed to the accident or injury.

______________________________________________________________________
______________________________________________________________________
______________________________________________________________________
______________________________________________________________________
______________________________________________________________________
______________________________________________________________________
______________________________________________________________________
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______________________________________________________________________
______________________________________________________________________

Details of any injuries:  
______________________________________________________________________
______________________________________________________________________
______________________________________________________________________
______________________________________________________________________
______________________________________________________________________
______________________________________________________________________

Details of damage to aircraft/vehicles/equipment/facilities:  
______________________________________________________________________
______________________________________________________________________
______________________________________________________________________
______________________________________________________________________
______________________________________________________________________
______________________________________________________________________
Southeastern SMS Implementation and GAP Analysis

1. Background

This gap analysis model form is intended to assist a service provider with the implementation of a Safety Management System (SMS) in accordance with the Standards and Recommended Practices (SARPs) contained in ICAO Annex 6 — *Operation of Aircraft, Part I — International Commercial Air Transport — Aeroplanes, and Part III — International Operations — Helicopters*, ICAO Annex 11 — *Air Traffic Services*, and ICAO Annex 14 — *Aerodromes, Volume I — Aerodrome Design and Operations*. A gap analysis is conducted against generally accepted SMS concepts and components. This model form provides, in checklist format, information to assist the evaluation of the components of a safety system presently in place, and the identification of those components of an SMS that will need to be developed.

2. ICAO Safety Management Systems Framework

The ICAO SMS framework is outlined below. The framework lists six components and 14 corresponding elements.

**ICAO SMS Framework**

1. **Safety Policy and Objectives**
   - 1.1 — Management Commitment and Responsibility
   - 1.2 — Safety Accountabilities of Managers
   - 1.3 — Appointment of Key Safety Personnel
   - 1.4 — SMS Implementation Plan
   - 1.5 — Coordination of the Emergency Response Plan
   - 1.6 — Documentation

2. **Safety Risk Management**
   - 2.1 — Hazard Identification Processes
   - 2.2 — Risk Assessment and Mitigation Processes
   - 2.3 — Internal Safety Investigations

3. **Safety Assurance**
   - 3.1 — Safety Performance Monitoring and Measurement
   - 3.2 — The Management of Change
   - 3.3 — Continuous Improvement of the Safety System

4. **Safety Promotion**
   - 4.1 — Training and Education
   - 4.2 — Safety Communication
The implementation of an SMS requires a service provider to conduct an analysis of its system to determine which components and elements of a safety management system are currently in place and which components or elements must be added or modified to meet the requirements. The analysis involves comparing the SMS requirements against the existing systems in the service provider.

The model gap analysis form included in this guide can be used for a service provider as a template to conduct a gap analysis. Each analysis question is designed for a “yes” or “no” response. A “yes” answer indicates that the organization already meets the criteria for that particular SMS component or element. A “no” answer indicates that a gap exists between the stated criteria and the organization's policies, procedures or processes. If the response is “yes”, the next column of the analysis form can be used to indicate where (in company documentation) the requirement is addressed. If the response is “no”, the same column can be used to indicate how and/or where the policy, procedure or process will be further developed to bring the organization into compliance with the requirement.

Once the gap analysis is complete and fully documented, the items identified as missing or deficient will form one basis of the SMS implementation plan. Each item will be assessed to determine how the organization will create or modify policies, procedures or processes to incorporate the required SMS components and elements. Components and elements can be grouped into larger projects and assigned to project manager(s) who will oversee the development and implementation of that project. Each component, element or project should be assigned milestones including a termination date to ensure that completion does not fall outside acceptable time limits.
Southeastern Aviation Sciences Institute ICAO Gap Analysis Model
August 7, 2011

<table>
<thead>
<tr>
<th>ICAO SMS Framework</th>
<th>Response (Yes/No)</th>
<th>If yes, state where the requirement is addressed. If no, record SMS processes that need further development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety Policy and Objectives</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is a safety management system with defined components established, maintained and adhered to?</td>
<td>Yes</td>
<td>SASI Safety Management System Manual</td>
</tr>
<tr>
<td>Is the safety management system appropriate to the size and complexity of the organization?</td>
<td>Yes</td>
<td>SASI SMS Manual</td>
</tr>
<tr>
<td>Is there a safety policy in place?</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Have safety objectives been established?</td>
<td>No</td>
<td>No accidents and no incidents Not feasible or reality</td>
</tr>
<tr>
<td>Are safety objectives publicized and distributed?</td>
<td>No</td>
<td>Need further research.</td>
</tr>
<tr>
<td>Is there a formal process to develop a coherent set of safety goals?</td>
<td>Yes</td>
<td>Safety Committee</td>
</tr>
<tr>
<td>Is there a formal process to develop and maintain a set of safety performance indicators and safety performance markers?</td>
<td>No</td>
<td>Organization too small</td>
</tr>
<tr>
<td>Has the organization based its safety management system on the safety policy?</td>
<td>Yes</td>
<td>SASI SMS Manual</td>
</tr>
<tr>
<td>Is the safety policy approved by the accountable executive?</td>
<td>Yes</td>
<td>Letter signed in SASI SMS Manual</td>
</tr>
<tr>
<td>Is the safety policy promoted by the accountable executive?</td>
<td>Yes</td>
<td>Safety Committee agenda and all aviation courses</td>
</tr>
<tr>
<td>Is the safety policy reviewed periodically?</td>
<td>Yes</td>
<td>Safety Committee</td>
</tr>
<tr>
<td>Is there a policy in place that ensures that employees are free to report safety deficiencies, hazards or occurrences without being subject to unjust discipline?</td>
<td>Yes</td>
<td>SASI SMS Manual</td>
</tr>
<tr>
<td>Question</td>
<td>Yes/No</td>
<td>Reference</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>--------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>Does the accountable executive have responsibility for ensuring that the safety management system is properly implemented and performing to requirements in all areas of the organization?</td>
<td>Yes</td>
<td>SOSU policy manual</td>
</tr>
<tr>
<td>Does the accountable executive have control of the financial and human resources required for the proper execution of their SMS responsibilities?</td>
<td>Yes</td>
<td>SOSU policies</td>
</tr>
<tr>
<td>Has a qualified person been appointed to oversee the operation of the SMS?</td>
<td>Yes</td>
<td>Safety Manager: John Van Bebber</td>
</tr>
<tr>
<td>Does the person overseeing the operation of the SMS fulfill the required job functions and responsibilities?</td>
<td>Yes</td>
<td>SASI SMS Manual</td>
</tr>
<tr>
<td>Are the safety authorities, responsibilities and accountabilities of personnel at all levels of the organization defined and documented?</td>
<td>No</td>
<td>Defined but documentation needed</td>
</tr>
<tr>
<td>Do all personnel understand their authorities, responsibilities and accountabilities in regards to all safety management processes, decisions and actions?</td>
<td>Yes</td>
<td>SASI SMS Manual</td>
</tr>
<tr>
<td>Does the organization have an emergency response procedure appropriate to the size, nature and complexity of the organization?</td>
<td>No</td>
<td>SOSU Safety Manual is in place and SASI’s Emergency Response Plan (ERP) is in progress</td>
</tr>
<tr>
<td>Have the emergency response procedures been documented, implemented and assigned to a responsible manager?</td>
<td>No</td>
<td>SASI Emergency Response Plan in progress</td>
</tr>
<tr>
<td>Have the emergency response procedures been periodically reviewed as part of the management review of the SMS, and after key personnel and organizational change?</td>
<td>No</td>
<td>SASI Emergency Response Plan in progress</td>
</tr>
<tr>
<td>Does the organization have a process to distribute the emergency response procedures and to communicate the content to all personnel?</td>
<td>No</td>
<td>SASI Emergency Response Plan in progress</td>
</tr>
<tr>
<td>Has the organization conducted drills and exercises with all key personnel at specified intervals?</td>
<td>No</td>
<td>SASI ERP in progress</td>
</tr>
<tr>
<td>Question</td>
<td>Yes/No</td>
<td>Notes</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>------------</td>
<td>-----------------------------------------------------------------------</td>
</tr>
<tr>
<td>Has a documented procedure been established and maintained for identifying applicable regulatory requirements?</td>
<td>Yes</td>
<td>Flight Operations SOPs Line Crew SOPs</td>
</tr>
<tr>
<td>Are regulations, standards and exemptions periodically reviewed to ensure that the most current information is available?</td>
<td>Yes</td>
<td>Need to update SMS Manual</td>
</tr>
<tr>
<td>Is there consolidated documentation that describes the SMS and the interrelationships between all its components?</td>
<td>Yes</td>
<td>SASI SMS Manual</td>
</tr>
<tr>
<td>Does this information reside or is it incorporated into approved documentation, such as Company Operations Manual, Maintenance Control/Policy Manual, Airport Operations Manual, as applicable, and where these approved documents are not required by regulation, the organization includes the information in a separate, controlled document?</td>
<td>Yes</td>
<td>Separate controlled document</td>
</tr>
<tr>
<td>Does the organization have a records system that ensures the generation and retention of all records necessary to document and support operational requirements, and is in accordance with applicable regulatory requirements and industry best practices?</td>
<td>Yes</td>
<td>Resides on SOSU Blackboard and Safety Managers files</td>
</tr>
<tr>
<td>Does the system provide the control processes necessary to ensure appropriate identification, legibility, storage, protection, archiving, retrieval, retention time, and disposition of records?</td>
<td>No</td>
<td>Complete records use and archival need to be in SASI SMS Manual</td>
</tr>
</tbody>
</table>

**Safety Risk Management**

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes/No</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does the organization have a reactive process or system that provides for the capture of internal information including incidents, accidents and other data relevant to safety and risk management?</td>
<td>Yes</td>
<td>Hazard/Incident reporting system implemented</td>
</tr>
<tr>
<td>Is the reactive reporting process simple, accessible and commensurate with the size of the organization?</td>
<td>Yes</td>
<td>Blackboard, email, or paper are the options</td>
</tr>
<tr>
<td>Are reactive reports reviewed at the appropriate level of management?</td>
<td>Yes</td>
<td>SASI SMS Manual provides procedure</td>
</tr>
<tr>
<td><strong>Question</strong></td>
<td><strong>Yes/No</strong></td>
<td><strong>Comment</strong></td>
</tr>
<tr>
<td>-----------------------------------------------------------------------------</td>
<td>------------</td>
<td>-------------------------------------------------</td>
</tr>
<tr>
<td>Is there a feedback process to notify contributors that their reports have been received and to share the results of the analysis?</td>
<td>Yes</td>
<td>SASI SMS Manual provides procedure</td>
</tr>
<tr>
<td>Is there a process in place to monitor and analyze trends?</td>
<td>No</td>
<td>No official procedure but Safety Manager is responsible for trend analysis</td>
</tr>
<tr>
<td>Are corrective and preventive actions generated in response to event analysis?</td>
<td>Yes</td>
<td>SASI SMS Manual tasks the Safety Committee</td>
</tr>
<tr>
<td>Does the organization have a process or system that provides for the capture of internal information including hazard identification, occurrences and other data relevant to safety?</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Is the proactive reporting process simple, accessible and commensurate with the size of the organization?</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Is there a structured process for the assessment of risk associated with identified hazards, expressed in terms of severity, and probability of occurrence?</td>
<td>Yes</td>
<td>SASI SMS Manual</td>
</tr>
<tr>
<td>Are there criteria for evaluating risk and the acceptable level of risk the organization is willing to accept?</td>
<td>No</td>
<td>Safety Committee is tasked with case by case analysis</td>
</tr>
<tr>
<td>Does the organization have risk management strategies that include corrective/preventive action plans to prevent recurrence of reported occurrences and deficiencies?</td>
<td>Yes</td>
<td>SASI SMS Manual</td>
</tr>
</tbody>
</table>

**Safety Assurance**

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes/No</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are regular and periodic, planned reviews conducted regarding company safety performance, internal audit results, hazard and occurrence investigations, hazard and occurrence analysis results, internal/external feedback analysis/results, status of corrective actions, follow-up actions from previous management reviews, changes that could affect safety, recommendations for improvement and sharing of best practices across the organization?</td>
<td>No</td>
<td>Audits and inspection processes are in progress</td>
</tr>
<tr>
<td>Question</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>------</td>
<td>-----------------------------------------</td>
</tr>
<tr>
<td>Is there a process to evaluate the effectiveness of corrective actions?</td>
<td>No</td>
<td>Might need a safety questionnaire during each semester for all personnel</td>
</tr>
<tr>
<td>Are proactive reports reviewed at the appropriate level of management?</td>
<td>Yes</td>
<td>SASI SMS Manual</td>
</tr>
<tr>
<td>Is there a feedback process to notify contributors that their reports have been received and to share the results of the analysis?</td>
<td>Yes</td>
<td>SASI SMS Manual</td>
</tr>
<tr>
<td>Is there a process in place to monitor and analyze trends?</td>
<td>No</td>
<td>No official procedure but Safety Manager is responsible for trend analysis</td>
</tr>
<tr>
<td>Has the organization planned self-evaluation processes, such as regularly scheduled reviews, evaluations, surveys, operational audits, assessments, etc.?</td>
<td>Yes</td>
<td>Yes, but not necessarily from the risk matrix</td>
</tr>
<tr>
<td>Are corrective and preventive actions generated in response to risk analysis?</td>
<td>Yes</td>
<td>Yes, but not necessarily from the risk matrix</td>
</tr>
<tr>
<td>Is a process in place for analyzing changes to operations or key personnel for risks?</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Are there procedures in place for the conduct of investigations?</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Do measures exist that ensure all reported occurrences and deficiencies are investigated?</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Is there a process to ensure that occurrences and deficiencies reported are analyzed to identify all associated hazards</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Are corrective and preventative actions generated in response to event investigation and risk analysis?</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Does the organization have a process for evaluating the effectiveness of the corrective/preventive measures that have been developed?</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Are corrective/preventive actions, including timelines, documented?</td>
<td>Yes</td>
<td>Yes, but more formal documentation might be needed.</td>
</tr>
<tr>
<td>Question</td>
<td>Yes/No</td>
<td>Notes</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>--------</td>
<td>--------------------------------------------</td>
</tr>
<tr>
<td>Does the organization conduct reviews and audits of its processes, its procedures, analyses, inspections and training?</td>
<td>No</td>
<td>We are planning audits now.</td>
</tr>
<tr>
<td>Does the organization have a system to monitor the internal reporting process and the associated corrective actions?</td>
<td>Yes</td>
<td>Safety Committee and Safety Manager</td>
</tr>
<tr>
<td>Is there an operationally independent audit function with the authority required to carry out an effective internal evaluation program?</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Does the audit system cover all functions, activities and organizations within the company?</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Are there defined audit scope, criteria, frequency and methods?</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Are there selection/training process to ensure the objectivity and competence of auditors as well as the impartiality of the audit process?</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Is there a procedure for reporting audit results and maintaining records?</td>
<td>No</td>
<td></td>
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<tr>
<td>Is there a procedure outlining requirements for timely corrective and preventive action in response to audit results?</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Is there a procedure to record verification of action(s) taken and the reporting of verification results?</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Does the organization perform periodic Management reviews of safety critical functions and relevant safety or quality issues that arise from the internal evaluation program?</td>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

**Safety Promotion**

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes/No</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are there communication processes in place within the organization that permit the safety management system to function effectively?</td>
<td>Yes</td>
<td>Blackboard 9.1; Safety Committee</td>
</tr>
<tr>
<td>Question</td>
<td>Answer</td>
<td></td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>-----------------</td>
<td></td>
</tr>
<tr>
<td>Are communication processes (written, meetings, electronic, etc.)</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>commensurate with the size and scope of the organization?</td>
<td></td>
<td></td>
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<tr>
<td>Is information established and maintained in a suitable medium that</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>provides direction in related documents?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is there a process for the dissemination of safety information</td>
<td>Yes</td>
<td></td>
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<tr>
<td>throughout the organization and a means of monitoring the effectiveness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>of this process?</td>
<td>(Pilot Bulletins</td>
<td></td>
</tr>
<tr>
<td>and Safety Bulletin Board).</td>
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</tr>
<tr>
<td>Is there a process in place to monitor and analyze trends?</td>
<td>No</td>
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</tr>
<tr>
<td>Are corrective and preventive actions generated in response to event</td>
<td>Yes</td>
<td></td>
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<tr>
<td>analysis?</td>
<td></td>
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<tr>
<td>Is there a documented process to identify training requirements so that</td>
<td>No</td>
<td></td>
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<tr>
<td>personnel are competent to perform their duties?</td>
<td></td>
<td></td>
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<tr>
<td>Is there a process that measures the effectiveness of training?</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Is the organization’s safety training incorporated into indoctrination</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>training upon employment?</td>
<td>Freshman</td>
<td></td>
</tr>
<tr>
<td>Is there emergency response and response training for affected</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>personnel?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

We need to identify what training is needed besides Fire Safety. ??
Pilot Training, Line Crew Training, Flight Instructor Training, Maintenance Training
Hazard and Incident Reporting Form

Revised: 11/4/16

The information supplied in this form will only be used to promote safety. Your name is optional. If you do provide your name, your identity will be removed before dissemination. An email reply will follow. Under no circumstances will your identity be disclosed to any university personnel, any other organization, agency, or person without your express permission.

Complete only Part A of the form, then submit it to the SASI Safety Manager—paper copy or email.

Name: ____________________________ Email: _____________________________

Position: _______________ [Only Safety Manager has access to name/position]

Report Number: ____________________ Date Received: ________________

PART A:

Please fully describe the Hazard or Incident.

Date of occurrence: _______________ Time: _______________

Aircraft Type & registration: ____________________ Location: _____________________________

Description of incident or hazard:

________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________

Airplane or Airport issues:

________________________________________________________________________________
________________________________________________________________________________

Reported Weather: ________________________________________________________________

Procedure issues (SOPs, FAR, POH):

________________________________________________________________________________
________________________________________________________________________________

Suggested actions to be taken:

________________________________________________________________________________
________________________________________________________________________________

________________________________________________________________________________
PART B:  
Actions & Recommendations of the Safety Manager or Safety Committee

The report has been de-identified, entered into the safety database on Blackboard, and a response emailed if necessary.

