AVIA 5103 AEROSPACE SAFETY PROGRAM DEVELOPMENT

This course is designed to provide the essential elements critical to the development, identification, and implementation of an aerospace safety program. Critical measures are discussed and emphasized as integral elements of a comprehensive safety program with focus on identification and prevention of unique safety problems in aerospace. Interaction between national and state government, corporate, and local regulations will be examined in detail supplemented with pertinent case studies.

AVIA 5153 AIRCRAFT ACCIDENT INVESTIGATION

This course is designed to examine the critical analysis of selected aircraft accidents and an evaluation of causal factors. Particular emphasis is placed in the study of human factors connected with flight and crew activities in aerospace operations. Interactions and cooperative agreements between international, national and state government, corporate, and local jurisdictions will be examined in detail supplemented with pertinent case studies. Field investigation techniques, laboratory techniques for accident reconstruction, analysis of cockpit voice recorders, flight data recorders, and air traffic control radar and voice tapes will be examined.

AVIA 5203 LEGAL AND ETHICAL ISSUES IN AEROSPACE

This course addresses legal questions in the field of aviation and ethical factors involved therein. Current issues will be used as the medium for study of the legal and moral concepts that influence developments in both national and international air law. U.S. government and ICAO publication, aviation case reports, air law journals and international aviation treaties will be used as legal support materials. Legal and ethical considerations directly challenging the aviation professional will be addressed through case studies.

AVIA 5213 AEROSPACE ECONOMICS AND FISCAL CONTROL

The major areas of emphasis of this course are the role of government, union and management relations, airline integration, centralized scheduling, flight and crew operations center structures, 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 of the profit/loss.

AVIA 5223 AEROSPACE HAZARD CONTROL AND ANALYSIS

This course examine the modern aerospace work environment from a safety and health point of view. Hazard control of the various substances used in, on and around the airport property, as well as the substances used and carried on aircraft will be reviewed with respect to the proper handling, disposal and emergency procedures. A comprehensive review and understanding of EPA and OSHA policies and procedures is a fundamental tenet of this course.

AVIA 5233 LOGISTICAL STRATEGIES IN AEROSPACE ADMINISTRATION

This course is designed to acquaint the student with the modern requirements for application of Logistics as a Strategy for success in Aviation and Aerospace Administration. The course covers the various applications of Logistics in the Department of Defense and the Commercial Aviation sectors The course focuses on the various strategies for the successful support of Aviation and Aerospace operations in all phases of the logistic process from acquisition through distribution, sustainment, and disposition. Contemporary topics, such as workforce
diversity, and the application of lean manufacturing to distribution, logistics, and supply chain management programs are included in the curriculum.

**AVIA 5303 MNGT AND ADMINISTRATION OF AEROSPACE CONTRACTS**

The focus of this course is the 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.

**AVIA 5313 AEROSPACE FINANCE**

A lecture, discussion and hands-on introduction to economic concepts involved in aviation economic decision analysis. Student application will include performing a Benefits-Cost-Analysis, which will develop techniques for defining and measuring relevant economic units for comparison. This course will introduce students to real world cost modeling business applications using Microsoft Excel. Each student team member will also gain practical hands-on experience in financial decision making as a member of the board for a simulated regional airline. Student teams will compete during the semester modifying regional airlines financial obligations and evaluating the results through interpolation of quarterly reports.

**AVIA 5323 AIRPORT OPERATIONS**

This course addresses operational requirements, responsibilities, and management approaches relevant to major U.S. and international commercial service airports. Both FAA & ICAO standards and methods will be studied in detail for topics such as airport licensing, air side operations, and land side operations, operational safety, coordination of maintenance and construction, aviation security, and disaster preparedness.

**AVIA 5333 AEROSPACE MARKETING**

This course focuses on the fundamental skills of aerospace marketing used by executives in complex, formal organizations. Wherever possible, special emphasis will be placed on the aviation industry. The various functions, aspects and characteristics of aerospace marketing 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 marketing strategy that solves the day-to-day challenges in a company or organization.

