

## Worldwide 2008-2010 Catalog

The following additions or changes apply to the 2008-2010 Worldwide volume of the Embry-Riddle Aeronautical University Catalog with the effective date of July 1, 2008 through June 30, 2010.

*Corrected Course: AMGT 202 name and course description reverted to original - Ref Page 74- (Effective 9/1/09)*

The AMGT 202 course has been corrected to revert to the original title and description.

AMGT 202

Aeronautical Science for Management

3 Credits

An introductory course in Aeronautical Science to provide students an orientation in aviation topics appropriate to management degree programs. Subjects include: the aviation profession; the science of flight; safety, security and human factors; aviation resources; the aviation environment; and meteorology.

*New Course: ASCI 356 - (Effective 7/1/09)*

ASCI 356

Aircraft Systems and Components

3 Credits

This course is a comprehensive study of aircraft systems and components at the technical level. Areas of study include aircraft electrical, hydraulic, fuel, propeller, and auxiliary systems including theory of operation, calculations, and related Federal Aviation Regulations. Prerequisite: PHYS 102.

*New Course: ESCI 105 - (Effective 7/1/09)*

ESCI 105

Fundamentals of Engineering

3 Credits

This course explores the topic of engineering and is appropriate for both those intending to major or specialize in engineering (or engineering sciences) and those with an interest in learning about the design process and other aspects of the engineering profession. Students will learn how to formulate, articulate, and solve problems, how to work on a conceptual design team, and how to present the results of engineering work in oral and written form. Students will also learn about the different disciplines of engineering and the multidisciplinary nature of modern engineering design. Corequisite: MATH 251

*New Course: SCTY 323 - (Effective 7/1/09)*

SCTY 323

Intelligence and Technology

3 Credits

This course will examine the whole arena of intelligence and technology, beginning with the World War II period, when science and technology came to play a critical role in intelligence. The course will cover technical intelligence collection methodologies and systems, the use of aircraft and space-based vehicles as collection platforms for photo-optical and digital imagery, radar imaging, infrared and multi-spectral imagery, signals intelligence, etc. The course will provide a technical understanding of these methodologies, as well as an analysis of their place in all-source

collection. The course will also examine the current development and implications of intelligence technologies, such as the emergent UAV systems.

*New Course: SCTY 324 - (Effective 7/1/09)*

SCTY 324

Cybersecurity and Information Assurance

3 Credits

This course examines the range of vulnerabilities and threats that affect corporate and government computer networks. Cybercrimes, such as credit card fraud, intellectual property theft, pedophilia, terrorism, hacking, etc. will be covered as well as industry and government best practices to defeat such crimes. Additionally, the course will cover ways to maintain and protect information on the computer, the key issues that impact the management of cybersecurity resources, and the role risk plays in allocating cybersecurity resources.

*New Course: SFTY 215 - (Effective 7/1/09)*

SFTY 215

Introduction to Health, Occupational, and Aviation Safety

3 Credits

This course introduces the student to the field of safety and covers basic health, safety, and regulatory issues that apply to aviation business in the United States. Included is a comprehensive health and safety overview of legislative development and enactment of appropriate statutes, regulations, and laws. This course also provides an introduction to hazard recognition, reporting, analysis, and control used in risk management and accident prevention. Additional topics include accident investigation, safety data statistics, ergonomics, security and emergency preparedness, safety culture, aircraft systems, air traffic control, and workers' compensation. This course reviews theories, applications, and practices of the field of safety.

*Revised Course: ASCI 309 revised course description - Ref Page 76- (Effective 7/1/09)*

ASCI 309

Aerodynamics

3 Credits

Students are provided with the opportunity to explore incompressible flow airfoil theory and wing theory. Topics center on calculations of stall speed, drag and basic performance criteria, configuration changes, high and low speed conditions, special flight conditions, and an introduction to compressible flow.