Signature: __________________________________ Date: _____________________

---

Probability of the hazard recurring (SASI Risk Matrix)

<table>
<thead>
<tr>
<th>Frequent</th>
<th>Occasional</th>
<th>Seldom</th>
<th>Remote</th>
<th>Improbable</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 days</td>
<td>6 months</td>
<td>1 year</td>
<td>5 years</td>
<td>&gt; 5 years</td>
</tr>
<tr>
<td>P5</td>
<td>P4</td>
<td>P3</td>
<td>P2</td>
<td>P1</td>
</tr>
</tbody>
</table>

Worst-case consequences (SASI Risk Matrix)

<table>
<thead>
<tr>
<th>Catastrophic</th>
<th>Critical</th>
<th>Concerning</th>
<th>Minor</th>
<th>Negligible</th>
</tr>
</thead>
<tbody>
<tr>
<td>S5</td>
<td>S4</td>
<td>S3</td>
<td>S2</td>
<td>S1</td>
</tr>
</tbody>
</table>

Risk Determination Matrix: ________________________________

Assessed Safety Risk: High—Serious—Moderate—Minor—Low

Suggested Action:
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________

Actions taken regarding the incident or hazard:
________________________________________________________________________________________
________________________________________________________________________________________
________________________________________________________________________________________
________________________________________________________________________________________
________________________________________________________________________________________
________________________________________________________________________________________
________________________________________________________________________________________
________________________________________________________________________________________

Responsibility for action (who): __________________________________________________________

Signature: __________________________________ Date: ________________________

---

Safety Committee review:
Signed: ________________________________ Date: _____________________
Southeastern Aviation
Emergency Response Plan

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</tr>
<tr>
<td>Line Crew Contact Information</td>
<td>5</td>
</tr>
<tr>
<td>Response Information</td>
<td>5</td>
</tr>
<tr>
<td>Response Plans</td>
<td>5</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>5</td>
</tr>
<tr>
<td>Sub-Level 1</td>
<td>5</td>
</tr>
<tr>
<td>Level 1</td>
<td>6</td>
</tr>
<tr>
<td>Level 2</td>
<td>6</td>
</tr>
<tr>
<td>Level 3</td>
<td>6</td>
</tr>
<tr>
<td>Runway Closure Checklist</td>
<td>6</td>
</tr>
</tbody>
</table>
The purpose of this plan is to outline the necessary actions that need to take place to ensure that an emergency or simple incident at Durant’s Eaker Field (KDUU) is handled by Southeastern Aviation personnel appropriately. Southeastern Aviation is a tenant on Durant Eaker Field and will provide assistance as necessary to the airport manager or whoever is serving as the Airport Emergency Coordinator.

All Southeastern Aviation personnel include faculty, maintenance personnel, line crew personnel, flight instructors, students, and staff.
<table>
<thead>
<tr>
<th>Position or Description</th>
<th>Responsibilities for Airport Emergency</th>
</tr>
</thead>
</table>
| Dewayne Williams Airport Manager     | • Serve as Emergency Coordinator.*  
• Assume Incident Command responsibility for all response and recovery operations, as appropriate.  
• Establish, promulgate, coordinate, maintain, and implement the Airport Emergency Plan (AEP).  
• Contact 911 and provide appropriate alerts and notifications.  
• Coordinate the closing of the airport when necessary and initiate the dissemination of relevant safety-related information to aviation users (NOTAMs). |
| Air Carrier/Aircraft Operator        | • Provide full details of aircraft-related information, as appropriate, to include number of persons, fuel, and dangerous goods on board.  
• Coordinate transportation, accommodations, and other arrangements for uninjured passengers.  
• Coordinate use of air carrier/aircraft personnel and other supplies and equipment for all types of emergencies occurring at the airport. |
| James Dunegan, City Manager          | Provide access to city resources.                                                                                                                                                                                                         |
| Roger Joines, Chief Durant Fire Department | • Manage and direct firefighting and rescue operations.  
• Direct search and rescue or hazardous materials response.  
• Coordinate mutual aid resources through Incident Command System.  
• Assist with search and rescue or evacuations.  
• Assume Incident Command as appropriate. |
| Durward Cook, Chief Durant Police Department | • Manage and direct police operations.  
• Assist with traffic control and scene security.  
• Assist with search and rescue or evacuations.  
• Respond as needed for activities involving crowds or assemblies of people.  
• Respond to bomb threats or acts of terrorism.  
• Assume Incident Command as appropriate. |
<table>
<thead>
<tr>
<th>Name</th>
<th>Responsibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>James Dalton Emergency</td>
<td>● Assist airport with obtaining all resources offered by the state or federal</td>
</tr>
<tr>
<td>Management Director</td>
<td>governments.</td>
</tr>
<tr>
<td></td>
<td>● Assist the county in obtaining any state or federal government resources that</td>
</tr>
<tr>
<td></td>
<td>may be needed as a result of an emergency situation.</td>
</tr>
<tr>
<td>Joe Barrett</td>
<td>● Provide emergency medical services to the airport during emergency conditions</td>
</tr>
<tr>
<td>Brian Norton</td>
<td>to include triage, stabilization, first aid, medical care, and transportation</td>
</tr>
<tr>
<td>Bryan County EMS</td>
<td>of the injured.</td>
</tr>
<tr>
<td></td>
<td>● Coordinate planning, response, and recovery efforts with hospitals, fire and</td>
</tr>
<tr>
<td></td>
<td>police departments, airport operator, etc.</td>
</tr>
<tr>
<td></td>
<td>● Coordinate the hospital disaster plan with the airport and community Emergency</td>
</tr>
<tr>
<td></td>
<td>Operations Plan (EOP).</td>
</tr>
<tr>
<td>Tenants and FBOs</td>
<td>● Coordinate the use of their available equipment and supplies.</td>
</tr>
<tr>
<td></td>
<td>● Coordinate the use of their workers. The tenants usually have information</td>
</tr>
<tr>
<td></td>
<td>about the airport, aircraft, and other technical knowledge.</td>
</tr>
<tr>
<td>Durant Public Works</td>
<td>● Coordinate use of resources for debris removal or building maintenance.</td>
</tr>
<tr>
<td>Department</td>
<td>● Coordinate restoration of utilities.</td>
</tr>
<tr>
<td></td>
<td>● Provide equipment for emergency response and recovery.</td>
</tr>
</tbody>
</table>
# Southeastern Emergency Response Team

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Contact Information</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>George Jacox</em></td>
<td>Department Chair - Flight</td>
<td>Work: (580) 745-3245 Cell: (580) 931-6456</td>
</tr>
<tr>
<td><em>Kyle Thomas</em></td>
<td>Chief Flight Instructor</td>
<td>Work: (580) 745-3246 Cell: (580) 916-5755</td>
</tr>
<tr>
<td><em>Susan Dilbeck</em></td>
<td>Staff Assistant</td>
<td>Work: (580) 745-3252</td>
</tr>
<tr>
<td><em>John Van Bebber</em></td>
<td>Safety Manager</td>
<td>Work: (580) 745-3242 Cell: (903) 815-1068</td>
</tr>
<tr>
<td>Stan Alluisi</td>
<td>Department Chair</td>
<td>Work: (580) 745-3241 Cell: (580) 230-9422</td>
</tr>
<tr>
<td>Line Crew/ Dispatch Desk</td>
<td></td>
<td>(580) 745-3271</td>
</tr>
<tr>
<td>Dewayne Williams</td>
<td>Airport Manager</td>
<td>Cell: 580-230-1188</td>
</tr>
</tbody>
</table>

*indicates that person is a member of the Aviation Sciences Institute’s Emergency Response Team (ASI’s ERT).

## Dispatch Employee Phone Numbers

<table>
<thead>
<tr>
<th>Dispatch Desk</th>
<th>Phone Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dispatch Desk</td>
<td>(280) 745-3271</td>
</tr>
</tbody>
</table>
Definitions:

**Accident:** Any occurrence associated with the operation of an aircraft that results in serious injury, death, or aircraft substantial damage.

**Incident:** Any occurrence associated with the operation of an aircraft that is not considered an “aircraft accident”.

**Vicinity:** An area extending no further than a 2-mile radius surrounding airport property.

Response Plans

- **Response Information**
  - Type of aircraft
  - N-Number/aircraft registration number
  - Souls on Board
    - If pilot student or flight instructor, include their names
  - Type and estimated amount of fuel
  - Current location of aircraft involved

Southeastern Miscellaneous Mishaps

- Any mishap or injury related to Southeastern aircraft or other vehicles.
  - Towing aircraft
  - Fueling Aircraft
  - Ground operation
  - Any work related injury or mishap
  - If there is a miscellaneous mishap, contact the chief flight instructor of SASI’s ERT.

**Southeastern Level 1**:

Aircraft has a mishap (runs off taxiway/blows tire) and shuts engine down anywhere other than SOSUs ramp area.

- If a Level 1 incident occurs, contact the member on the Emergency Response Team for further instructions. Consider notification of airport manager if mishap might interfere with runway takeoff and landing operations.

- Gather response information listed above.

**KDUA Accidents and Incidents**

**Level 1**: The possibility of an accident occurring in the near future. For example, an aircraft is experiencing landing gear malfunctions, or there is a situation occurring that may lead to an aircraft incident or accident. This would also include situations where uncertainty if an accident or incident had occurred.

If a Level 1 response is required:

1. Contact member of ERT
2. Gather Response Information
3. Create a list of other aircraft currently flying
4. Standby near phone for further instructions
5. Upon becoming informed of the situation, the ERT will convene at the dispatch counter and determine necessary action considering the following:
   - Are there other aircraft flying?
   - If an accident/incident occurs, how will it affect the other aircraft flying?
Level 2: An aircraft is known or suspected to have an operational defect that affects normal flight characteristics to the extent that there is danger of an accident.

If a Level 2 response is required:
1. Call Airport Manager to inform him/her of situation, if no answer then...
2. Dial 9-1-1 from mobile phone only, not from campus phone/ give information as requested
3. Contact Member of ERT
4. Gather Response Information
5. Create a list of other aircraft currently flying
6. Standby near phone for further instructions
7. Upon becoming informed of the situation, the ERT will convene at the dispatch counter and determine necessary action considering the following:
   • Are there other aircraft flying?
   • If an accident/incident occurs, how will it affect the other aircraft flying?

Level 3: An aircraft accident has occurred in the vicinity of the airport.

If a Level 3 response is required:
1. Call Airport Manager to inform him/her of situation
2. Dial 9-1-1 from mobile phone only, not from campus phone/ give information as requested
3. Contact member of ASI’s ERT
4. Gather Response Information
5. Create a list of aircraft currently flying
6. Standby near phone for further instructions
7. Upon becoming informed of the situation, the ERT will convene at the dispatch counter and determine necessary action considering the following:
   • Are there other aircraft flying?
   • If an accident/incident occurs, how will it affect the other aircraft flying?
   • If the runway closes, where will the aircraft flying go?
   • Do we need to inform Southeastern Safety Manager of this accident?

Runway Closure Checklist
1. Call the chief flight instructor and get further instructions.
2. If no answer, call the next member of ASI’s ERT.
<table>
<thead>
<tr>
<th>Revision</th>
<th>Description of Change</th>
<th>Revision Effective Date</th>
<th>Revision Inserted By</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Original issue</td>
<td>11-1-10</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Report Forms p.33-34</td>
<td>2-8-11</td>
<td>JVB</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
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<tr>
<td>22</td>
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</tbody>
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1.0—INTRODUCTION

1.1—BACKGROUND
Southeastern Aviation Sciences Institute (SASI) Safety Management System has been developed from guidance contained in ICAO Document 9859: Safety Management Manual, Transport Canada Advisory Circular AC 107-001: Guidance on Safety Management Systems Development, and FAA’s Safety Management System Framework Guide and SMS Assurance Guide (revisions dated July 15, 2009). Much of SASI’s SMS Manual has used the SMS Toolkit authored by the International Helicopter Safety Team (2009). We acknowledge and thank the International Helicopter Safety Team (http://www.ihst.org/) for their permission to use and copy their SMS Toolkit into Southeastern’s SMS.

1.2—SMS MANUAL AND SUPPORTING PROGRAMS
This Safety Management System (SMS) Manual has been developed to direct all personnel in the safe operations of Southeastern Aviation Sciences Institute (SASI), and this manual is the policy that governs the operation of this organization. SMS is a proactive, integrated approach to safety management and is part of an overall management process that SASI has adopted in order to ensure that the goals of this organization can be accomplished.

SMS embraces the principle that the identification and management of risk increases the likelihood of accomplishing the mission. Hazards can be identified and dealt with systematically through the Hazard Reporting Program that facilitates continuous improvement and professionalism. Auditing and monitoring processes ensure that aircraft and flight training operations are accomplished in such a way as to minimize the risks inherent in FAR Part 141 flight training.

This SMS Manual sets forth instructions and guidance to all SASI personnel regarding their responsibilities, authorities, and performance of duties as they pertain to SASI’s Safety Management System.

1.3—SAFETY MANAGEMENT PLAN
Safety is the state in which the risk of harm to people or damage to property is reduced to, and maintained at or below, an acceptable level through a continuing process of hazard identification and risk management. Safety management holds the key to SASI’s objectives and affects every process within the organization. Safety management includes all areas of safety, security, health, and environmental management.

The primary purpose of this manual is to develop a system at SASI for managing our flight training processes and ensure compliance with all guidelines published by FAA, ICAO, OSHA, UAA, and AABI. This SMS Manual identifies the organization’s Safety Management Plan as the tool used to define how the SMS supports the SASI’s flight training, aircraft maintenance, and Durant Eaker Field operations. University management is committed to the SMS; and, has established leadership for the program and will continue to demonstrate, through everyday actions, the commitment to safety and its priority in the achievements of the organization.

The processes in place in the Safety Management Plan include the active involvement of all Southeastern Aviation faculty, maintenance employees, staff, flight instructors, and students, who, through planning and review, will drive efforts for continuing improvement in safety and safety performance. The key focus is the safe operations of airworthy aircraft and a safe training environment.

Safety audits are essential components of the Safety Management Plan. Audits review systems, identify safety issues, prioritize safety issues, and involve all university personnel and students to enhance the safety of operations.
1.4—SCOPE OF SAFETY MANAGEMENT

SASI has developed an integrated Safety Management System for its entire organization. The SMS provides the highest reasonable level of safety by identifying and minimizing risks, which could contribute to accidents, incidents, or injury to persons. SASI provides both safety and quality management covering the complete scope and life cycle of all systems and operational processes, including:

- Flight Training Operations;
- Operational Control (Dispatch / Flight Following);
- Maintenance and Inspection; including:
  - Parts / materials
  - Technical data
  - Quality control
  - Records management
  - Contract maintenance
- Security;
- Aircraft ground handling and servicing;
- Training of all personnel.

1.5—OVERVIEW OF SMS FRAMEWORK

As described in FAA AC 120-92 and the ICAO Safety Management Manual (SMM) (Document 9859), SMS processes are organized into four basic components of safety management: safety policy, safety risk management, safety assurance, and safety promotion.

Safety policy must be described with who in the organization has responsibility, authority, and accountability for the goals of the organization. The policies, procedures, and structure of the organization must be described along with the fundamental value of safety within the organization.

Safety Risk Management is the process of hazard identification and management of risk to acceptable levels. This systematic process describes how to identify hazards, how to assess the risks, and then the procedures to control the risks.

Safety Assurance processes ensure that once risk controls are in place, the organization continues to review the safety initiatives to make sure that risks are maintained within acceptable levels as defined by the organizations safety policies and goals.

Safety Promotion is the ongoing process to promote safety within the organization. Senior leadership must continuously promote the growth of a positive safety culture within the organization. Key components are training personnel and clear communication of lessons learned throughout the organization.
2.0—SAFETY POLICY

2.1—OVERVIEW

All faculty, staff, maintenance personnel, flight instructors, and students are accountable for Southeastern Aviation Sciences safety performance. In addition, all are committed to operating in safe, healthy, secure working conditions and promoting safety attitudes with the objective of having an accident-free workplace.

Southeastern’s Director of Aviation Sciences Institute is committed to making safety excellence a part of all activities in the Aviation Department as described in the safety policy statement below.

2.2—SAFETY POLICY

Safety is one of our core university aviation functions. We are committed to developing, implementing, maintaining, and constantly improving strategies and processes to ensure that all our aviation activities take place under a balanced allocation of university resources. We shall strive to achieve the highest level of safety performance and exceed FAA standards, while training our university aviation students.

All levels of faculty, employees, and aviation students are accountable for the highest level of safety performance, starting with the Director of SASI.

Our commitment is to:

- Support the management of safety through the provision of all appropriate resources, that will result in an organizational culture that fosters safe practices, encourages effective safety reporting and communication, and actively manages safety with the same attention to results as the attention to the results of the other management systems of the organization;
- Clearly define accountabilities and responsibilities for all faculty, flight instructors, aviation students, and employees, to maximize the organization’s safety performance;
- Establish and operate hazard identification and risk management processes, including a hazard reporting system, in order to eliminate or mitigate the safety risks of the consequences of hazards resulting from our operations or activities to a point which is as low as reasonably practicable (ALARP);
- Ensure that no action will be taken against any student, flight instructor, or employee who discloses a safety concern through the hazard reporting system, unless such disclosure indicates, beyond any reasonable doubt, an illegal act, gross negligence, or a deliberate or willful disregard of regulations or procedures;
- Comply with and, wherever possible, exceed, regulatory requirements and standards;
- Ensure that all employees and staff are provided with adequate and appropriate aviation safety information and training, are competent in safety matters, and are allocated only tasks commensurate with their skills;
- Establish and measure our safety performance against realistic safety performance indicators and safety performance targets;
- Continually improve our safety performance through management processes that ensure relevant safety action is taken and is effective.

David Conway
Director of Southeastern Aviation Sciences Institute
2.3—SOUTHEASTERN AVIATION SAFETY PERSONNEL

The Director of SASI is ultimately responsible for the following safety accountabilities:

- Provide the necessary resources to implement and maintain the SMS.
- Conduct of all operations in the safest manner practicable
- Development of long-term safety objectives, including the establishment of safety policies and practices.
- Implementation of management systems that will establish and maintain safe work practices.
- Identification of a Safety Manager to provide oversight of policies and procedures.