**AVIA 5343 IMPLEMENTING LOGISTICS:ACQUISITION & PROGRAM MNGT**

This course is designed to give the student experience in the practical applications of the implementation of systems acquisition process. The course will cover the various policies and philosophies used by the Department of Defense(DoD) and commercial industry to provide for program management within each phase of the systems acquisition process. This course will utilize a team building concept and require that students participate in case study evaluations of various acquisition strategies.

**AVIA 5423 APPLICATIONS IN CREW RESOURCE MANAGEMENT**

This course will focus on problems and solutions in decision making and communication unique to aerospace operations. This course will examine methods to improve effective crew management utilizing the common concepts of Crew Resource Management (CRM) as developed by major air carriers and explore the theoretical basis of such training. Topics such as supervision of crewmembers, counseling, accountability and role management will be studied. Each student will assist in the development of a CRM program.
AVIA 5513 QUANTITATIVE ANALYSIS OF AEROSPACE DATA FOR ADMIN

This course will introduce the student to concepts, methods and an assortment of quantitative management tools available to the Aerospace Manager. This course emphasizes an applied approach providing a practical understanding of: project management, product design, project control, learning curve theory, critical path analysis and break-even analysis. This course will introduce students to real world statistical business applications using Microsoft Excel.

AVIA 5523 RESEARCH METHODS IN AEROSPACE

Concepts and methods of the scientific research process within the context of business and management. The course emphasizes an applied approach providing a through understanding of the nature and scope of business research. Student application will include developing and presenting a five chapter Graduate Research Study. Study format will include: Chapter One: Introduction; Chapter Two: Review of the Literature; Chapter Three: Procedures; Chapter Four: Findings and Chapter Five: Summary and Conclusion. This course will introduce students to real world statistical business applications using Microsoft Excel.

AVIA 5533 COMMUNICATION IN AEROSPACE MANAGEMENT

This course focuses on the fundamental skills of business communications used in complex, formal organizations. Wherever possible, special emphasis will be placed on the aviation industry. 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. A wide array of teaching methods will be used, including textbook and outside readings, student presentations, instructor presentations, outside speakers, group discussion, case studies, and audio-visuals.

AVIA 5543 SYSTEMS ENGINEERING APPLICATIONS FOR LOGISTICS

This course will cover the process in Logistics referred to as Systems Engineering (SE). The Systems Engineering processes covered in this course consist of a rigorous and interdisciplinary set of interactive activities that are designed to support the full life cycle of any product. Students will learn the principles and techniques that are involved in the SE processes that fully integrate cost, scheduling, and performance into the rationale and methodologies that support all necessary management decisions, often referred to a process inputs and outputs.

AVIA 5613 THE ETHICS OF DECISION MAKING-MANAGING CONSEQUENCE

Courses in ethics and ethical-centered decision making exist within most engineering, law, business and medical schools, but very little is done specifically to prepare the aerospace professional for their role in decision-making. This course seeks to create a high awareness on the part of aviation and space professionals with regard to their potential impact on these issues and give them skills to effectively deal with such critical problems.

AVIA 5950 GRADUATE INTERNSHIP IN AEROSPACE

The graduate internship is aerospace course is an academic and professional activity that is coordinated by the university between aerospace related organizations and the student. An internship in aerospace provides the student with an opportunity to extend their academic endeavors through the applications of theories and philosophies studied in the classroom to specific activities.
AVIA 5960 DIRECTED READINGS IN AEROSPACE

This course provides an opportunity to augment or develop specialized areas in the aerospace curriculum as determined by the instructor. Students may elect to perform a special, directed analysis and or independent study in an area of particular interest. A detailed proposal of the project must be developed and presented to the instructor for approval.

AVIA 5980 SEMINAR IN AEROSPACE TRENDS

The seminar in aerospace trends is designed to provide individual and group research projects into contemporary issues confronting aerospace administrators. The dynamics of this course require the students present their findings to a group of their peers in a formal academic environment.