GENERAL INFORMATION
Instructor: George Jacox
Office Number: Flight Operations, Eaker Field
Office Hours: T - T, 1400 - 1500, M-W-F, 1400-1700, 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 NT SB 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
Pilots Handbook of Aeronautical Knowledge FAA-H-8083-25A
Airplane Flying Handbook FAA-H-8083-3A
Aircraft Weight and Balance Handbook FAA-H-8083-1A
Instrument/Commercial Manual, Jeppesen Sanderson
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

<table>
<thead>
<tr>
<th>Examination</th>
<th>Points</th>
<th>Grade Range</th>
<th>Grade</th>
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<tbody>
<tr>
<td>Examination #1</td>
<td>100</td>
<td>90 - 100%</td>
<td>A</td>
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<tr>
<td>Examination #2</td>
<td>100</td>
<td>80 - 89%</td>
<td>B</td>
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<tr>
<td>Class Attendance/Participation</td>
<td>100</td>
<td>70 - 79%</td>
<td>C</td>
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<td>60 - 69%</td>
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<tr>
<td>Total</td>
<td>300</td>
<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

Library Services:
Get help @ your library! You may access the online catalog, electronic databases, research guides and help with citing sources from Henry G. Bennett Library’s website at http://www.se.edu/lib/. For research assistance, you may contact the Reference Desk: Phone: 580-745-2935 or Email: dmiles@se.edu or kplunkett@se.edu

Mental 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.

Disability
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.

Lecture Schedule

<table>
<thead>
<tr>
<th>Class period</th>
<th>Lesson</th>
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<tr>
<td>January 14</td>
<td>Introduction-Stage I Lesson 1/2</td>
</tr>
<tr>
<td>January 16</td>
<td>Stage I Lesson 2.</td>
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<td>January 21</td>
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<tr>
<td>January 23</td>
<td>Stage I Lesson 2</td>
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<tr>
<td>January 28</td>
<td>Stage I Lesson 3</td>
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<td>January 30</td>
<td>Stage I Lesson 3</td>
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<tr>
<td>February 4</td>
<td>Stage I Lesson 3</td>
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<td>Stage I Lesson 3</td>
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<tr>
<td>February 11</td>
<td>Stage I Lesson 4</td>
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<tr>
<td>February 13</td>
<td>Stage I Lesson 4</td>
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<tr>
<td>February 18</td>
<td>Review for Test I</td>
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<tr>
<td>February 20</td>
<td>Test I</td>
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February 25  Stage II Lesson 1
February 27  Stage II Lesson 1
March 4  Stage II Lesson 1
March 6  Stage II Lesson 1
March 11  Stage II Lesson 1
March 13  Stage II Lesson 2
Spring Vacation 17 - 21
March 25  Stage II Lesson 2
March 27  Stage II Lesson 2
April 1  Stage II Lesson 3
April 3  Stage II Lesson 3
April 8  Stage II Lesson 3
April 10  Stage II Lesson 4
April 15  Stage II Lesson 4
April 17  Stage II Lesson 4
April 22  Stage II Lesson 5
April 24  Stage II Lesson 5
April 29  Review for Final Exam
May 1  Review for Final Exam
May 5 – 9  Final Exam Week

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
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 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 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) Computation 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.
   (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.**
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.**