The Safety Manager is responsible for the following:

- Maintaining and reporting all safety related data, including the minutes of safety meetings.
- Providing information on hazard and risk analysis.
- Defining and establishing a procedure for risk management.
- Conducting incident and accident investigations.
- Preparing and presenting audit reports and remedial actions.

The Manager of Flight Operations is responsible for the following safety accountabilities:

- Ensuring all flight operations personnel understand and comply with applicable regulatory requirements, standards, and the organization’s safety policies and procedures.
- Identification and development of resources to achieve safe flight operations.
- Observing and controlling safety systems by monitoring and supervising flight instructors and pilot students.
- Measuring performance compliance of flight instructors and pilot students with SASI’s goals, objectives, and regulatory requirements.
- Reviewing standards and the practices of SASI personnel as they affect flight safety.

The Manager of Maintenance is responsible for:

- Ensuring all maintenance personnel understand applicable regulatory requirements, standards, and SASI safety policies and procedures.
- Identification and development of resources to achieve safe maintenance operations.
- Observing and controlling safety systems by monitoring and supervising maintenance personnel.
- Measuring maintenance personnel performance compliance with SASI’s goals, objectives, and regulatory requirements.
- Reviewing standards and the practices of maintenance personnel as they affect flight safety.

2.4—COMPLIANCE WITH STANDARDS AND LEGAL REQUIREMENTS

All personnel have the duty to comply with approved standards including SASI policy and procedures, aircraft manufacturer’s operating procedures and limitations, and government regulations. Research shows that once you start deviating from the rules, you are almost twice as likely to commit an error with serious consequences. Breaking the rules usually does not result in an accident; however, it always results in greater risk for the operation, and the organization supports the principle of, “NEVER take unnecessary risks.”

Behavior of intentional non-compliance with standards is a function of consequences. SASI management is committed to identifying deviations from standards and taking immediate corrective action. Corrective action can include counseling, training, discipline, grounding, or removal. Corrective action must be consistent and fair.
SASI management makes a clear distinction between honest mistakes and intentional non-compliance with standards. Honest mistakes occur, and they are addressed through counseling and training.

Research has shown that most accidents involve some form of flawed decision-making. This most often involves non-compliance with known standards. Non-compliance rarely results in an accident; however, it always results in greater risk for the operation. SASI policy agrees with the following conclusions:

- Compliance with known procedures produces known outcomes.
- Compliance with standards helps guarantee repeatable results.
- Bad rules produce bad results.
- Complacency affects the safe operation of the aircraft and cannot be tolerated.
- Standards are mechanisms for change.
- The hardest thing to do and the right thing to do are often the same thing.

This organization is committed to the principle that people are rewarded for normal, positive performance of their duties that comply with organization standards. Personnel will not be rewarded for accomplishing the mission by breaking the rules. Reinforced bad behavior breeds continued bad behavior. This is unacceptable.

2.5—EMERGENCY PREPAREDNESS AND RESPONSE

The SASI Safety Committee identifies the potential for accidents and incidents through proactive analysis programs. The Safety Committee will respond to accidents and incidents at all times.

The Safety Committee is responsible for SASI emergency response and planning. The Emergency Planning and Response Manual (ERPM) will govern all actions to be taken in the event of an aircraft accident, incident, or natural disaster.

The Safety Manager is responsible for assuring that all personnel are trained to handle SASI emergencies based on their role in the organization. Emergency drills are conducted at least annually to ensure employees are competent. Emergency contact numbers are posted and kept current at every telephone.

2.6—DOCUMENTATION AND RECORDS

All safety documents are controlled by the Safety Manager and SASI Safety Committee. This includes the SMS documents, hazard and safety reports, and training records. Change control procedures are incorporated into each of these documents.

The Safety Manager is responsible for maintaining and reporting safety related data, including the minutes of safety meetings, information on hazard and risk analysis, risk management, remedial action, incident and accident investigations, and audit reports.
3.0—SAFETY RISK MANAGEMENT

Figure 1
Safety Risk Management and Safety Assurance Processes
Source: FAA AC 120-92
3.1—HAZARD IDENTIFICATION AND ANALYSIS

The systematic identification and control of all major hazards is the fundamental process in this SMS. The success of the organization depends on the effectiveness managing hazards and risk. Hazards are primarily identified through employee/student reporting, safety meetings, audits, and inspections.

When a major change in operations, equipment, or pilot certification is anticipated, the management of change process includes hazard identification and risk management processes. Risk management is the identification and control of risk. See Figure 2 as it depicts the process. It is the responsibility of every member of SASI. The first goal of risk management is to avoid the hazard. SASI has established sufficient independent and effective barriers, controls and recovery measures to manage the risk posed by hazards to a level as low as practicable. These barriers, controls, and recovery measures include equipment, work processes, standard operating procedures, training, and other similar means to prevent the hazard development and limit their consequences should they occur.

SASI ensures that all individuals responsible for safety critical barriers, controls, and recovery measures are aware of their responsibilities and competent to act accordingly. The organization establishes who is doing what to manage key risks and ensures that these people, and their actions, are up to the task.

The Director of SASI is responsible for accepting or denying operations and manages risk through the Safety Committee using the Risk Assessment Matrix (see Tables 1 thru 4). The matrix is a graphic portrayal of risk as the product of probability on one axis (exposure, frequency, or likelihood) and Severity (potential consequence or loss from the outcome) on the other axis.
The Risk Assessment Matrix shows an assigned value and has a broad application for qualitative risk determination, as well as graphically presenting risk criteria. The data from the risk assessment(s) is entered into the risk assessment form and is maintained by the safety manager. These risk assessment forms make up the list of hazards for the organization.

### TABLE #1 – SEVERITY Scale Definitions (WHAT could happen) (source: ATC Advantage.com)

<table>
<thead>
<tr>
<th>CONSEQUENCE</th>
<th>S5 = CATASTROPHIC</th>
<th>S4 = CRITICAL</th>
<th>S3 = CONCERNING</th>
<th>S2 = MINOR</th>
<th>S1 = NEGLIGIBLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCIDENT</td>
<td>Irreparable loss of aircraft or other key equipment or facility</td>
<td>Significant damage - Multiple weeks out of service to repair</td>
<td>Moderate damage - multiple days out of service to repair</td>
<td>Minor damage - repaired and back in service within 24 hours</td>
<td>Damage is within limits or requires less than two hours to repair and return to service</td>
</tr>
<tr>
<td>INJURY</td>
<td>Death or total disability of an employee or passenger</td>
<td>Partial disability greater than 3 months of an employee or passenger</td>
<td>Lost workday injury over 3 days for an employee or comparable to passenger</td>
<td>OSHA defined injury of up to 3 LWDS for an employee or similar passenger injury</td>
<td>Any non-OSHA injury (no treatment needed to employee or passenger)</td>
</tr>
<tr>
<td>OPERATIONAL</td>
<td>Operating an aircraft in an unairworthy and/or unsafe condition</td>
<td>Operating an aircraft in an unairworthy but not unsafe condition</td>
<td>Operating an aircraft in an uncertain, but ultimately safe, condition</td>
<td>Stopping aircraft from operating after mistakenly releasing to service</td>
<td>Affecting aircraft reliability, but not affecting airworthiness or safety of operation</td>
</tr>
<tr>
<td>SYSTEMS</td>
<td>Complete loss or breakdown of entire system or sub-systems</td>
<td>Significant breakdown of a system or sub-system</td>
<td>Partial breakdown of system or sub-system</td>
<td>System deficiencies having some effect on time achievement of objectives</td>
<td>Little or no effect on system or sub-system</td>
</tr>
<tr>
<td>FINANCIAL</td>
<td>Fine, citation or other loss more than $1,000,000</td>
<td>Fine, citation or other loss more than $200,000 but less than $1,000,000</td>
<td>Fine, citation or other loss more than $50,000 but less than $200,000</td>
<td>Fine, citation or other loss more than $5,000 but less than $50,000</td>
<td>Fine, citation or other loss less than $5,000</td>
</tr>
</tbody>
</table>

### TABLE #2– PROBABILITY Scale Definitions (WHEN it could happen) (source: ATC Advantage.com)

| P5 | FREQUENT = Likely to occur within 30 days. Will be continually experienced unless action is taken |
| P4 | OCCASIONAL = Estimated to occur within 6 months. Will occur often, if unchanged |
| P3 | SELDOM = Estimated to occur within one year. Infrequent occurrence |
| P2 | REMOTE = Estimated it might occur within 5 years. Possible, but remote change of occurrence. |
| P1 | IMPROBABLE = Unlikely to occur. Any estimate of occurrence is over 5 years. |
### TABLE #3 – Risk Determination Matrix (source: ATC Advantage.com)

<table>
<thead>
<tr>
<th>VALUES:</th>
<th>S5</th>
<th>S4</th>
<th>S3</th>
<th>S2</th>
<th>S1</th>
</tr>
</thead>
<tbody>
<tr>
<td>P5</td>
<td>25</td>
<td>23</td>
<td>21</td>
<td>18</td>
<td>7</td>
</tr>
<tr>
<td>P4</td>
<td>24</td>
<td>22</td>
<td>19</td>
<td>15</td>
<td>5</td>
</tr>
<tr>
<td>P3</td>
<td>20</td>
<td>17</td>
<td>16</td>
<td>13</td>
<td>4</td>
</tr>
<tr>
<td>P2</td>
<td>14</td>
<td>12</td>
<td>10</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>P1</td>
<td>11</td>
<td>9</td>
<td>6</td>
<td>3</td>
<td>1</td>
</tr>
</tbody>
</table>

### TABLE #4 – Assessed Safety Risk Condition (source: ATC Advantage.com)

| RED 23-25 | HIGH RISK – IMMINENT DANGER. Unacceptable. Requires the highest priority for investigation, resources, and quick corrective action to reduce the risk of the hazard in question to a lower, acceptable level. |
| ORANGE 18-22 | SERIOUS RISK – Unacceptable. Requires investigation, resources, and timely corrective action to reduce the risk level. There apparently are no acceptable controls, policies, or procedures currently in place to adequately manage or mitigate this risk. |
| YELLOW 12-17 | MODERATE RISK – May be acceptable with review by appropriate authority. Requires tracking and probable action. There may be acceptable policies and procedures in place, but improvement is needed. |
| BLUE 6-11 | MINOR RISK – May be acceptable with review by appropriate authority. Requires tracking and possible action. There are acceptable policies and procedures in place, but improvement is possible. |
| GREEN 1-5 | LOW RISK – May be acceptable without further action. |

### 3.2—RISK ASSESSMENT AND CONTROL

#### 3.2.1—Hazard and Incident Reporting System

**Policy**

Effective implementation of Southeastern Aviation Policy is contingent upon a working system to prevent accidents. Essential to this objective is a program to identify and eliminate or mitigate workplace hazards and to prevent the occurrence of unsafe incidents. Under normal circumstances, hazards should be reported and corrected at the lowest operational level utilizing established lines of authority and responsibility. For other situations, the Hazard and Incident Reporting System provides a means for affected personnel to report recognized safety hazards or reportable incidents to faculty management for appropriate action.

**Non-Reprisal Policy**

The following statement provides guidance for all employees and students regarding the use of, participation in, and party to SASI’s Hazard and Incident Reporting System.
The Southeastern Aviation Sciences Institute is committed to the safest operation possible. Therefore, it is imperative we promote uninhibited reporting of all hazards, occurrences, and incidents that in any way affect the safety of our operations, employees, students, facilities, or visitors.

It is therefore, the policy of SASI to recognize the efforts of individuals who identify and communicate unsafe acts and conditions for the purpose of promoting safety. It is also the responsibility of each employee or student to communicate any information that could possibly affect the integrity of flight and ground safety. All communications made by employees or students following the SMS reporting process shall be made with the assurance that no retaliation/reprisal shall occur to the employee or student for submitting any information via the Hazard and Incident Reporting System. The identity of employees and students who provide information through this system shall be protected to the extent permissible by law while disseminating critical flight and ground safety information.

This non-reprisal policy shall not apply to information concerning accidents and criminal offenses, or to information provided to SASI by a source other than the employee or student.

System Description
Any individual involved directly or indirectly in the flight and maintenance activities of SASI (i.e., employees, part-time/contract personnel, and aviation students) must report any observed hazard. If a hazard is recognized and unable to be resolved via normal procedures, the observer shall complete a Hazard/Incident Report and submit it to the Safety Manager.

The following provides a guideline for the purpose of determining whether a situation warrants the submission of a Hazard/Incident Report. This description is not all-inclusive and the originator should exercise sound judgment and discretion when determining if a report should be submitted. A Hazard and Incident Report shall be submitted when any situation, practice, procedure, or process is observed which is either: a) a recognized safety concern, b) considered unusual from an operational or procedural standpoint, or c) considered deficient from a safety standpoint. Any safety concern that would be of interest to other aviation students, instructors, or faculty should be reported. A report shall also be submitted in the event of any incident detailed in the Incident Reporting Criteria found in this document.

Incident reports should be submitted using the Hazard and Incident Report form. The submitter's identification on the report is optional but is encouraged in the event that further information is required for elimination of the hazard. Reports should be concise and should accurately describe the hazard. When applicable, reports should include the submitter's recommendation(s) for corrective action. In circumstances where the perceived hazard possesses the immediate potential for injury/illness to persons or damage/loss of property, the Safety Manager, Chief Pilot, or Manager of Flight Operations shall be notified immediately by the most expeditious means possible to determine the appropriate action to prevent such injury, illness, damage, or property loss.

Hazard and Incident Report Processing
Upon receipt of a Hazard/Incident Report, the Safety Manager will conduct an investigation to determine the validity of the report as well as to gain additional information concerning the report's subject matter. Any hazardous situations or equipment shall be either placarded or removed from service until the hazardous situation is corrected. The submitter, if identified, will be advised of the result of the investigation. If a Hazard/Incident Report identifies a problem that is outside the scope or authority of the Safety Program, the originator will be offered assistance in routing the information to the appropriate person responsible.

Upon validation of a Hazard/Incident Report, the Safety Manager shall identify and notify the individual(s) assigned responsibility for the affected area of operation. The contents of the Hazard/Incident Report and the investigation results will be provided along with recommendations for corrective/preventive action to the Safety Committee. Appropriate action and a target date for elimination or reduction of the hazardous situation will then be determined. Final corrective action
shall be documented on the Hazard/Incident Report form and the completed form returned to the Safety Manager. The Hazard/Incident Report originator will then be notified of the final disposition of the matter.

3.2.2—Occurrences and Hazards

An occurrence is defined as any unplanned safety related event. This event would cause a concern for the safety of students, faculty, flight instructors, employees, equipment, property, or the environment.

A hazard is defined as something that has the potential to cause harm to people and/or the loss of or damage to equipment, property or the environment.

It is the responsibility of the Manager Flight Operations to ensure all relevant comments and agreed actions from other managers are recorded in the Hazard/Incident report. Reports are closed when all actions have been taken. Occurrences shall be reviewed in the quarterly safety meeting.

Personnel who report are treated fairly and justly, without punitive action from Southeastern Faculty except in the case of known reckless disregard for regulations and standards, or repeated substandard performance. The “Just Culture” process shown on the next page is used when deciding if disciplinary action is appropriate.

Significant occurrences are investigated by the safety manager or his designee and shall be reviewed by the Chief Pilot and Flight Department Chair. The Safety Manager reviews the database for previous occurrences in order to identify trends.
4.0—SAFETY ASSURANCE

4.1—OVERVIEW
Safety assurance provides all stakeholders and indication of the performance of the safety system in place. Assurance is “something that gives confidence.” After the controls for risk are made part of the safety system, safety assurance takes over to see that they work as intended.

SASI will conduct safety audits and inspections as part of the safety assurance process. The safety manager directs annual audits of the SMS. Findings and associated corrective actions shall be recorded in the audit. Records of audits and inspections, and the resolution of actions needed, are maintained by the safety manager. Issues identified in the audits and inspections are included in the agenda of the Safety Meeting. Positive findings are also recorded. Findings and recommended actions are communicated to all personnel in a timely manner.

4.2—AUDITS AND INSPECTIONS
The use of audit functions to verify compliance and standardization is an integral part of the quality assurance system. An initial audit will cover all activities within the SASI operations. Records of audit findings, including issues of compliance and non-compliance, corrective actions, and follow-up inspections will be kept and maintained by the Safety Manager. The results of audits and inspections will be communicated to all appropriate personnel in Southeastern's Aviation Department.

SASI will perform regularly scheduled internal audits of its operational processes to determine the performance and effectiveness of risk controls. Planning of the evaluation program will take into account:

- safety criticality of the processes being evaluated, and
- the results of previous evaluations.

The Safety Committee will select the evaluators; and document the procedures used, which include the responsibilities and requirements for:

- planning evaluations,
- conducting evaluations,
- reporting results, and
- maintaining records.

SASI’s Manager of Quality Assurance will conduct the safety audits; however, he/she may be assisted by a qualified representative of Southeastern’s Occupational Health and Safety Department. These auditors are experts outside of Southeastern Aviation Operations. In this way, the quality assurance function remains neutral and is independent from the operational aspects of SASI.

4.2.1—Audits Checklist
Audit checklists are used to identify all of the functions controlled by SASI’s policies and procedures manuals. A copy of the Southeastern Aviation Audit Checklist is found in Appendix 3. The audit checklists are based on standard FAA guidelines (SMS Assurance Guide) and the small size of the SASI organization. The quality audit of SASI’s safety management system will include an account of the following areas:

- Safety policy
- Safety standards
- Safety culture
- Structure of safety accountabilities
- Hazard identification
- Risk Management
- Safety assessment, and Safety monitoring
4.2.2—Inspections: Internal Evaluation  
Safety evaluation is fundamental to the safety management process. SASI will conduct internal evaluations of the SMS and operational processes at planned intervals to determine that the SMS conforms to its objectives and expectations. Once each year, SASI’s safety manager will conduct an internal evaluation of the organization’s existing operations, operational changes, and future safety management planning. The operational areas to be evaluated are:

- flight training operations;
- operational control (dispatch / flight following);
- maintenance and Inspection; including:
  - Parts / materials
  - Technical data
  - Quality control
  - Records management
  - Contract maintenance
- security;
- aircraft ground handling and servicing;
- training of all personnel.