Prerequisites: MATH 112 or MATH 142, and PHYS 102

*Revised Courses: SFTY 365, 409, 420, & 470 – Ref. Pages 93 & 94- (Effective 7/1/09)*

SFTY 365

Fire Protection

3 Credits

This course introduces the basics of fire and fire protection. Students will study the physics, chemistry, characteristics and behavior of fire, fire hazards of material, fire suppression systems, extinguishing agents, and detection and alarm systems. Transportation and industrial related fire hazards and the prevailing regulatory requirements will be covered. (Cannot be used for credit toward degrees in Fire Science.) Prerequisites: PHYS 102, SFTY 311.

**SFTY 409**

## Aviation Safety

3 Credits

This course covers all facets for an aviation safety program including both flying safety and safety of ground operation. Major problem areas in aviation safety, safety program evaluation, and impact of accidents on industry are covered. Focus is on human factors, basic accident prevention programs, and the roles of various government and industry organizations have in preventing accidents. Prerequisite: SFTY 320.

**SFTY 420**

## Systems Design for Fire and Life Safety

3 Credits

This course centers on design principles involved in building construction standards and building codes to assure maximum life and property safety from fires, explosions, and natural disaster. Egress design specifications, occupancy and construction classifications, and fire protection requirements for buildings will be covered. (Cannot be used for credit toward degrees in Fire Science.) Prerequisites: PHYS 102, SFTY 311.

**SFTY 470**

## Advanced Occupational Safety and Health Technology

3 Credits

This course is the culminating experience that derives from previous work in the occupational safety and health technology field. In this course, a heavy emphasis is placed on the analysis of previously learned occupational safety and health theories and concepts so as to determine their appropriate application. A secondary emphasis is placed on the horizontal integration of these theories and concepts within a practical framework, which will serve as professional guidance for the practicing Occupational Health and Safety Technologist. Students will draw on previous occupational safety and health studies, and develop and defend an in-depth analysis of an occupational safety and health issue in a program or business of their choice.

Prerequisites: SFTY 311, SFTY 341, and SFTY 355.

**Revised Course: PHYS 150 new course description - Ref Page 90- (Effective 7/1/09)****PHYS 150**

## Physics I for Engineers

3 Credits

Physics 150 is a calculus-based study of the fundamental principles of classical mechanics. It is the first course of a three-semester sequence, intended for students of science and engineering and is designed to provide the student with an appropriate background for more advanced physics and engineering course work. This course provides the student an understanding of vector and scalar quantities, kinematics, Newton's Laws of Motion work-energy, conservation of energy, conservation of momentum, center of mass and its motion, as well as rotation. Problem solving is central to this goal, and practical applications are introduced where appropriate. Prerequisite: Calculus 1 or MATH 112

**Deleted Course: PREP 102 – Course no longer available -Ref Page 90- (Effective 7/1/09)****PREP 102**

## Self-Assessment and Portfolio

Preparation (2,0)

1 Credit

This course is required of all adult undergraduate students seeking an assessment of their prior experiential learning by portfolio. Students will assess their prior learning experiences in light of career and educational goals. The distance learning course is designed to assist students in life and career planning, goal clarification, career concerns, portfolio preparation, and the development of college success skills. The focus is on methods of self-assessment of prior learning work/education/training experiences and procedures for assembling a portfolio to document learning experiences. This course is graded Satisfactory/Unsatisfactory and is required for students who seek prior learning

portfolio evaluation. Students must register for PREP 102 in their first two terms as a degree-seeking student at ERAU.

*New Course: ENGL 106 (Effective 2/1/09)*

ENGL 106

Introduction to Composition

3 Credits

This course focuses on the basic principles of unity, support, and coherence as applied to the writing of a variety of paragraphs and essays. Grammar, mechanics, punctuation, sentence skills and basic writing skills are emphasized.

*New Course: ASCI 495 (Effective 1/1/09)*

ASCI 495

Airborne Law Enforcement

3 Credits

Airborne Law Enforcement covers the historical and modern issues that shape present day airborne law enforcement organizations. Students will study how airborne law enforcement impacts the criminal justice system. Additionally, operational issues, including management of airborne law enforcement units will be studied. Aviation laws and civil/criminal laws that effect airborne law enforcement operations will also be covered. Students will review pilot and crew duties along with aircraft selection and emerging technologies that impact present day airborne law enforcement organizations. The role of airborne law enforcement in preventing and responding to terrorist threats is also reviewed. Safety issues, as they apply to airborne law enforcement, will also be studied.

