# Extended Campus Catalog 2006-2007





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# EXTENDED CAMPUS LEADING THE WORLD IN AVIATION AND AEROSPACE EDUCATION

#### WORLDWIDE CENTERS AND DISTANCE LEARNING

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In compliance with federal laws and regulations, Embry-Riddle Aeronautical University does not discriminate on the basis of race, color, gender, creed, national and ethnic origin, age, or disability in any of its policies, procedures, or practices. An Equal Opportunity institution, the University does not discriminate in the recruitment and admission of students, in the recruitment and employment of faculty and staff, or in the operations of any programs and activities.

Designed for use during the one-year period stated on the cover, this catalog gives a general description of Embry-Riddle Aeronautical University and provides detailed information regarding the departments within the institution and curricula offered by the University. Supplements to the catalog are available online only. The provisions of the catalog do not constitute a contract between the student and the University. The faculty and trustees of Embry-Riddle Aeronautical University reserve the right to change, without prior notice, any provision, offering, or requirement in the catalog. This includes the right to adjust tuition and fees, as necessary. The University further reserves the right at all times to require a student to withdraw for cause.

Online Catalog: An online version of this catalog, along with catalog supplements, is available at <a href="http://www.erau.edu/ec/catalog">http://www.erau.edu/ec/catalog</a>. Supplements to the catalog are provided to reflect updated information that includes additions, corrections, and/or changes to the initial publication of the catalog.

**ERAU Student Email Accounts:** ERAU issues an email account to each student of the Extended Campus upon registration for courses. Students receive a letter informing them of their email address, password, and additional account information. Please check your ERAU email frequently, as the University will use this account as a means of sending official notification on University matters. Although the software used to send some of these communications automatically includes an "unsubscribe" link at the bottom of each message, *do not unsubscribe* since this will hinder the University's ability to provide you with important information. Your ERAU email account will remain active up to two years after your last ERAU course.

This catalog becomes effective July 1, 2006.

# AVIATION AND EMBRY-RIDDLE: The Lifelong Partnership



At the beginning of the last century no flying schools existed, much less an aviation university. It was not until 1903 that the Wright brothers achieved sustained, controlled flight by a powered aircraft and, in so doing, changed life on this planet forever.

It did not take long for aviation to come of age. By 1914, regular passenger service had been inaugurated in Florida between St. Petersburg and Tampa. Later that year, war came to the European skies. The combined effect of military and commercial demands produced a dynamic new industry.

Unlike many other developments at the end of the Industrial Revolution, aviation required a special education — learning how to fly, learning about safety and weather, and learning about engines — from skilled maintenance to the outer limits of performance.

This need for trained pilots and mechanics quickly led to the establishment of a new type of school, one focused totally on aviation. In the beginning, these organizations were often a combination of airplane dealership, airmail service, flight training center, and mechanic school. The original Embry-Riddle operations fit that mold precisely.

On December 17, 1925, exactly 22 years after the historic flight of the Wright Flyer, barnstormer John Paul Riddle and entrepreneur T. Higbee Embry founded the Embry-Riddle Company at Lunken Airport in Cincinnati, Ohio. The following spring the company opened the Embry-Riddle School of Aviation, coinciding with the implementation of the Air

Commerce Act of 1926, which required, for the first time, the certification and medical examination of pilots.

Although it was a volatile time for aviation enterprises, the school prospered. Others came and went regularly, but Embry-Riddle was not affected.

Within three years the school had become a subsidiary of AVCO, the parent of American Airlines. The school remained dormant during most of the 1930s, mirroring the casualties of the Great Depression. By the end of the decade, however, World War II erupted in Europe and the demand for skilled aviators and mechanics grew significantly. Embry-Riddle's second life was about to begin.

The Lunken Airport operation had long since disappeared, but in Florida Embry-Riddle opened several flight training centers and quickly became the world's largest aviation school. Allied nations sent thousands of fledgling airmen to the Embry-Riddle centers at Carlstrom, Dorr, and Chapman airfields to become pilots, mechanics, and aviation technicians. Some 25,000 men were trained by Embry-Riddle during the war years.

After the war, under the leadership of John and Isabel McKay, Embry-Riddle expanded its international outreach while strengthening its academic programs.

In 1965, with Jack R. Hunt as president, Embry-Riddle consolidated its flight, ground school, and technical training programs into one location. This move, which

proved to be a moment of singular importance, was made possible by Daytona Beach civic leaders who donated time, money, and the use of personal vehicles. The relocation signaled the rebirth of Embry-Riddle and the start of its odyssey to world-class status in aviation higher education. In June 1970, Embry-Riddle changed its name from "Institute" to "University," and resident centers were established at U.S. military aviation centers to serve the educational needs of active-duty military personnel. Application for Southern Association of Colleges and Schools accreditation through the Commission on Colleges was initiated in 1970 and received in 1972. The University has participated in the Self-Study process ever since.