SASI will:

- periodically measure performance objectives and design expectations of the Internal Evaluation Process;
- ensure that procedures are followed for safety-related operations and activities; and
- periodically review supervisory and operational controls to ensure the effectiveness of the Internal Evaluation Process.

Safety evaluation is fundamental to the safety management process. Once each year, SASI’s safety management policies and procedures require an internal evaluation of the organization’s existing operations, operational changes, and future safety management planning.

4.3—INVESTIGATIONS

4.3.1—Incidents and Accidents  
Safety related events, including accidents and incidents, will be investigated to collect information to help prevent similar events. An initial risk assessment assists in determining the extent of the full investigation. The investigation and analysis will include the following:

- determination of “what” and “why” the event happened, rather than, “who’s” to blame;
- ensure that the FAA or the NTSB are appropriately notified;
- immediate causal and contributing factors;
- organizational factors that may contribute to the hazard or incident;
- the unsafe acts of the operators; and
- a report to the Safety Committee, which will implement recommendations.

4.4—SAFETY PERFORMANCE MONITORING AND MEASUREMENT

4.4.1—Management of Change  
Hazards may be inadvertently introduced anytime the operation changes externally or internally. Examples of external change may be due to regulatory requirements, air traffic control, security requirements, or airport issues. Safety management requires a proactive analysis of the change using the Management of Change (MOC) process.

The systematic approach to managing and monitoring organizational change is part of the risk management process. The SASI Safety Committee will indentify safety issues associated with change and utilize the following procedures for managing change:
• Identify new hazards and analyze the risk
• Identify the goals, objectives, and nature of the proposed change
• Identify operational procedures that must change
• Analyze changes in location, equipment, or operating conditions
• Insert the current changes to appropriate Southeastern Aviation manuals
• Communicate to all personnel an understanding of the changes
• Review, evaluate, and record potential safety hazards from the change or its implementation
• Obtain the Director's approval of the agreed change and implement the new procedure(s)

There are methods for managing the introduction of new technology. All personnel should be consulted when changes to the work environment, process, or practices could have health or safety implications. Changes to resource levels and competency of personnel are assessed as part of the change control procedure.

Change can only be successful if the appropriate personnel participate in the process. Management of change provides a structured framework for managing all aspects of the change.

4.4.2—Continuous Improvement

Safety risk management requires continual feedback to assure all stakeholders that the level of risk is indeed “as low as reasonably practical” and the Safety Management System performance is accomplishing the desired goals.

SASI’s Safety Committee will conduct an annual internal audit of the SMS process to:
• Assess compliance with safety risk controls
• Measure the effectiveness of safety risk controls
• Assess overall system performance
• Identify all new hazards for the year

After analyzing the data, corrective actions, hazard/incident reports, and all safety related processes, the Safety Committee will publish the lessons learned and best practices to all employees, staff, faculty, and flight instructors. There is no way to measure and determine the organization’s improvement of the safety management process without all personnel contributing and reporting below standard performance, as well as the best practices achieving outstanding performance.
5.0—SAFETY PROMOTION

5.1—INTRODUCTION
Safety promotion includes training, education, and safety communication. Training and education at SASI includes:
- documented process of training requirements;
- validation test to measure the effectiveness of training;
- general training to operate within Southeastern Aviation SMS; and
- recurrent safety training on system changes for the past year.

5.2—SAFETY TRAINING
System safety training is one of the key elements within a Safety Management System. To conduct a successful program participants should be trained in appropriate concepts, duties, and responsibilities associated with each area of activity within SASI’s operation.
Specific training in safety management duties is required for faculty, Safety Committee members, inspectors, maintenance personnel, aviation students, and flight instructors. The amount of safety training will be appropriate to the individual’s responsibility and involvement in the SMS. Required training is also used as an administrative control to eliminate or mitigate risk to an acceptable level.

5.3—SAFETY COMMUNICATION
SMS objectives and procedures will be communicated to all aviation personnel and be visible in all aspects of SASI’s operations. The Safety Manager and Safety Committee will work together to communicate the performance of the SMS programs to all aviation personnel. All personnel are encouraged to keep the flow of safety issues to the Safety Committee a top priority at all times. Therefore, SASI’s safety communication will:
- ensure that all personnel are fully aware of SASI’s SMS;
- communicate safety-critical information;
- convey the “nice-to-know” information;
- explain the actions and procedural changes to mitigate or eliminate risk;
- utilize the Blackboard website for all types of safety communication; and
- utilize a safety bulletin board in the dispatch area.
6.0—SAFETY MANAGEMENT PLAN

6.1—GENERAL
The Safety Committee will function as a clearinghouse for all functions of the Southeastern Aviation SMS. Safety policies, procedures, planning, and overall safety performance objectives will be evaluated continuously by the committee. The Safety Manager will then organize the committee’s directions into action.

6.2—SAFETY COMMITTEE

6.2.1—General Overview
The purpose of the safety committee is to promote the safety, health, and welfare of Southeastern’s students, faculty, employees, staff, and airport community. In addition, the committee is to act proactively to:
- ensure the safe operation of equipment and facilities
- ensure compliance with the applicable regulations of local, state, and federal authorities
- enhance and protect university insurance programs

Policy responsibility and authority is mandated by the Director of Southeastern Aviation Sciences Institute. The Safety Committee shall be comprised of one Flight Instructor Safety Representative, one Line Crew Safety Representative, the Director of Maintenance, the Chief Pilot, the Safety Manager, the Manager of Administration, and the Manager of Flight Operations. Two senior aviation students may also serve on the committee. The chairperson of the committee will be the Safety Manager. The committee will be accountable and report all actions to the Director of SASI.

6.2.2—Safety Committee Responsibilities
All Safety Committee members will be trained to function within the Safety Management System by the Safety Manager or the Assistant Safety Manager.

The Safety Committee shall meet on a quarterly basis and the chairperson will establish procedures and agendas each meeting and distribute meeting minutes and action items. All members are asked to bring safety concerns to the attention of the committee and provide feedback to department employees on the results of the meeting.

All members will encourage the prompt and accurate reporting of incidents and safety issues that have surfaced since the last meeting. All members will discuss and recommend solutions to safety issues and/or hazards in the workplace and flight operations. All recommendations will be documented and communicated to all Southeastern Aviation personnel.

Any matter deemed urgent by the Safety Manager or a Safety Committee member shall be brought to the attention of the Director of SASI immediately. The Committee is empowered by the Director to protect Southeastern Aviation, its employees, its students, and university assets immediately.

6.2.2—Documentation and Records Management
The Safety Committee is responsible for all Southeastern aviation safety documentation and records management. The Safety Manager shall record and delegate all actions and deliberations of the Committee (minutes, resolutions, etc.) to ensure its decisions are implemented, as needed. An Action Log will be maintained by the Safety Manager for review at all Safety Committee meetings. The log will document each hazard, incident, accident, and injury report; then, list the actions taken for each safety issue.

The Safety Manager will ensure decisions of the committee are within appropriate guidelines and will ensure follow through on committee action plans. Minutes will be distributed and maintained for all Safety Committee meetings. Records of each meeting shall be maintained for a period of 2 calendar years from the date the record was created. The Safety Manager will publish an annual report of all items brought before the Committee and those with action taken.
6.3—SOUTHEASTERN AVIATION REPORTING SYSTEM

6.3.1—Non-Punitive Reporting Policy

It is recognized that humans will make errors and systems must be developed that are error
tolerant and behaviors changed to lessen the chance of errors occurring. It is not SASI’s goal or
policy to seek out the guilty party in order to administer retribution for the error. The goal is not to
punish, but to ensure it does not happen again. SASI will strive to develop a non-punitive
disciplinary policy as part of its safety management system. Employees and students are more
likely to report events and cooperate in an investigation when some level of immunity from
disciplinary action is offered. When considering the application of our non-punitive disciplinary
policy, SASI will consider whether the occurrence involved willful intent of the individual.

6.3.2—Reporting Responsibilities

All faculty, employees, and students have a responsibility to report what they consider a
hazard or unsafe situation, as well as accidents and incidents. Employee and student input are
essential for the success of the reporting system. A safety reporting system is worthless if no one
uses it.

6.4—HAZARD AND INCIDENT REPORTING CRITERIA

6.4.1—Hazard Reporting Criteria

Hazard Definitions

- Hazard (ICAO): “Condition or an object with the potential to cause injuries to personnel,
damage to equipment or structures, loss of material, or reduction of ability to perform a
prescribed function.” (ICAO, 2009)
- Hazard (FAA): “any existing or potential condition that can lead to injury, illness, or death to
people; damage to or loss of a system, equipment, or property; or damage to the environment.
A hazard is a condition prerequisite to an accident or incident.” (FAA, 2009a)

The scope of hazards is quite large; but some examples, stated in the ICAO Safety
Management Manual (ICAO, 2009), of factors and processes that that should be investigated are:
- design factors of equipment and tasks;
- procedures and operating practices, including documentation, checklists, and their
validation in actual operations;
- communications, including means, terminology, and language;
- personnel factors, such as organizational policies, training, salary, and allocation of
resources;
- work environment factors, such as ambient noise, vibration, temperature, lighting,
and protective equipment and clothing;
- regulatory oversight factors, including the applicability and enforceability of
regulation; the certification of equipment, personnel and procedures; the adequacy of
oversight;
- defenses, including such factors as adequate detection and warning systems, the
error tolerance of equipment, and the failure rates of equipment; and
- human performance, pertaining to medical conditions and physical limitations.

6.4.2—Mandatory Incident Reports

Southeastern Reportable Incidents

1. If evasive action was taken due to loss of aircraft separation and/or possible collision
2. Any instance of inadequate terrain clearance
3. Pilot’s loss of situational awareness resulting in his/her loss of position for more than 30
minutes
4. Failure of navigation or communication systems
5. Electrical failure resulting in a precautionary landing
6. Any physical damage to the aircraft, propeller, university property, or people
7. Any unintentional exit from a paved surface while landing, taking off, or taxiing
8. Critically low fuel quantity or landing with less than the prescribed reserve fuel load
9. Any airframe icing encounter
10. Severe turbulence
11. Any evacuation of an aircraft for emergency purposes
12. Any ditching or controlled landing that is not on an airport runway
13. Any intentional or unintentional violation of SASI’s Standard Operating Procedures
14. Any runway incursion
15. Landing on the wrong runway or at the wrong airport
16. Any departure or excursion from the runway
17. Weather related injury or damage
18. Significant fuel leak
19. Takeoff with a significant weight and balance error
20. Injury to any person while in or outside the aircraft
21. Lighting strike or bird strike
22. Damage to aircraft by ground equipment
23. Damage to non-university property
24. Fire, explosion, smoke, or toxic fumes in or on the aircraft

**NTSB Reportable Incidents (immediate notification required)**
1. Flight control system malfunction or failure
2. Inability of any required flight crewmember to perform normal flight duties as a result of injury or illness
3. In-flight fire
4. Failure of structural components of a turbine engine excluding compressor and turbine blades and vanes
5. Damage to property, other than aircraft exceeding $25,000 for repair
6. Aircraft collide in flight

**6.4.3—Reporting Aircraft Accidents and Injuries**

Aircraft accidents will be reported in accordance with Federal Aviation Regulations and the National Transportation Safety Board regulations (Title 49 CFR Part 830).

**6.4.4—Reporting Procedures for Hazards and Incidents**

Incidents are defined and described in this document under Hazard and Incident Reporting Criteria. The Hazard and Incident Report Form may be found in Appendix 1. The report may be submitted to the Safety Manager (paper copy or email attachment) or online with Blackboard login to SE Aviation Safety Reports. If a name is included on the report, a reply to the submitter will follow via email within five working days.

**The Normal Process**
- After a hazard or incident has been identified to the Safety Manager or Safety Committee, an Action Log and tracking number are assigned.
- During the next quarterly Safety Committee Meeting, the safety issue is presented.
- The Safety Committee determines if the item warrants further consideration, then assigns the item to the appropriate person for analysis and possible action.
- The Safety Committee determines the status of the safety issue and updates the Action Log.
**The Immediate Process**
- If the Safety Manager, Director of SASI, or Manager of Flight Operations determines that immediate action is required, the appropriate personnel are directed to analyze and take action immediately.
- The Safety Manager adds the item to the Action Log and a detailed review takes place at the next Safety Committee meeting.

**Voluntary Disclosure Reporting**
SASI is committed to the promotion of a non-punitive environment where all SASI employees, faculty, staff, and students can voluntarily report safety issues, errors, mistakes, and even violations, without fear of disciplinary action from the university administration or SASI faculty. SASI will not initiate punishment against a student, a flight instructor, or other aviation personnel who discloses a safety related occurrence. This policy cannot apply to criminal or intentional infractions.

Voluntary self-reporting of errors, violations, and near midair collisions are encouraged as Southeastern Aviation strives to promote a safety culture in our flight operations; Dr. James Reason termed this corporate attitude as a “just culture.” Figure 1 below illustrates the accountability of people within our university aviation system. A just culture provides guidelines that differentiate between acceptable and unacceptable behavior.

![Decision Tree Image](image)

**Figure 3:** Reason (1997) A decision tree for determining culpability of unsafe acts, p. 290
7.0—SMS ORGANIZATION

7.1—SASI SAFETY MANAGEMENT ORGANIZATION CHART

Figure 4: SASI Safety Organization

Director of SASI
Dr. David Conway      580-745-3240

Safety Manager
John G. Van Bebber      580-745-3242
Assistant Safety Manager
Conner Tyler

Maintenance Manager
Alan Davis      580-745-3278
Mechanic
Mike Pruitt
Jordan Blackburn

Manager of Flight Operations
George Jacox      580-745-3245
Chief Pilot
Kyle Thomas      580-745-3246
Flight Instructors
Line Crew Lead
K. T. Grantham

Manager of Administration
Dr. Stan Alluisi      580-745-3241
Manager Quality Assurance and Environmental/Workplace Safety
Dr. Charles Marshall  405-682-1611 Ext.7452
Quality Auditor
Dr. Wayne Jones      580-745-2292
8.0—FLIGHT RISK ASSESSMENT

all in progress

8.1—INTRODUCTION
8.2—FLIGHT RISK ASSESSMENT POLICY
8.3—RISK FACTORS
8.4—USE OF FLIGHT RISK ASSESSMENT
8.5—SCENARIOS THAT MAY PROMPT A FLIGHT RISK ASSESSMENT
DEFINITIONS AND TERMINOLOGY

Accident – an unplanned event or series of events that results in death, injury, occupational illness, damage to or loss of equipment or property, or damage to the environment.

Analysis – the process of identifying a question or issue to be addressed, modeling the issue, investigating model results, interpreting the results, and possibly making a recommendation. Analysis typically involves using scientific or mathematical methods for evaluation.

Assessment – the process of measuring or judging the value or level of something.

Attributes – System Attributes, or the inherent characteristics of a system, are present in any well-defined organization and apply to an effective SMS. While the six system attributes were first applied with Air Transportation Oversight System (ATOS) fielding, there are conceptual differences when applied to SMS, as discussed below:

AUTHORITY & RESPONSIBILITY

Authority – who can direct, control, or change the process, as well as who can make key decisions such as risk acceptance. This attribute also includes the concept of empowerment.

Controls – controls are elements of the system, including hardware, software, special procedures, or procedural steps, and supervisory practices designed to keep processes on track to achieve their intended results. Organizational process controls are typically defined in terms of special procedures, supervisory and management practices, and processes. Many controls are inherent features of the SMS Framework. Practices such as continuous monitoring, internal audits, internal evaluations, and management reviews (all parts of the safety assurance component) are identified as controls within the design expectations. Additionally, other practices such as documentation, process reviews, and data tracking are identified as controls within specific elements and processes.

Interfaces – this aspect includes examining such things as lines of authority between departments, lines of communication between employees, consistency of procedures, and clearly delineating lines of responsibility between organizations, work units, and employees. Interfaces are the “Inputs” and “Outputs” of a process. Interfaces in Safety Risk Management & Safety Assurance – Safety Risk Management (SRM) and Safety Assurance (SA) are the key processes of the SMS. They are also highly interactive, especially in the input-output relationships between the activities in the processes. This is especially important where interfaces between processes involve interactions between different departments, contractors, etc. Assessments of these relationships should pay special attention to flow of authority, responsibility and communication, as well as procedures and documentation.

Procedures – ISO-9001-2000 defines “procedure” as “a specified way to carry out an activity or a process” – procedures translate the “what” in goals and objectives into “how” in practical activities (things people do). Procedures are simply documented activities to accomplish processes, e.g. a way to perform a process. The organization should specify their own procedures for accomplishing processes in the context of their unique operational environment, organizational structure, and management objectives.

Process Measures – are ways to provide feedback to responsible parties that required actions are taking place, required outputs are being produced, and expected outcomes are being achieved. A basic principle of safety assurance is that fundamental processes be measured so that management decisions can be data-driven. The general expectations for Component 1, Policy, specify that SMS outputs be measured and analyzed. These measurements and analysis are accomplished in Component 3, Safety Assurance. Outputs of each process should, therefore, be identified during Component 3 activities. For example, these outputs should be the subjects of continuous monitoring, internal audits, and internal evaluation.

Responsibility – who is accountable for management and overall quality of the process (planning, organizing, directing, controlling) and its ultimate accomplishment.
Audit – scheduled, formal reviews and verifications that evaluate whether an organization has complied with policy, standards, and/or contract requirements. An audit starts with the management and operations of the organization and then moves to the organization’s activities and products/services.

Internal audit – an audit conducted by, or on behalf of, the organization being audited, e.g., the flight-training department audits the flight training department.

External audit – an audit conducted by an entity outside of the organization being audited, e.g., the flight operations division audits the flight training department.

Aviation system – the functional operation or production system used by an organization to produce an aviation product or service (see System and Functional below).

Complete – nothing has been omitted and what is stated is essential and appropriate to the level of detail.

Conformity – fulfilling or complying with a requirement [ref. ISO 9001-2000]; this includes but is not limited to complying with Federal regulations. It also includes complying with company requirements, requirements of operator developed risk controls, or operator policies and procedures.