*Revised Course: AT 302 course description updated to include AT 200 prerequisite (Effective 1/1/09)*

Course description for AT 302 has been updated to include AT 200-Air Traffic Management I, as the prerequisite.

AT 302

Air Traffic Management II

3 Credits

Air Traffic Management II provides the student with an introduction to the manuals, procedures, maps, charts, and regulations used by pilots and air traffic controllers in the National Airspace System (NAS). Included is an examination of FAA Orders, the Aeronautical Information Manual (AIM), and Federal Air Regulations (FARs). Students will also acquire basic knowledge about SIDs, STARs, en route IFR charts, and instrument approaches. search and rescue, special operations, NOTAMS, and teamwork in the ATC environment are also studied in this course. Prerequisite: AT 200

*Revised Course: LGMT to MGMT 652 Specialization #4 MSM – Ref: Page 49 (Effective 9/1/08)*

For Specialization #4 in the Master of Science in Management (MSM) program, LGMT 652 should read: MGMT 652 Concepts and Practices of Project Management.

*New Courses (course descriptions) : ASCI 378, 388, 428, 438 (Effective 7/1/08)*

**ASCI 378**

**Environmental Helicopter Operations (3,0)**

3 Credits

During this course, the student obtains the foundation for helicopter operations in close proximity to the ground in varying environmental conditions. The student will be introduced to aspects particular to helicopter flight as it pertains to adverse weather, day and night environments specifically pertaining to take-off, cruise, and landing. Emphasis will be placed on understanding principles of flight close to the earth and hazards both natural and man-made. Additional emphasis will be placed on helicopter flight in and around mountains. The student will be exposed to visual references and how to adjust perceptions to maintain safe, low-level flight in and around

hazardous conditions present in commercial helicopter operations. By the end of the course, the student will have sufficient knowledge to understand the concepts necessary for employment in the commercial helicopter industry. Prerequisites: Rotorcraft-Helicopter Commercial Pilot Certificate or Instructor Approval

**ASCI 388****Helicopter Flight Planning (3,0)***3 Credits*

During this course, the student obtains the foundation for the FARs as they relate to flight planning and navigation for various operations. The student will be able to use regulatory and operations requirements to plan flights. Remote location flight and terrain flight navigation procedures will be studied closely. Cargo planning for internal and/or external loads will also be considered. Communications procedures with internal and external operations nodes during near-ground operations will be discussed. By the end of the course, the student will have sufficient knowledge to understand the concepts necessary for effective flight planning and operation in the commercial helicopter industry. Prerequisites - Rotorcraft-Helicopter Commercial Pilot Certificate or Instructor Approval

**ASCI 428****FMS/Autopilots for Helicopters***3 Credits*

During this course, the student studies the principles, systems analysis, operations of flight directors with mechanical, glass cockpits, HUDs, autopilots, automatic flight control systems with auto throttle, altitude hold, heading hold, position hold, stability augmentation devices, and flight management systems. Prerequisites: Commercial Helicopter Operations or Approval of Instructor.

**ASCI 438****Advanced Helicopter Operations***3 Credits*

During this course, the student obtains the foundation for advanced and specialized commercial helicopter operations. The student will be introduced to advanced commercial operations and emphasis will be placed on developing a safe and competent pilot and future manager who is adequately prepared for operations in these areas. The student will understand operations management, safety management, training management, crew resource management, personnel management, and acquire an in-depth understanding in maintenance, maintenance tracking and record keeping. By the end of the course, the student will have sufficient knowledge to understand the concepts necessary for employment in the commercial helicopter industry. Prerequisites: ASCI 388 and 378 and Rotorcraft-Helicopter Commercial Pilot Certificate or Instructor Approval