Continuous monitoring – uninterrupted (constant) watchfulness (checks, audits, etc) over a system.

Corrective action – action to eliminate (remove) or mitigate (lessen) the cause or reduce the effects of a detected nonconformity or other undesirable (unwanted) situation.

Correct – accurate without ambiguity or error in its attributes.

Documentation – information or meaningful data and its supporting medium (e.g., paper, electronic, etc.). In this context, documentation is different from records because documentation is the written description of policies, processes, procedures, objectives, requirements, authorities, responsibilities, or work instructions; whereas Records are the evidence of results achieved or activities performed.

Evaluation – an independent review of company policies, procedures, and systems [ref. AC 120-59A]. If accomplished by the company, the evaluation should be done by a person or organization other than the one performing the function being evaluated. The evaluation process builds on the concepts of auditing and inspection. An evaluation is an anticipatory process designed to identify and correct potential problems before they happen. An evaluation is synonymous with the term “systems audit.”

Functional - The term “function” refers to “what” is expected to be incorporated into each process (e.g., human tasks, software, hardware, procedures, etc.) rather than “how” the function is accomplished by the system. This makes for a more performance based system and allows for a broad range of techniques to be used to accomplish the performance objectives. This, in turn, maximizes scalability while preserving standardization of results across the aviation organization communities.

Hazard – any existing or potential condition that can lead to injury, illness, or death; damage to or loss of a system, equipment, or property; or damage to the environment. A hazard is a condition that might cause (is a prerequisite to) an accident or incident.

Incident – a near-miss episode with minor consequences that could have resulted in greater loss. An incident is an unplanned event that could have resulted in an accident or did result in minor damage. An incident indicates that a hazard or hazardous condition exists, though it may not identify what that hazard or hazardous condition is.

Lessons learned – knowledge or understanding gained by experience, which may be positive, such as a successful test or mission, or negative, such as a mishap or failure. Lessons learned should be developed from information obtained from inside and outside of the organization and/or industry.

Likelihood – the estimated probability or frequency, in quantitative or qualitative terms, of an occurrence related to the hazard.
Line management – the management structure that operates (controls, supervises, etc) the operational activities and processes of the aviation system.

Nonconformity – non-fulfillment of a requirement (ref. ISO 9001-2000). This could include but is not limited to, noncompliance with Federal regulations, company requirements, requirements of operator developed risk controls or operator-specified policies and procedures.

Objective – the desired state or performance target of a process. Usually it is the final state of a process and contains the results and outputs used to obtain the desired state or performance target.

Operational life cycle – time period from implementation of a product/service until it is no longer in use.

Organization – indicates both certificated and noncertificated aviation organizations, aviation service providers, air carriers, airlines, maintenance repair organizations, air taxi operators, corporate flight departments, repair stations, and collegiate aviation schools.

Outputs – the product or end result of an SMS process, which can be recorded, monitored, measured, and analyzed. Outputs are the minimum expectation for the product of each process area and the input for the next process area in succession.

Each of the outputs of a process should have a method of measurement specified by the organization. Measures need not be quantitative where this is not practical; however, some method of providing objective evidence of the attainment of the expected output is necessary.

Oversight – a function performed by a regulator (such as the FAA) that ensures that an aviation organization complies with and uses safety-related standards, requirements, regulations, and associated procedures. Safety oversight also ensures that the acceptable level of safety risk is not exceeded in the air transportation system.

Preventive action – preemptive action to eliminate or mitigate the potential cause or reduce the future effects of an identified or anticipated nonconformity or other undesirable situation.

Procedure – a specified way to carry out an activity or a process.

Process – a set of interrelated or interacting activities that transform inputs into outputs.

Process measures – refer to definition for Process Measures under the Attributes definition, above.

Product/service – anything that is offered or can be purchased that might satisfy a want or need in the air transportation system.

Records – evidence of results achieved or activities performed.

Residual safety risk – the safety risk that exists after all controls have been implemented or exhausted and verified. Only verified controls can be used for assessing residual safety risk.

Risk – the composite of predicted severity (how bad) and likelihood (how probable) of the potential effect of a hazard in its worst credible (reasonable or believable) system state. The terms risk and safety risk are interchangeable.

Risk control – steps taken to eliminate (remove) hazards or to mitigate (lessen) their effects by reducing the severity and/or likelihood of risk associated with those hazards.

Safety assurance – a formal management process within the SMS that systematically provides confidence that an organization’s products/services meet or exceed safety requirements. A Safety Assurance flow diagram includes the Framework element/process numbers and other notes to help the reader visualize the Framework in terms of a process flow (with interfaces), and understand the component / element / process expectations.

Safety culture – the product of individual and group values, attitudes, competencies, and patterns of behavior that determine the commitment to, and the style and proficiency of, the organization’s management of safety. Organizations with a positive safety culture are characterized by communications founded on mutual trust, by shared perceptions of the importance of safety and by confidence in the efficacy of preventive measures.

Safety Management System (SMS) – the formal, top-down business-like approach to managing safety risk. It includes systematic procedures, practices, and policies for the management of safety (as described in this document it includes safety risk management, safety policy, safety assurance, and safety promotion).
Product/service provider Safety Management System (SMS-P) – the SMS owned and operated by a product/service provider.

Oversight Safety Management System (SMS-O) – the SMS owned and operated by an oversight entity.

Safety objective – a goal or desirable outcome related to safety. Generally based on the organization’s safety policy, and specified for relevant functions and levels in the organization. Safety objectives are typically measurable.

Safety planning – part of safety management focused on setting safety objectives and specifying needed operational processes and related resources to fulfill these objectives.

Safety risk – the composite of predicted severity (how bad) and likelihood (how probable) of the potential effect of a hazard in its worst credible (reasonable or believable) system state. The terms safety risk and risk are interchangeable.

Safety risk control – a characteristic of a system that reduces or mitigates (lessens) the potential undesirable effects of a hazard. Controls may include process design, equipment modification, work procedures, training or protective devices. Safety risk controls must be written in requirements language, measurable, and monitored to ensure effectiveness.

Safety Risk Management (SRM) – a formal process within the SMS that describes the system, identifies the hazards, assesses the risk, analyzes the risk, and controls the risk. The SRM process is embedded in the processes used to provide the product/service; it is not a distinct, separate process.

Safety promotion – a combination of safety culture, training, and data sharing activities that support the implementation and operation of an SMS in an organization.

Separate Aviation Maintenance Organizations – are independent maintenance organizations such as, but not limited to, certificated repair stations, non-certificated repair facilities, and separate maintenance organizations. This does not include an air operator’s maintenance organization and is not intended to duplicate 1.0 B) 1) a) 3) of an air operator’s organization.

Severity – the degree of loss or harm resulting from a hazard.

Substitute risk – a risk unintentionally created as a consequence of safety risk control(s).

System – an integrated set of constituent elements that are combined in an operational or support environment to accomplish a defined objective. These elements include people, hardware, software, firmware, information, procedures, facilities, services, and other support facets.

System Attributes – refer to definition for Attributes
REFERENCES


Intentionally Blank
APPENDIX 1

Hazard and Incident Reporting Form
(revised 3/2/11)

The information supplied in this form will only be used to promote safety. You may choose not to provide your name. If you do provide your name, your name and position will be removed before dissemination. An email reply will follow. Under no circumstances will your identity be disclosed to any university personnel, any other organization, agency, or person without your express permission.

When you have completed Part A of the form, submit it to the SASI Safety Manager—paper copy or email. Forms are found on Blackboard (http://blackboard.se.edu/) under Safety Reporting.

Name: ____________________________ Email: ____________________________

Position: ______________________ [Only Safety Manager has access to name/position]

Report Number: __________________ Date Received: ________________

PART A:

Please fully describe the Hazard or Incident.

Date of occurrence: ________________ Time: ________________

Location: ________________________________________________________________

Description: ___________________________________________________________________
_________________________________________________________________________
_________________________________________________________________________
_________________________________________________________________________
_________________________________________________________________________

Suggest Solution: __________________________________________________________
_________________________________________________________________________
_________________________________________________________________________

In your opinion, what is the probability of a similar occurrence happening again?

<table>
<thead>
<tr>
<th>Frequent</th>
<th>Occasional</th>
<th>Seldom</th>
<th>Remote</th>
<th>Improbable</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 days</td>
<td>6 months</td>
<td>1 year</td>
<td>5 years</td>
<td>&gt; 5 years</td>
</tr>
<tr>
<td>P5</td>
<td>P4</td>
<td>P3</td>
<td>P2</td>
<td>P1</td>
</tr>
</tbody>
</table>

What do you consider could be the worst possible consequence (severity) if this occurrence did happen again?

<table>
<thead>
<tr>
<th>Catastrophic</th>
<th>Critical</th>
<th>Concerning</th>
<th>Minor</th>
<th>Negligible</th>
</tr>
</thead>
<tbody>
<tr>
<td>S5</td>
<td>S4</td>
<td>S3</td>
<td>S2</td>
<td>S1</td>
</tr>
</tbody>
</table>
PART B:
Actions & Recommendations of the Safety Manager or Safety Committee

The report has been de-identified, entered into the safety database on Blackboard, and a response emailed if necessary.

Signature: ___________________________ Date: __________________

Rate the probability of the hazard recurring.

<table>
<thead>
<tr>
<th>Frequent</th>
<th>Occasional</th>
<th>Seldom</th>
<th>Remote</th>
<th>Improbable</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 days</td>
<td>6 months</td>
<td>1 year</td>
<td>5 years</td>
<td>&gt; 5 years</td>
</tr>
<tr>
<td>P5</td>
<td>P4</td>
<td>P3</td>
<td>P2</td>
<td>P1</td>
</tr>
</tbody>
</table>

Rate the worst-case consequences (severity).

<table>
<thead>
<tr>
<th>Catastrophic</th>
<th>Critical</th>
<th>Concerning</th>
<th>Minor</th>
<th>Negligible</th>
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<tr>
<td>S5</td>
<td>S4</td>
<td>S3</td>
<td>S2</td>
<td>S1</td>
</tr>
</tbody>
</table>

Risk Determination Matrix: __________
Assessed Safety Risk: __________

Actions taken to ELIMINATE or CONTROL the hazard:
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________

Resources Required (money, equipment, etc): ________________________________
____________________________________________________________________________________

Responsibility for action (who): ________________________________

Referred to ________________________________ for further action:
Signature: ___________________________ Date: __________________

Forwarded to the Safety Committee for review:
Signed: ___________________________ Date: __________________

Appropriate feedback communicated to all appropriate personnel:
Signed: ___________________________ Date: __________________
APPENDIX 2

Accident and Injury Report Form
(Revised 10/11/10)

To be completed by the Safety Manager or appropriate Safety Committee Representative for all accidents and injuries which have seriously endangered people, aircraft, vehicles, or equipment.

Name of person that completed this report: _______________________________________
Position: _____________________________ Email: ___________________________
Telephone number: _____________________________
Date of Accident/Injury: _____________________________
Time: _____________________________
Location: _____________________________
Date of Report: _____________________________

Names of Witnesses

Witness 1
Name: _____________________________
Address: _____________________________
Telephone: _____________________________

Witness 2
Name: _____________________________
Address: _____________________________
Telephone: _____________________________

Witness 3
Name: _____________________________
Address: _____________________________
Telephone: _____________________________
DETAILS:

Details of the accident or injury: (Include details of people involved, aircraft, vehicles, and equipment. Include details of what took place that contributed to the accident or injury.

______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________

Details of any injuries:

______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________

Details of damage to aircraft, vehicles, equipment, or facilities:

______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
APPENDIX 3

Southeastern Aviation Audit Checklist

In Progress
APPENDIX D

REPORT OF WEAKNESSES NOTED BY PREVIOUS VISITING TEAM

Weaknesses:
1. The number of students (261) being advised by the single advisor at Tinker AFB is relatively high, particularly given the additional administrative effort provided by that individual. However, the maturity of the students at the Oklahoma City locations apparently offsets the advising load sufficiently to allow effective academic advisement.
2. The institution is underway in creating and implementing an assessment plan; however, effort to date indicates that the amount of evidence archived is limited, and the use of those data to effect continuous improvement in program outcomes has yet to be broadly accomplished, per AABI 2.2.
3. Alumni tracking is weak and not formally established, per AABI 2.12.
4. The Aviation Sciences Institute mission statement and program outcomes are not stated in the ASI section of the University catalog or other public documents.
5. No performance level has been specified for assessment and evidence of student attainment of learning objectives.
6. There is no clear process for the use of student grading as a means to improve the programs.
7. No flight courses have prerequisites specified, with the only stipulation regarding Enrollment being "permission required." Moreover, the flight courses, which are required laboratory coursework, are graded pass/fail.
8. There is little or no evidence of feedback from student achievement, to course methodology or content.
9. Several faculty members have demanding administrative positions while also carrying a heavy teaching load.
10. Three adjunct faculty members hold only a baccalaureate degree, while teaching in a baccalaureate program.
11. Complex and multi-engine flight requirements are being met by one airplane for each, and these airplanes are both high-time and high-maintenance.
12. The Cessna 150/152 and Cessna 182 single-engine airplanes, and the Cessna 310, while well-maintained, are high airframe-time aircraft. Reasonably-priced spare parts are increasingly difficult to obtain.
13. The Safety Committee includes representatives from faculty and students, but no University safety official or airport management representative.
14. There appears to be very little substantive activity from the Industry Advisory Committee for the Management program.
15. Placement assistance appears to be non-existent for Flight graduates, and very limited for Management graduates.
Appendix E: Evidence of Compliance with AABI 225 3.4.2

From ABI 225:

3.4.2 Institutions MUST broadly and accurately publish the objectives of each accredited program, admission requirements, program assessment measures employed and the information obtained through these assessment measures and report on actions taken as a result of this assessment, to include but not limited to: student achievement, the rate and types of employment of graduates, and any data supporting the qualitative claims made by the program.

“Institutions MUST broadly and accurately publish the objectives of each accredited program”

This information is contained starting on page 101 in *the Southeastern Oklahoma State University 2013 – 2015 Undergraduate and Graduate Catalog* which can be found at:


We are painfully aware that the “current” printed catalog is out of date as is the version on the school web site. The delay in publishing a “current” catalog has been an ongoing issue across the campus.

Admission requirements are also found in *the Southeastern Oklahoma State University 2013 – 2015 Undergraduate and Graduate Catalog* starting on page 18.

“…program assessment measures employed and the information obtained through these assessment measures and report on actions taken as a result of this assessment…”

Details on assessment may be found in the annual Assessment Reports web page located at:

http://www.se.edu/dept/academic-affairs/annual-assessment-reports/

Finally, “…to include but not limited to: student achievement, the rate and types of employment of graduates, and any data supporting the qualitative claims made by the program.”

We do not currently capture or publish specific data on student achievement or types of employment of our graduates.

In your email you also note: “The statement is “Evidence will be provided” is written on a few occasions.  We have found in the recent visits that it is almost impossible for the team to accomplish their tasks without having evidence to review before getting to the campus. I am wondering if you can provide additional details about evidence and evidence locations that I may share with the team members.”

I understand your desire to get a head start on wading through the evidence before the team’s arrival.

Currently, all Aviation Management evidence is in hard copy form and much of the flight program’s data is on Taskstream. Unfortunately, due to budget difficulties our Taskstream bill was not paid and we did not have access to it from the fall of 2015 through the summer of 2016.
We regained access this past fall but, to the best of my knowledge, SOSU has not paid for access since last December.
April 12, 2017

Mr. Sean Burrage
Office of the President
Southeastern Oklahoma State University
1405 North Fourth Avenue
PMB 4236
Durant, OK 74701-0609

Dear Mr. Burrage:

Enclosed is a copy of the Final Visiting Team Report, which has been submitted by the Visiting Team following the reaffirmation visit to Southeastern Oklahoma State University on March 5-8, 2017. You are asked to review this report and respond to the recommendations set forth in the report not later than May 15, 2017. In your response, it would be helpful to restate each recommendation. If you desire to respond to the suggestions or submit additional information, you may include an attachment to your response that expands on your statement.

The response from your institution, along with the Final Visiting Team Report, will be forwarded to the Accreditation Committee for their review and final recommendation on accreditation/reaffirmation action at the next meeting of the Committee. The Board of Trustees of the Aviation Accreditation Board International (AABI) at its July 2017 meeting will consider the recommendations from the Accreditation Committee. If you or any of your colleagues would like to attend this meeting, registration information will be posted on the AABI Web site: www.aabi.acro. Following the meeting, I will inform you by letter of the decision of the Board. In the meantime, if you have any questions or concerns, please call me at (334) 844-2431.

Sincerely,

Gary, J. Northam, Ph.D.
President

Enclosure: Visiting Team Final Report

cc: Dr. Thomas Carney, Chair, Accreditation Committee
Dr. Barney King, Assistant Chair, Accreditation Committee, and Visiting Team Chair
Dr. Stanley Allusi, Co-Director, Aviation Sciences Institute
Prof. George Jacox, Co-Director, Aviation Sciences Institute

Aviation Accreditation Board International
3410 Skyway Drive * Auburn, AL 36830
(334) 844-2431 * Fax (334) 844-2432
www.aabi.acro

Concordia University MB 12-125
1455 de Maisonneuve Blvd. West
Montreal, Canada H3G 1M8
Telephone: (514)-848-2424 Ext. 2987
Final Report of the Accreditation Team's Visit to

SOUTHEAST OKLAHOMA STATE UNIVERSITY

John Massey School of Business

Aviation Sciences Institute

Oklahoma City and Durant, Oklahoma

March 5-8, 2017
Visiting Team Members:
Dr. Bernard King, Kansas State University – Salina (Ret), Team Chair
Mr. Jorge Calaf, Inter American University of Puerto Rico, Educator Member
Ms. Margaret Browning, Hampton University, Educator Member
Capt. Peter Russo, Ph.D., JetBlue Airways (Ret.), Industry Member

Programs Evaluated:
Bachelor of Science in Aviation Professional Flight, (AABI Flight Education)
Bachelor of Science in Aviation Management, Business Option, (AABI Aviation Management)

A note about the organization of this report:
The main body of this report is in the context of a brief narrative, followed by Strengths, Weaknesses, Suggestions and Recommendations. A reference to the appropriate section of the AABI Criteria Manual is included with each recommendation. The visited institution must address recommendations; suggestions are considered informational and may be addressed if the institution so elects.

Dr. Bernard F. King, Team Chair, prepared the Visiting Team Report.
I. INTRODUCTION

On March 6, 1909, the Second Oklahoma State Legislature approved an act designating Durant as the location for a normal school to serve a 12-county region. Southeastern Oklahoma State University first opened its doors to students on June 14, 1909, as Southeastern State Normal School. The early program of instruction consisted of four years of high school and the freshman and sophomore college years. The first sessions of the school were held in temporary quarters. In 1910, the Normal School Building, later called Morrison Hall, was constructed on Dr. J. L. Schuler’s peach orchard.

The original purpose of Southeastern was the education of teachers for the public schools of Oklahoma. The two-year graduates were awarded life teaching certificates. In 1921, the institution became a four-year college and was renamed Southeastern State Teachers College. The primary function remained that of teacher education and the degrees of Bachelor of Arts in Education and Bachelor of Science in Education were authorized.

In 1939, the purpose of the college was expanded. Courses leading to two newly authorized non-education degrees – Bachelor of Arts and Bachelor of Science – were added. At this time, the college was renamed Southeastern State College. In 1954, the curriculum was enlarged by the addition of a graduate program leading to the Master of Teaching degree. In 1969, the name of the degree was changed to Master of Education.

On May 27, 1968, the Oklahoma State Regents for Higher Education designated Southeastern as an Area Community College. While retaining previous functions, the college moved in the direction of providing greater post-secondary educational opportunities by expanding its curriculum to include new programs in areas such as business, technology, aviation and conservation.

On August 15, 1974, the name of Southeastern State College was changed to Southeastern Oklahoma State University by an act of the Oklahoma State Legislature. Since 1974, Southeastern, through institutional reorganizations, has continued to diversify, so that, presently, there are four academic schools: Arts and Sciences, John Massey School of Business, Education and Behavioral Sciences, and Graduate & University Studies. It is a public institution with about 4,000 students.

Aviation Unit
The Aviation program began offering a Bachelor of Science degree in 1967 and was housed in the School of Technology. In the early 70s, the program included A&P training but it was moved from the university system to the VOTECH system in the early 80s. The Aviation program bought aircraft and began conducting flight training in Durant in the late 70s. In the early 80s, the School of Technology was reorganized and the Aviation program was moved to the School of Business.

In 2000, the Aviation program added the Aviation Management degree as well as the Master of Science Degree in Aerospace Administration. At this time, the Aerospace Department accepted the role of “Parent University” in the Oklahoma City Aviation Education Alliance and began offering all degree options at Tinker Air Force Base.
In 2001, the organizational structure of the Aviation Department changed and developed into the Aviation Sciences Institute (ASI) with separate aviation departments and the Master of Science Degree in Aerospace Administration was changed to Master of Science Degree in Aerospace Administration and Logistics.

In 2004, SOSU partnered with Oklahoma City Community College (OKCCC) and Rose State College to begin a joint effort to accommodate students by offering the undergraduate management degrees and the graduate degree.

In 2012, SOSU evolved from a university with three schools with their own deans to a solitary Dean of Instruction. The ASI, technically still a part of the John Massey School of Business, became just one of many departments under the single Dean of Instruction.

In 2014, the director of the ASI retired and the school administration elected not to fill that position resulting in the two department chairs acting as interim-co-directors. In January of 2015, the two ASI Department chairs officially became co-directors of the ASI under the now re-named Executive Dean of Instruction and the chair of Aviation Management also assumed the duties as chair of the Graduate Program.

In July of 2016, the Executive Dean of Instruction retired and the school administration elected not to fill that position. This left SOSU with no one in a position as dean. This shift to zero deans required further changes in the structure of the University. The co-directors, Aviation Sciences Institute, report directly to the vice president for Academic Affairs.

The Aviation Sciences Institute Web site incorrectly states that the Aviation Sciences Institute is accredited by AABI. It should state that the programs: B.S. Aviation Management: Business Option and B.S. Aviation Professional Pilot, are AABI-accredited.

**Persons Contacted**

During the course of the visit, Team Members held discussions with the following University representatives:

- Mr. Sean Burrage, President
- Dr. Byron Clark, Vice President for Academic Affairs
- Mr. Dennis Westman, Vice President for Business Affairs/CFO
- Ms. Liz McCraw, Dean of Student Affairs
- Mr. Tony Lehrling, Director, Financial Aid
- Dr. Stanley Alluisi, Co-Director, Aviation Sciences Institute
- Mr. George Jacox, Co-Director, Aviation Sciences Institute
- Ms. Sandra Thomas, Interim Director, Henry G. Bennett Memorial Library
- Ms. Kay Barber, Coordinator, Career Management Center
- Capt. John Van Bebber, Assistant Professor/Chief Ground Instructor
- Mr. Kyle Thomas, Chief Flight Instructor
Mr. Alan Davis  
Director of Maintenance
Ms. Lori Rupert  
Program Coordinator for Aviation Education  
Alliance, Tinker AFB
Dr. Charles Marshall  
Associate Professor, Rose State
Mr. Jake Durham  
Assistant Professor, Rose State
Mr. Rick Hedrick  
Program Coordinator, Rose State/OKCCC
Mr. Mitchell Mills  
Student Government President
Mr. Joseph Hammer  
Student Government Secretary

Approximately 2 Flight Instructors
Approximately 55 Students

As part of the Team's evaluation, the following documents were reviewed:
SOSU AABI Application Form 202
Self-Study Report AABI Form 204, November 2016
SOSU 2015-2017 Undergraduate Catalog
Academic Policies and Procedures 2016-2017
Employee Handbook
Student Handbook 2016-2017
Hazard and Incident Reporting Form
Bachelor of Science Aviation Management Business Degree Plan and Clearance Letter
Student transcripts
Alliance Institutions Enrollment/Drop Form
Assessment Reports Professional Pilot
Safety Management System
Blackboard Course Information with SLO assessments
ASI Aircraft Dispatch Form
Professional Pilot check list and sequence 01/2012
Student Work
II. STUDENTS

A. Student Criterion

Admission Data
The University has published standards for the selection and admission of students which are related to the educational mission and purposes of the institution.

Evidence assures that the program has and enforces policies for the acceptance of transfer students and a method of validation of courses taken for credit elsewhere. Evidence includes admission requirements defined in the academic catalog for first-time freshman and transfer students, student transcripts and student records.

Quality of New Students
The University has established policy to ensure the quality of new students is standardized and provides an equal opportunity for all prospective students. Evidence includes admission requirements defined in the academic catalog for first-time freshman and transfer students, student transcripts and student records.

Enrollment Data
Enrollment data in Self-Study Report (SSR) indicates data is not current, data headings define the years 2006-2010. The chair was unable to confirm the data at the time of visit.

Evidence is unsatisfactory.

Grading System
The University has an established grading system that is understandable and published in the academic catalog. Evidence is defined in the academic catalog.

Record Keeping
The unit maintains recent examples of student work, to include examinations, homework problems, laboratory exercises and reports.

Evidence included examples of student competence in both subject matter areas and communications skills.

Academic Performance
The University has an established policy and method for recognizing excellent academic performance and handling poor academic performance that is consistent with common student success practices.

Evidence of procedures is defined in the academic catalog.

Academic Advisement
The unit evaluates, advises and monitors students to determine its success in meeting program goals. Both students and faculty expressed satisfaction with the process and the
availability of faculty to assist students. Each student must meet with their advisor each semester before they will be allowed to register through an online system.

Evidence of procedures included curriculum worksheets, faculty and student confirmation and student records.

**Student Activities**
The number and quality of student activities appeared to be sufficient for unit size. Unit activities included Women in Aviation, Alpha Eta Rho and Flight Team. Aviation students were heavily involved in University activities as well, including student government, fraternities, community service and other clubs.

**Graduates and Placement Data**
The unit did not produce data records reflecting the employment or continuing education experience of students graduating from the program during each of the preceding five years.

Evidence of graduate and placement data was provided from faculty, students, staff and administration who had specific knowledge of alumni activities and were able to boast on graduate accomplishments.

**Strengths:**
1. Actively engaged in student government association.
2. Appreciate faculty efforts as advisors.
3. Described as more focused by administration.

**Weaknesses:**
1. Enrollment data was not current.

**Suggestions:**
1. Use current enrollment data.

**Recommendations:**
None.
III. PROGRAM MISSION AND EDUCATIONAL GOALS

A. **Program Educational Objectives Criterion**

The University has clearly defined its mission as establishing an environment of academic excellence that promotes values for career preparation, responsible citizenship, and lifelong learning. The John Massey School of Business focuses on the mission of applying knowledge of business to solve problems effectively as individuals or in a team environment, clearly communicate their ideas to appropriate audiences, and demonstrate an understanding of the process of making ethical decisions. The Aviation Sciences Institute desires to provide the highest quality aviation education and flight training possible.

The Aviation Sciences Institute Web site incorrectly states that the Aviation Sciences Institute is accredited by AABI. It should state that the programs are AABI-accredited, specifically: B.S. Aviation Management: Business Option and B.S. Aviation Professional Pilot.

The mission of the Professional Pilot program was published with the assessment report, but no mission statement could be found for the Aviation Management Business Option.

Taskstream is the software used for the collection of assessment data. No data could be located for the Aviation Management program for the last two years. The goals of the Aviation programs are clearly defined, but they are not published so they are accessible to stakeholders. They include knowledge, skills, abilities and attitudes. The goals were finalized in their present form after discussions with student groups, then existing Industry Advisory Board members and faculty, although no documentation of Industry Advisory Board meeting could be found.

The University publishes several studies such as retention and graduation rates that are in some cases broken down by major. There was no evidence that these available products are being used by the ASI.

**Strengths:**
1. Aviation Sciences Institute mission strongly supports the institutional mission.
2. Professional Pilot program has clearly identified measurable goals.

**Weaknesses:**
1. The Aviation Sciences Institute Web site does not accurately represent accreditation status.
2. Educational goals are not published for either program.
3. Aviation Management program has no documentation of goals.
4. There is no formal program mission statement for the Aviation Management Business Option.
Suggestions:
None.

Recommendations:
1. Indicate that AABI accredits programs not organizations (AABI PPM 3.4.1).
2. Institution must broadly and accurately publish the objectives of each accredited program (AABI PPM 3.4.2).
3. Publish educational goals, having sufficient detail to be measured, that are consistent with the mission of the institution (AABI Criterion 3.2.a).
4. The Aviation Management program must have a mission statement (AABI Criterion 3.2).
IV. STUDENT LEARNING OUTCOMES

Student learning outcomes are developed for both academic programs. Processes are in place for assessment of general outcomes and Aviation core topics. The Professional Pilot program provided five years of data in Taskstream showing student learning outcomes, how they were measured, results of the measurement, whether the outcomes were met and what actions were taken for those outcomes that were not met. The University Annual Assessment reports indicates that the Management program has not updated their Taskstream report in the last two years.

The Academic Affairs Web site has Program Outcomes Assessment Reports posted from 2008 through 2011 for all University programs. Subsequent reports appear to have been posted in Taskstream but this is not open to the public so stakeholders do not have access to the data.

The University has a robust assessment program for evaluating entry level and mid-level programs. They publish summaries of program-level assessment and they use two instruments for student satisfaction assessment. They also assess and report on graduate student programs.

Strengths:
1. Professional Pilot program has well-documented evidence of measurable learning outcomes.

Weaknesses:
1. There is no recent documentation of Aviation Management SLOs.

Suggestions:
None.

Recommendation:
1. Update Aviation Management Taskstream entries and publish student learning outcomes (AABI Criterion 3.3).
V. CURRICULUM

A. **Curriculum Criterion**

**Aviation Management**
The Aviation Management program has a general education requirement of 44 credit hours (nine in Communications, 12 in Social and Behavioral Sciences, 14 in Science and Mathematics, and nine in Humanities). The University has an assessment plan for General Education and published information for stakeholders. The major has a total of 55 credit hours (25 Aviation core and 30 Business). The academic catalog states the program major is augmented by 69 hours for a total of 124 credits for the baccalaureate degree.

Evidence in the academic catalog does not clearly define the curriculum requirement. The catalog curriculum layout on page 104 in the 2015-2017 SOSU Academic Catalog describes only 99 hours of course work. The chair stated the remaining credit hours were general electives. Evidence includes the academic catalog, curriculum worksheets, faculty description and student transcripts.

**Aviation Professional Pilot**
The Professional Pilot program has a general education requirement of 46 credit hours (nine in Communications, 12 in Social and Behavioral Sciences, 16 in Science and Mathematics, and nine in Humanities). The University has an assessment plan for General Education. The major has a total of 64 credit hours for a total of 124 credits for the baccalaureate degree.

B. **Aviation Course Sequencing**

**Aviation Management**
Sequencing of courses and the appropriateness of prerequisites are well-defined and published in the General Catalog. Course coverage is broad enough to allow student growth and development.

Evidence includes curriculum guide and academic catalog.

**Aviation Professional Pilot**
Sequencing of courses and the appropriateness of prerequisites are well-defined and published in the general catalog. Course coverage are broad enough to allow student growth and development. Laboratory course components are coordinated with lecture components for courses in science and courses for obtaining FAA pilot certificates.

C. **Course Offerings**
There are ample course offerings for required courses in the Aviation unit with multiple sections with an average of 13 students per session, which allows the student to finish the program in four years or eight academic semesters.

D. **Supporting Disciplines**
General education courses are taught by other academic units, such as science, mathematics, communication and humanities.
**Strengths:**
1. Curricula are well-balanced with liberal arts and major courses.
2. Curricula provide ample opportunity for general elective courses.

**Weaknesses:**
None.

**Suggestions:**
None.

**Recommendations:**
None.
VI. FACULTY AND STAFF

A. **Current Faculty**
Faculty are appropriately qualified and experienced. There are six full-time professors of which four are tenured and two are on tenure track. Two professors have a 25 percent FTE due to their administrative assignment as co-directors of the Aviation unit and the Chief Flight Instructor has 50 percent FTE. The academic units have approximately 19 non-tenured adjunct professors that teach different courses. The institution has an Academic Policies & Procedures Manual that defines all faculty processes from hiring to faculty evaluation and promotions.

B. **Current Staff**
The staff is appropriately qualified with a robust set of responsibilities appropriate to an Aviation Flight and Management programs.

C. **Staff Assignment Definitions**
The staff assignments are appropriate and include such titles as: financial assistant, program coordinator, office assistant, coordinator of academic services, flight maintenance technician supervisor, lead mechanic, maintenance technician, and flight instructors.

D. **Current Faculty Assignments**
Assignments are consistent with the University and are equivalent to norms found throughout the institution except for chairs who appear to teach full loads and do not receive the relief specified for their administrative assignments.

E. **Compensation and Benefits**
The Aviation unit faculty salaries and benefits are comparable with others in the College and the University.

F. **Evaluation and Promotion Policies**
The Aviation unit salaried faculty and staff at the University are evaluated annually using procedures developed by each department that is consistent with University policies.

G. **Professional Development**
Current professional activities are appropriate and involve a host of activities oriented to improve professional preparation critical to an institution focused on teaching, research, and service.

**Strengths:**
1. Institution has well-established procedures for promotion, tenure and faculty recruitment.
2. Faculty are well-qualified with industry experience.
3. Administration was proactive to replace Aviation faculty during hiring freeze.
Weaknesses:
   1. Co-director workload is excessive.

Suggestions:
   1. Review co-director workload and release time.

Recommendations:
   None.
VII. FACILITIES, EQUIPMENT AND SERVICES

A. **Classrooms**
The Aviation Sciences Institute conducts classes on four distinct campuses, each of which contains classrooms. In Oklahoma City, the AABI Team visited three campuses: Rose State College, where there are two classrooms with a capacity of about 30 students each; the Tinker AFB campus, which is operated by the base education office, offers six classrooms serving 20 to 30 students each; and the Oklahoma City Community College campus, where there are two 30-student rooms. On the second day, the Team drove to the main University campus in Durant, and observed five primary classrooms in the Russell Building with a capacity of 30 to 50 students, and one classroom at the Eaker Airport which can hold 15 students.

B. **Laboratories**
At Eaker Field, there are two laboratories dedicated to a computer lab holding up to 14 students, and an aircraft simulator room.

C. **Staff Offices**
Staff offices are located at all four campuses. The main offices of the ASI are located at Eaker Field, although some staff and faculty work on the SOSU main campus as well.

D. **Airport Facilities**
Eaker Field (KDUA) is operated by the Durant Regional Airport. SOSU owns and operates their facility where one building houses classrooms, simulators, dispatch and flight planning rooms, as well as a conference room. There is a large hangar which is used for the extensive maintenance to the aging aircraft fleet. Aircraft are stored in the hangar or in adjacent sheds to protect against wind and hail damage. The fleet encompasses 19 aircraft, 11 of which are approximately 40 years old. One of the aircraft is a twin engine model, while two of the single engine aircraft are complex, retractable gear airplanes. There is also a simulator, which is listed as an advanced aircraft training device (AATD). The Team was told by both senior University leaders that there is an aircraft replacement plan, which will be carried out when the budgetary problems are overcome.

E. **Library**
The library on the main SOSU campus was visited by the AABI Team. There is minimal interaction between ASI courses and the library.

F. **Instructional Media Services**
All classrooms on all campuses have computers installed or portably available. The university uses BlackBoard as the common Learning Management System (LMS). On the main campus, the University IT office is responsible for the maintenance of the computer systems.

G. **Computer Facilities**
The University-operated airfield, Eaker Field, contains a computer lab and a simulator lab used for a total of five separate Aviation courses. The computer lab contains 14 PCs, a
video projector and smartboard, all used by various ground school, advanced technology aircraft and Flight Management System (FMS) classes.

H. Placement Services
The airline industry is entering a prolonged period of planned expansion combined with massive retirements of the most experienced pilots. As a result, the companies at the entry level for professional pilots are anxious to recruit college-educated and trained pilots as early in the training footprint as possible. SOSU Aviation Sciences Institute has responded with the signing of a pipeline agreement with regional operator Envoy. These programs vary between carriers, but generally sign up students when they finish about half of the flying certification program. The carrier sends volunteer line pilots to the school periodically to mentor the identified pilots and monitor their progress. When pilots achieve CFI status, they begin flying as instructors at a Part 141 school that is affiliated with the airline, and hours and pay are monitored by the airline. Interviews are conducted, health care and travel benefits may be made available if the student signs up as a new-hire. Upon reaching 1500 flying hours, or reduced number due to the Institution of Higher Education’s Application for Authority to Certify its Graduates for an Airline Transport Pilot Certificate with Reduced Aeronautical Experience program with the FAA, the candidate proceeds to airline training as a new-hire.

There is no such program for aviation managers, but SOSU operates a Career Management Center (CMC) program of internships sponsored by regional employers. This partnership has also led to full time employment. However, the CMC was closed due to a budget cut in 2016 and subsequently re-instated in 2017.

I. Instructional Equipment
There are 19 aircraft and one flight deck simulator located at Eaker Field that provide all levels of flight training required for graduation.

Strengths:
1. Aircraft simulator exceeds pilot training standard.

Weaknesses:
1. Aircraft year and model are not comparable to industry and educational standards.
2. Constant maintenance of aircraft detracts from aircraft availability to meet educational outcomes.

Suggestions:
1. Develop aircraft replacement plan.
2. Evaluate aircraft maintenance workload.

Recommendations:
None.
VIII. INSTITUTIONAL STRUCTURE AND SUPPORT

A. Organizational Charts
The University is set up in a flattened model with department heads reporting to the vice president for academic affairs. The vice president for academic affairs reports to the president who answers to the Board of Trustees. There are no college deans. The vice president for business affairs is actually an employee of a community college and is contracted to SOSU on a shared basis. The University is also looking at sharing faculty as a cost savings measure.

B. Institutional Support
The Team met with senior administration officials of the University including the president, vice president for academic affairs, and the vice president for business affairs/CFO, and discussed institutional support for the Aviation programs. They all are aware of the emergent pilot shortage and the impact it has on graduate opportunity, difficulty in retaining instructors, and possible increased demand for flight programs. Everyone expressed an interest in growing the programs over time and willingness to support the investment required from their respective offices. They all were aware of the age of the aircraft and the need for a fleet replacement plan. Cuts in the budget from the State of Oklahoma forced the University to adopt an early retirement program and last year some employees were furloughed. This year administration distributed 50 percent of the budget at the start of the year and an additional 25 percent in January. They are holding the remaining budget for unanticipated circumstances. During the out briefing, the president announced that the staff was going to have to report to the State the effects of an additional 10, 15 or 20 percent cut in their current budget.

C. Aviation Unit Administration
The current co-directors of the Aviation Sciences Institute are Associate Professor Stanley Alluisi who is also the chair of Aviation Management, and Assistant Professor George Jacox who is the chair of Aviation Flight. The programs in the Oklahoma City area are all Aviation Management.

D. Related Programs
The Aviation faculty interacts with other faculty members at SOSU by participating in governance organizations such as the University Faculty Senate, and by serving on university-wide committees. Seven safety courses are included in the Aviation Management – Safety Option. In Oklahoma City, these are taught by Aviation faculty causing them to work closely with the Department of Occupational Safety and Health.

E. Institutional Budget

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<tr>
<th>Source</th>
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<tr>
<td>State Support</td>
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<td>Other (specify)</td>
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### Institutional Expenditures for: 2015-2016

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<td>Extension or Continuing Education</td>
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<td>Other (specify)</td>
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<tr>
<td><strong>Total Expenditures</strong></td>
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### Aviation Unit’s Next Higher Administrative Level Budget

#### Operating Revenue for: Fiscal Year 2015-2016

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<td>Institutional Funds</td>
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<td><strong>Total Operating Revenue</strong></td>
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#### Expenditures for: Fiscal Year 2015-2016

<table>
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<td>Instruction</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Research</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Extension or Continuing Education</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Administration</td>
<td>$285,071</td>
<td>100</td>
</tr>
<tr>
<td>Physical Plant</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Other (specify)*</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total Expenditures</strong></td>
<td><strong>$285,071</strong></td>
<td>100</td>
</tr>
</tbody>
</table>
G. **Aviation Unit Budget**

<table>
<thead>
<tr>
<th>Source</th>
<th>Amount(s)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institutional Funds</td>
<td>$1,258,555</td>
<td>67</td>
</tr>
<tr>
<td>Other (specify)</td>
<td>$606,185</td>
<td>33</td>
</tr>
<tr>
<td><strong>Total Operating Revenue</strong></td>
<td><strong>$1,864,740</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type of Expenditure</th>
<th>Amount(s)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty Salaries</td>
<td>$619,393</td>
<td>37</td>
</tr>
<tr>
<td>Other Salaries and Wages</td>
<td>$646,362</td>
<td>38</td>
</tr>
<tr>
<td>Expenses (Specify)*</td>
<td>$373,252</td>
<td>22</td>
</tr>
<tr>
<td>Other (specify)**</td>
<td>$55,873</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Expenditures</strong></td>
<td><strong>$1,694,880</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

**Strengths:**
1. Strong support for the programs by the administration.
2. Administration was proactive in managing state budget reductions.
3. Innovative resource management techniques to increase efficiency.

**Weaknesses:**
1. State budget cuts adversely affected University budget which has limited the distribution of departmental funding.

**Suggestions:**
1. Continue monitoring incoming resources to proactively prepare for future funding trends.

**Recommendations:**
None.
IX. AVIATION SAFETY CULTURE AND PROGRAM

SOSU has developed a university-wide Safety Management System (SMS) Manual and program, and Aviation Sciences Institute operates the portion of the SMS dedicated to flight.

The safety program and reporting is conducted using Blackboard. It allows student access for reporting and is used for tracking and showing resolution of incidents.

Students indicated that there was a strong emphasis on safety. They feel they can talk to any faculty member and get problems resolved.

Strengths:
1. Evidence of strong safety culture.
2. Safety program and reporting deployed through Blackboard for timely delivery and accessible to all users. Incidents are shown as reported, investigated and resolved.
3. Students interviewed reported a strong emphasis on safety culture and performance of prescribed procedures.

Weaknesses:
None.

Suggestions:
None.

Recommendations:
None.
X. RELATIONS WITH INDUSTRY

A. Advisory Committees
An Industry Advisory Board, composed mostly of SOSU alumni pilots, meets once per year on the campus. This group performs as the Flight program board, but no individuals are identified as Aviation Management advisors. In addition, tracking the discussions and recommendations of these groups is difficult, since no written agenda or minutes are kept.

The relationship between SOSU and Envoy Airline was recently recognized by the Oklahoma Board Regents with the Business Partnership Excellence Award.

Students feel they have great opportunities to be mentored by graduates. They have access to contact information of graduates and feel comfortable contacting them when they have questions about the industry or about an issue.

Strengths:
1. Alumni actively involved in mentoring students.
2. Envoy Airline partnership promotes student career path success.
3. SOSU and Envoy Airline awarded the Oklahoma Board of Regents for Business Partnership Excellence Award.

Weaknesses:
1. Professional Pilot Advisory Board lacks documentation of meetings.
2. Aviation Management Advisory Board members not sufficiently identified.

Suggestions:
1. Document meeting agendas and minutes.
2. Document Advisory Board membership.

Recommendations:
None.
XI. CONTINUOUS ASSESSMENT AND IMPROVEMENT

A. **Students**
Students are assessed each semester with a written assessment completed each fall. Faculty members identify the strengths and weaknesses of each class. Through collaboration with the Aviation faculty, the results are evaluated and a plan is developed. The final decision is that of the ASI co-directors, the departmental culture is such that everyone feels as if they have a say in all things related to program effectiveness.

B. **Program Mission and Educational Goals**
Each semester Department chairs collect data on student progress during that semester’s classes. This data is analyzed and later combined with all the data for the academic year to produce the Program Outcome Assessment Report. These reports also contain data for the previous five years so that longer term trends may be detected and analyzed.

C. **Student Learning Outcomes**
The Team was presented a Program Level Assessment and Action Plan, dated November 2016. The plan covered the years 2012 through 2015 and covered the AABI student learning outcomes associated with various flight courses. Most student cohorts were performing above stated limits and very few corrective actions were recommended. The reporting and analysis was conducted using the Taskstream program.

D. **Curriculum**
Assessment of curriculum for the Bachelor of Science in Aviation for the majors of Professional Flight (AABI Flight Education) and Aviation Management Business Option (AABI Aviation Management) is conducted continuously through a variety of means, such as Industry Advisory Board reviews, capstone course evaluations, and interactions with Envoy Pilot Pipeline Program representatives, and connections with alumni.

E. **Faculty and Staff**
Assessment of faculty and staff for the Bachelor of Science in Aviation for the majors of Professional Flight (AABI Flight Education) and Aviation Management Business Option (AABI Aviation Management) is conducted continuously through a variety of means as per the current version of the Academic Policies and Procedures Manual (APPM), which guide the activities and actions of the faculty, administration, and staff.

F. **Facilities, Equipment and Services**
There is currently no formal or regularly scheduled assessment of ASI facilities or equipment. The ASI co-directors work closely with the chief pilot and the lead maintenance technician to evaluate the ability of the ASI’s aircraft and facilities to meet the educational needs of the various Aviation programs. However, since the ASI is an FAA Part 141 school, the FAA does conduct an annual facility inspection.

G. **Institutional Structure and Support**
There was no procedure provided on how the programs assessed this area.
H. **Aviation Safety Culture and Program**

The safety program has benefited from the innovation of the safety developers, who developed the use of the college’s LMS, Blackboard, in fulfilling the four pillars of the Safety Management System (SMS). Two of the most difficult accomplishments, for a small unit such as the Aviation program, are easing the work of reporting and tracking incidents, and promoting the safety program. These chores are accomplished with much less work and resources through the use of a system all students and instructors use every day for other course work, and are therefore familiar with. The Team was shown evidence of multiple reports, analysis, safety bulletins sent to students to “read before flight,” and other enhancements which are difficult without a familiar data management structure. The record keeping provided by Blackboard leaves a trail of historical problem solving and improvement in the safety area.

I. **Relations with Industry**

The Advisory Board structure seems to be an informal meeting during the Annual Aviation Alumni Reunion and Awards Banquet every spring. The lack of agenda or minutes from these meetings leaves no method to determine if problems are discussed, recommendations accepted and acted upon, and the result of the efforts. Additionally, the Board is made up of pilot-alumni, which tends to bias the independent advisory role of the Board toward the way things have always been done, as opposed to continuous improvement driven by different academic perspectives.

**Strengths:**
1. Professional Pilot program is comprehensive and well-maintained.
2. Professional Pilot Advisory Board enjoys strong alumni support.

**Weaknesses:**
1. No evidence of Aviation Management assessment and improvement process.
2. No evidence of recommendations and improvements based on the Aviation Advisory Board.
3. No formal assessment of facilities, equipment and services and no process for evaluation of institutional structure and support.

**Suggestions:**
None.

**Recommendations:**
1. Develop a comprehensive assessment plan (AABI Criterion 3.10.1).
XII. SUMMARY OF STRENGTHS, WEAKNESS, SUGGESTIONS AND RECOMMENDATIONS

Strengths:

1. Actively engaged in student government association.
2. Appreciate faculty efforts as advisors.
3. Described as more focused by administration.
4. Aviation Sciences Institute mission strongly supports the institutional mission.
5. Professional Pilot program has clearly identified, measurable goals.
6. Professional Pilot program has well-documented evidence of measurable learning outcomes.
7. Curricula are well-balanced with liberal arts and major courses.
8. Curricula provide ample opportunity for general elective courses.
9. Institution has well-established procedures for promotion, tenure and faculty recruitment.
10. Faculty are well-qualified with industry experience.
11. Administration was proactive to replace Aviation faculty during hiring freeze.
13. Strong support for the programs by the administration.
14. Administration was proactive in managing state budget reductions.
15. Innovative resource management techniques to increase efficiency.
16. Evidence of strong safety culture.
17. Safety program and reporting deployed through Blackboard for timely delivery and accessible to all users. Incidents are shown as reported, investigated and resolved.
18. Students interviewed reported a strong emphasis on safety culture and performance of prescribed procedures.
19. Alumni actively involved in mentoring students.
20. Envoy Airline partnership promotes student career path success.
21. SOSU and Envoy Airline awarded the Oklahoma Board of Regents for Business Partnership Excellence Award.
22. Professional Pilot program is comprehensive and well-maintained.
23. Professional Pilot Advisory Board enjoys strong alumni support.

Weaknesses:

1. Enrollment data was not current.
2. The Aviation Sciences Institute Web site does not accurately represent accreditation status.
3. Educational goals are not published for either program.
4. Aviation Management program has no documentation of goals.
5. There is no formal program mission statement for the Aviation Management Business Option.
6. There is no recent documentation of Aviation Management SLOs.
7. Co-director workload is excessive.
8. Aircraft year and model are not comparable to industry and educational standards.
9. Constant maintenance of aircraft detracts from aircraft availability to meet educational outcomes.
10. State budget cuts adversely affected University budget which has limited the distribution of departmental funding.
11. Professional Pilot Advisory Board lacks documentation of meetings.
12. Aviation Management Advisory Board members not sufficiently identified.
13. No evidence of Aviation Management assessment and improvement process.
14. No evidence of recommendations and improvements based on the Aviation Advisory Board.
15. No formal assessment of facilities, equipment and services and no process for evaluation of institutional structure and support.

**Suggestions:**
1. Use current enrollment data.
2. Review co-director workload and release time.
3. Develop aircraft replacement plan.
4. Evaluate aircraft maintenance workload.
5. Continue monitoring incoming resources to proactively prepare for future funding trends.
6. Document meeting agendas and minutes.

**Recommendations:**
1. Indicate that AABI accredits programs not organizations (AABI PPM 3.4.1).
2. Institution must broadly and accurately publish the objectives of each accredited program (AABI PPM 3.4.2).
3. Publish educational goals, having sufficient detail to be measured, that are consistent with the mission of the institution (AABI Criterion 3.2.a).
4. The Aviation Management program must have a mission statement (AABI Criterion 3.2).
5. Update Aviation Management Taskstream entries and publish student learning outcomes (AABI Criterion 3.3).
6. Develop a comprehensive assessment plan (AABI Criterion 3.10.1).
May 15, 2017

Dr. Gary J. Northam  
President  
Aviation Accreditation Board International  
3410 Skyway Drive  
Auburn, AL 36830

Dear President Northam,

Please find enclosed the response by Southeastern Oklahoma State University to the comments and recommendations made in the Final Report submitted by the Aviation Accreditation Board International (AABI) Visiting Team following their review of our undergraduate aviation programs. We are highly appreciative of the time and effort spent by AABI and the Visiting Team to evaluate Southeastern’s aviation programs at all our locations of program delivery in Oklahoma. The suggestions and recommendations made by the Visiting Team provided us with new ideas and useful comments on how to enhance and strengthen our programs. As detailed in our response, we are pleased to convey that many of the comments and recommendations in the report already have been addressed and plans have been developed to work on the other items identified.

At Southeastern, we believe the AABI accreditation embodies what we know to be true about our undergraduate aviation programs, they are two of our premier programs. We have a dedicated group of faculty, staff, and administrators that are committed to providing high-quality educational programs and experiences to the students we serve.

Please do not hesitate to contact me, Dr. Stan Alluisi, or Mr. George Jacox, if additional information is needed as AABI completes the review process of our request for continued accreditation. Once again, thank you, members of the Visiting Team, and other AABI personnel for all the work required as part of the reaffirmation of accreditation process. We look forward to learning the results of the Accreditation Committee this summer.

Sincerely,

Sean Burrage  
President
Responses to the Suggestions and Recommendations from the AABI Final Report of the Accreditation Team’s Visit to Southeastern Oklahoma State University

The response by Southeastern Oklahoma State University to the AABI Accreditation Team’s Report is in two parts. In Part I, a response is provided to each area of improvement that the visiting team noted in its report. Our response includes an explanation of actions already taken, as well as and what we plan to do in the future, to address the Team’s comments that will ultimately strengthen and enhance our programs.

In Part II, a response is provided to each specific recommendation in the Final Report as requested in the letter dated 12 April, 2017 from Dr. Gary Northam, President of AABI, to President Burrage (see attached letter). As provided in Dr. Northam’s letter, we have included additional information with our responses.

PART I

Section I: Introduction

- **Team Comment**—The Aviation Sciences Institute Web site incorrectly states that the Aviation Sciences Institute is accredited by AABI. It should state that the programs: B.S. Aviation Management: Business Option and B.S. Aviation Professional Pilot, are AABI-accredited.
- **SE Response**—The ASI web page ([www.se.edu/dept/aviation/](http://www.se.edu/dept/aviation/)) has been updated to address this Team Comment.

Section II: Students

- **Team Comment**—Enrollment data in Self-Study Report (SSR) indicates data is not current, data headings define the years 2006-2010. The chair was unable to confirm the data at the time of visit.
- **SE Response**—We believe the data are correct and that the headings were not changed (See Figure 1).

- **Team Comment**—The unit did not produce data records reflecting the employment or continuing education experience of students graduating from the program during each of the preceding five years.
- **SE Response**—We have been collecting some basic data on graduating seniors for the past few years with an Alumni Tracking Form (see Figure 2). We will develop and begin to use a simple database to track graduates through their first post-graduation employment or additional schooling beginning this summer.

Section III: Program Mission and Educational Goals

- **Team Comment**—The Aviation Sciences Institute Web site incorrectly states that the Aviation Sciences Institute is accredited by AABI. It should state that the programs are AABI-accredited, specifically: B.S. Aviation Management: Business Option and B.S. Aviation Professional Pilot.
- **SE Response**— The ASI web page ([www.se.edu/dept/aviation/](http://www.se.edu/dept/aviation/)) has been updated to address this Team Comment.

- **Team Comment**—*The mission of the Professional Pilot program was published with the assessment report, but no mission statement could be found for the Aviation Management Business Option.*

- **SE Response**—Aviation Management Mission Statement will be published on the updated web site in summer 2017 and included in the new 2017-2019 catalog.

- **Team Comment**—*Taskstream is the software used for the collection of assessment data. No data could be located for the Aviation Management program for the last two years.*

- **SE Response**—Complete assessment data for Aviation Management will be up-loaded to Taskstream by mid-May 2017. These data also will be published on the Academic Affairs website ([www.se.edu/dept/academic-affairs/program-outcomes-assessment-reports/](http://www.se.edu/dept/academic-affairs/program-outcomes-assessment-reports/)) by June 1, 2017.

- **Team Comment**—*The goals of the Aviation programs are clearly defined, but they are not published so they are accessible to stakeholders.*

- **SE Response**—Goals will be published on the updated web site in summer 2017 and included in the 2017-2019 catalog.

- **Team Comment**—*The goals were finalized in their present form after discussions with student groups, then existing Industry Advisory Board members and faculty, although no documentation of Industry Advisory Board meeting could be found.*

- **SE Response**—An Industry Advisory Board web presence is being created and will be available by summer 2017. This website will include information on membership, activities, recommendations, and accomplishments of the Industry Advisory Board.

- **Team Comment**—*The University publishes several studies such as retention and graduation rates that are in some cases broken down by major. There was no evidence that these available products are being used by the ASI.*

- **SE Response**—They are correct. We usually do not use this data. We usually already know why our major do not return or graduate. However, we plan consider these data to determine if our retention and graduation rates are within the range of values found at similar programs at other institutions.

**Section IV: Student Learning Outcomes**

- **Team Comment**—*There is no recent documentation of Aviation Management SLOs.*

- **SE Response**—Complete assessment data for Aviation Management will be up-loaded to Taskstream by mid-May 2017 and published on the Academic Affairs website by June 1, 2017; the assessment plan is embedded in Taskstream report ([www.se.edu/dept/academic-affairs/program-outcomes-assessment-reports/](http://www.se.edu/dept/academic-affairs/program-outcomes-assessment-reports/)).
Section V: Curriculum

- **Team Comment**—Evidence in the academic catalog does not clearly define the curriculum requirement. The catalog curriculum layout on page 104 in the 2015-2017 SOSU Academic Catalog describes only 99 hours of course work. The chair stated the remaining credit hours were general electives. Evidence includes the academic catalog, curriculum worksheets, faculty description and student transcripts.

- **SE Response**—The new Southeastern 2015-2017 Undergraduate & Graduate Catalog ([www.se.edu/academics/files/2015/04/catalog_final_web.pdf](http://www.se.edu/academics/files/2015/04/catalog_final_web.pdf)) was distributed the day the visiting team arrived on campus and this may have caused some confusion. Publication of the 2017-2019 catalog also will help to clarify this issue.

Section VI: Faculty & Staff

- **Team Comment**—Assignments are consistent with the University and are equivalent to norms found throughout the institution except for chairs who appear to teach full loads and do not receive the relief specified for their administrative assignments.

- **SE Response**—A couple of different reorganizational scenarios are being considered for the next fiscal year (starts July 1, 2017). Once the state allocations is determined and SE’s budget approved in June 2017, which option i

Section VII: Facilities, Equipment and Services

- **Team Comment**—Aircraft year and model are not comparable to industry and educational standards.

- **SE Response**—The entire fleet is undergoing a five-year cycle of avionics upgrades and improvements. All aircraft (two Cessna 150’s; six Cessna 172’s; two Cessna 182RG’s; and one Cessna 310) will be upgraded with new Garmin G650 moving map navigation systems as well as Garmin G340 transponders to allow our aircraft full access to the National Airspace System. One remaining Cessna 172 with the advanced Garmin G1000 system will have its transponder upgraded to meet new FAA airspace requirements.

After the avionics upgrades are complete another five-year upgrade cycle will begin where each aircraft will have paint and interiors upgraded.

Southeastern has received a $1,000,000 commitment to support capital improvements and operations in the Aviation Sciences Institute. Using the lead gift as leverage, Southeastern has made applications and had conversations with individuals and foundations to provide additional support for ASI.

- **Team Comment**—Constant maintenance of aircraft detracts from aircraft availability to meet educational outcomes.
• **SE Response**—We respectfully disagree that this is a serious problem (except for possibly the Cessna 310). An additional maintenance technician also would help address this issue.

**Section VIII: Institutional Structure and Support**

• **Team Comment**—*State budget cuts adversely affected University budget which has limited the distribution of departmental funding.*

• **SE Response**—Southeastern cannot control the state allocation; however, we can influence enrollment trends. Several campus-wide initiatives, as well as ASI-specific efforts, to increase the recruitment and retention of students will help offset budget reductions, at least in part, by the state.

**Section IX: Aviation Safety Culture and Program**

• **Team Comment**—*No Weaknesses.*

• **SE Response**—The safety of all our students, staff, and faculty is a top priority for ASI and the institution.

**Section X: Relations With Industry**

• **Team Comment**—*Professional Pilot Advisory Board lacks documentation of meetings.*

• **Team Comment**—*Aviation Management Advisory Board members not sufficiently identified.*

• **SE Response**—An Industry Advisory Board web presence is being created and will be available by summer 2017. This website will include information on membership, activities, recommendations, and accomplishments of the Industry Advisory Board.

**Section XI: Continuous Assessment and Improvement**

• **Team Comment**—*There is currently no formal or regularly scheduled assessment of ASI facilities or equipment.*

• **SE Response**—The Industry Advisory Board will be charged with helping us formally assess the ASI facilities, aircraft, and other equipment to meet our educational needs in a safe manner.

• **Team Comment**—*The Advisory Board structure seems to be an informal meeting during the Annual Aviation Alumni Reunion and Awards Banquet every spring. The lack of agenda or minutes from these meetings leaves no method to determine if problems are discussed, recommendations accepted and acted upon, and the result of the efforts. Additionally, the Board is made up of pilot-alumni, which tends to bias the independent advisory role of the Board toward the way things have always been done, as opposed to continuous improvement driven by different academic perspectives.*

• **SE Response**—As noted earlier, an Industry Advisory Board web presence is being created and will be available by summer 2017. This website will include information on membership, activities, recommendations, and accomplishments of the Industry Advisory Board.
PART II

Recommendations

- **Team Recommendation 1.** *Indicate that AABI accredits programs not organizations (AABI PPM 3.4.1).*
- **SE Response**—This has been corrected on the ASI web page ([www.se.edu/dept/aviation/accreditation/](http://www.se.edu/dept/aviation/accreditation/))

- **Team Recommendation 2.** *Institution must broadly and accurately publish the objectives of each accredited program (AABI PPM 3.4.2).*

- **Team Recommendation 3.** *Publish educational goals, having sufficient detail to be measured, that are consistent with the mission of the institution (AABI Criterion 3.2.a).*

- **Team Recommendation 4.** *The Aviation Management program must have a mission statement (AABI Criterion 3.2).*

- **SE Response to Recommendations 2-4**—Aviation Management Mission Statement and goals will be updated and published on the updated ASI web site not later than summer 2017 and included in the 2017-2019 catalog.

- **Team Recommendation 5**—*Update Aviation Management Taskstream entries and publish student learning outcomes (AABI Criterion 3.3).*

- **SE Response**—Complete assessment data for Aviation Management will be up-loaded to Taskstream by mid-May 2017. These data also will be published on the Academic Affairs website ([www.se.edu/dept/academic-affairs/program-outcomes-assessment-reports/](http://www.se.edu/dept/academic-affairs/program-outcomes-assessment-reports/)) by June 1, 2017.

- **Team Recommendation 6**—*Develop a comprehensive assessment plan (AABI Criterion 3.10.1).*

- **SE Response**—An Industry Advisory Board web presence is being created and will be available by summer 2017. This website will include information on membership, activities, recommendations, and accomplishments of the Industry Advisory Board. ASI will also coordinate with the Industry Advisory Board and the administration to expand our assessment process and make it more comprehensive.

Additionally, the five-year cycle of avionics upgrades and subsequent five-year cycle to paint and refurbish plane interiors will be included in the comprehensive plan.

The items mentioned above, when coupled with the assessment of student learning outcomes, will provide a more comprehensive assessment plan.
Attachments and Figures
April 12, 2017

Mr. Sean Burrage
Office of the President
Southeastern Oklahoma State University
1405 North Fourth Avenue
PMB 4236
Durant, OK 74701-0609

Dear Mr. Burrage:

Enclosed is a copy of the Final Visiting Team Report, which has been submitted by the Visiting Team following the reaffirmation visit to Southeastern Oklahoma State University on March 5-8, 2017. You are asked to review this report and respond to the recommendations set forth in the report not later than May 15, 2017. In your response, it would be helpful to restate each recommendation. If you desire to respond to the suggestions or submit additional information, you may include an attachment to your response that expands on your statement.

The response from your institution, along with the Final Visiting Team Report, will be forwarded to the Accreditation Committee for their review and final recommendation on accreditation/reaffirmation action at the next meeting of the Committee. The Board of Trustees of the Aviation Accreditation Board International (AABI) at its July 2017 meeting will consider the recommendations from the Accreditation Committee. If you or any of your colleagues would like to attend this meeting, registration information will be posted on the AABI Web site: www.aabi.aero. Following the meeting, I will inform you by letter of the decision of the Board. In the meantime, if you have any questions or concerns, please call me at (334) 844-2431.

Sincerely,

[Signature]

Gary, J. Northam, Ph.D.
President

Enclosure: Visiting Team Final Report

cc: Dr. Thomas Carney, Chair, Accreditation Committee
    Dr. Barney King, Assistant Chair, Accreditation Committee, and Visiting Team Chair
    Dr. Stanley Alluisi, Co-Director, Aviation Sciences Institute
    Prof. George Jacox, Co-Director, Aviation Sciences Institute
Figure 1. Corrected Enrollment Tables

Quality of New Students Table

Indicate the quality of the new students for the most recent full year. Show the average values.

<table>
<thead>
<tr>
<th>Year</th>
<th>Scores</th>
<th>High School Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Verbal</td>
<td>Math</td>
</tr>
<tr>
<td>ACT or international equivalent (specify)</td>
<td>17</td>
<td>22</td>
</tr>
<tr>
<td>SAT or international equivalent (specify)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Enrollment Data Table

1. Indicate the total number of undergraduate students enrolled in the aviation program being submitted for accreditation during the fall semester or quarter for the past five years.

<table>
<thead>
<tr>
<th>Year</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>First year students</td>
<td>13</td>
<td>9</td>
<td>13</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>Second year students</td>
<td>12</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>Third year students</td>
<td>22</td>
<td>7</td>
<td>10</td>
<td>18</td>
<td>14</td>
</tr>
<tr>
<td>Fourth year students</td>
<td>43</td>
<td>52</td>
<td>42</td>
<td>47</td>
<td>45</td>
</tr>
<tr>
<td>Totals</td>
<td>90</td>
<td>75</td>
<td>73</td>
<td>82</td>
<td>76</td>
</tr>
</tbody>
</table>

2. Provide tabular data that indicate the approximate number of full-time and part-time undergraduate students for the fall semester or quarter for the past five years.

<table>
<thead>
<tr>
<th>Year</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full Time</td>
<td>34</td>
<td>24</td>
<td>32</td>
<td>28</td>
<td>33</td>
</tr>
<tr>
<td>Part Time</td>
<td>56</td>
<td>51</td>
<td>41</td>
<td>54</td>
<td>43</td>
</tr>
</tbody>
</table>

Define the institution's method of accounting for part-time students.
Southeastern Oklahoma State University
Aviation Sciences Institute
Alumni Tracking

Congratulations on completing the aviation professional pilot program at Southeastern Oklahoma State University. We are proud of your accomplishments as you certainly must be. We have an accreditation requirement to follow our alumni as they go forth into their chosen field. Therefore, we need your assistance in complying with the accreditation policy concerning alumni tracking. We request you complete the following information:

Name _________________________________________
Date of graduation from Southeastern ____________
Permanent address ______________________________
 permanence
 permanence
 permanence
 Permanent email ________________________________
 Phone number __________________________________

Employment
Are you employed or assuming a position? Yes _____ No____

If you selected yes to the previous question please list the name and address of your employment:

Name: ____________________________________________
Address: ____________________________________________

☐ Check here if you prefer to not provide information

Please advise us of changes in employment and contact information and send them to us at Southeastern Aviation Sciences Institute, 425 W. University Boulevard, Durant, OK 74701. We also have a Facebook presence we encourage you to participate in; listed as Southeastern Oklahoma State's Aviation Sciences Institute.

Figure 2. Alumni Tracking Form
AAB International

August 7, 2017

Mr. Sean Burrage
Office of the President
Southeastern Oklahoma State University
1405 North 4th Avenue
PMB 4236
Durant, OK 74701-0609

Dear Mr. Burrage:

At its Annual Meeting July 18-21, 2017, the Accreditation Committee and the Board of Trustees of the Aviation Accreditation Board International (AABI) acted on the application for reaffirmation submitted by Southeastern Oklahoma State University on April 11, 2016. I am pleased to advise you that the Board action was to grant reaffirmation for a period of five years for the following programs:

- B.S. in Aviation Management, Business Option (AABI Aviation Management)
- B.S. in Aviation Professional Flight (AABI Flight Education)

The Board accepted the institutional response for Recommendation 1; however, an interim report is due to this office June 5, 2018, for Recommendations 2-6, specifically:

2. (The) Institution must broadly and accurately publish the objectives of each accredited program (AABI PPM 3.4.2).

Provide evidence that the institution has broadly and accurately published the objectives of each accredited program.

3. Publish educational goals, having sufficient detail to be measured, that are consistent with the mission of the institution (AABI Criterion 3.2.a).

Provide evidence that the institution has published educational goals, having sufficient detail to be measured, that are consistent with the mission of the institution.

4. The Aviation Management program must have a mission statement (AABI Criterion 3.2).

Provide evidence that the Aviation Management program has a mission statement.

5. Update Aviation Management Taskstream entries and publish student learning outcomes (AABI Criterion 3.3).

Provide evidence that the Aviation Management Taskstream entries and the data on the Academic Affairs website have been updated. The report should also provide evidence that the student learning outcomes for Aviation Management have been published.

6. Develop a comprehensive assessment plan (AABI Criterion 3.10.1).

Provide evidence that the institution has developed, and is using, a comprehensive assessment plan.
Enclosed with this letter is a public release policy, which has been excerpted from the AABI Policies & Procedures Manual. Please advise appropriate members of the faculty and staff of the necessity to adhere to this policy. A Certificate of Accreditation and a list of accredited programs are also enclosed.

On behalf of the AABI Board of Trustees, congratulations and thank you for the confidence you have placed in AABI and the commitment that you have evidenced toward quality aviation education through membership and successful reaffirmation of two programs. Since AABI accreditation for these programs will expire on July 31, 2022, we suggest that an application be submitted for reaffirmation of accreditation no later than July 2020 to allow approximately 24 months for the reaffirmation process.

Please feel free to contact me if you have any questions.

Sincerely,

Gary J. Northam, Ph.D.
President

Enclosures

cc: Dr. Thomas Carney, Chair, Accreditation Committee
    Dr. Barney King, Assistant Chair, Accreditation Committee
    Mr. Steve Brown and Capt. Matt Tuohy, Accreditation Committee
    Reviewers (ACRs)
    AABI Board of Trustees
    Dr. Stan Alluisi and Mr. George Jacox, Co-Directors, Aviation Sciences Institute
letter of intent to appeal within 30 days of the date the AABI notification letter was postmarked. Upon receiving the letter of intent to appeal, AABI will appoint a panel of three current or past Board members, who have not voted as a Board member in the prior action, to hear the appeal. AABI must receive the institution’s formal letter of appeal within 60 days of the date of the AABI notification letter. The panel will convene in conjunction with the next regularly scheduled meeting of AABI or a special meeting of the Board. The panel will report its findings to AABI within seven days following hearing the appeal. The AABI Board of Trustees will then take final action on the appeal at its next scheduled meeting.

### 3.4. Public Release Policy

The institution MUST accurately publish the period of accreditation as stated on the Certificate of Accreditation on the public website of each accredited program. In addition, any references to the period of accreditation used for other types of public release MUST also list the period of accreditation as stated on the Certificate of Accreditation. The institution may use the term ‘accredited’ only for those specific programs accredited by AABI. If accreditation is deferred, suspended or revoked, the institution may not use the phrase “accredited by AABI,” even if the phrase states or implies prior or future accreditation.

#### 3.4.1. Accurate Representation of Accreditation Status in Catalogues and Other Documents

Institutions MUST clearly and accurately represent their current accreditation status in all institutional documents and publications, including on-line documents, in which they refer to AABI accreditation. Failure to adhere to this requirement may result in revocation of accreditation for all AABI accredited programs at the institution.

#### 3.4.2

For each AABI-accredited aviation program, institutions MUST accurately publish on the program’s public website the following information, updated annually:

- The objectives of each accredited program
- Admission requirements
- Program assessment measures employed
- The information obtained through these assessment measures and report on actions taken as a result of this assessment
- Student achievement
- Graduation rates
- Rates and types of employment of graduates
- Data supporting the qualitative claims made by the program

Failure to be in continuous compliance may result in suspension of accredited status.

#### 3.4.3

It is AABI’s policy to respond to all public inquiries in accordance with the provisions of Section 3.5 of this document.

AABI will respond to written requests/complaints from students and parents of students enrolled in accredited programs, if appropriate, or will refer the request/complaint to the institution.

AABI will maintain a file of all inquiries and responses for review by CHEA.
AAB International

Leading the World in the Advancement of Aviation Education Accreditation

CERTIFICATE OF ACCREDITATION

presented to

SOUTHEASTERN OKLAHOMA STATE UNIVERSITY

for the following Aviation Programs:

**Durant Campus:**
B.S. Aviation Management: Business Option
B.S. Aviation: Professional Pilot

**Tinker Air Force Base:**
B.S. Aviation Management: Business Option

**Rose State College:**
B.S. Aviation Management: Business Option

**Period of Accreditation:** July 21, 2017, to July 31, 2022

Aviation Accreditation Board International

presented this 21st day of July 2017

Chairperson