Also under President Hunt's leadership, Embry-Riddle opened a western campus in Prescott, Arizona, on the 511-acre site of a former college. With superb flying weather, expansive grounds, the Prescott campus has been an outstanding companion to the University's eastern campus.

Continuing the legacy left behind by Hunt was Lt. Gen. Kenneth L. Tallman. Tallman was president of Embry-Riddle for five years. He came to the University after a distinguished 35-year military career that included service as superintendent of the U.S. Air Force Academy. Under Tallman's leadership, a school of graduate studies and the electrical engineering degree program were introduced. He led the University into research with the addition of the engineering physics degree program. He also developed stronger ties between Embry-Riddle and the aviation/aerospace industry.

Dr. Steven M. Sliwa led the University from 1991 through 1998. Sliwa, the University's third president, is best known for creating an entrepreneurial environment and for developing strategic partnerships with industry. These partnerships included a joint venture with FlightSafety International; a partnership with Cessna Aircraft Company; a technology alliance with IBM; and an exclusive educational partnership with Aircraft Owners and Pilots Association. He also spearheaded a \$100+ million capital expansion program, which included an \$11.5 million congressional line-item

appropriation. In addition, new academic and research programs were created at his direction to respond to structural changes in the industry while increasing market share in the University's core programs.

Embry-Riddle's fourth president, Dr. George H. Ebbs, led the University from 1998 through 2005. During his tenure, the annual college guide produced by *U.S. News & World Report* consistently ranked Embry-Riddle's aerospace engineering program No. 1 in the nation among schools without doctorate programs. Embry-Riddle's programs in aerospace engineering, aeronautical science, and engineering physics are the largest in the nation.

Under the leadership of Dr. Ebbs, new graduate degree programs in safety science and space science were introduced, as well as new undergraduate degree programs in computer science, global security and intelligence studies, mechanical engineering, software engineering, and space physics. Major construction began on the Aviation Complex at the Daytona Beach Campus and the Academic Complex at the Prescott Campus.

Dr. Ebbs presided over three military contracts worth a total of more than \$57 million. Under those contracts, Embry-Riddle provides aviation-related degree programs to the U.S. military in Europe; trains Air Force pilots at the U.S. Air Force Academy in Colorado Springs, and trains Air Force, Air National Guard, and international flight safety officers at Kirtland Air Force Base in Albuquerque, New Mexico.

Embry-Riddle is a global institution that holds a prominent position in aviation/aerospace education. The University is the world's largest independent aeronautical university and boasts a student body of 30,000 who come from all 50 states and more than 100 nations. The University offers more than 30 degree programs, at the bachelor and master level. Embry-Riddle provides flexible educational services to thousands of working adults through the Extended Campus. Many students receive their degrees from more than 130 teaching centers in the United States and Europe or through distance learning.

### MESSAGE FROM THE PRESIDENT



Dear Students:

Embry-Riddle recognizes that adult learners need access to degree programs and opportunities for continuing education and professional development when trying to stay current in today's constantly changing workplace environment. Our Extended Campus is anywhere you are, in classrooms and online, helping you to compete in the demanding aviation and aerospace world.

Thank you for choosing the Embry-Riddle Aeronautical University Extended Campus for one of the most important investments you will make in your own future. With thousands of students enrolled in our programs today, and over 60,000 graduates, you are now a member of a very large family of leaders in companies, corporations, and in our military forces throughout the world.

Our commitment is to provide you with quality programs and faculty, as well as responsive and caring student services. We know that it isn't easy to continue your education while you are working or have family commitments. That's why we designed our programs to be flexible and convenient, with faculty and staff available to advise you on how to complete your program successfully.

Embry-Riddle has a history, legacy and reputation that dates back almost to the time of the Wright brothers. We pride ourselves on being the world leader in aviation and aerospace education. I welcome you to an exciting and dynamic University, and to the Embry-Riddle experience.

John P. Johnson, Ph.D. Interim President

# EMBRY-RIDDLE'S STATEMENT OF VALUES

#### STUDENT SUCCESS

We understand that students are the lifeblood of Embry-Riddle. We focus and commit ourselves and our resources to the success of current, past, and future students. Our success is gauged by the difference we make in our students' lives.

#### LEARNING ENVIRONMENT

We seek intellectual growth through study, research, questioning, listening, and debate. We value the enlightened interchange of ideas as we challenge one another to do more, to study, to learn, to share, and to grow. We expect members of the student body, faculty, and administration to exercise their academic freedoms and to preserve those of others. We commit ourselves to a lifelong endeavor of learning. We are all teachers and we are all students.

#### **SAFETY**

We care deeply about the health and safety of our students and fellow employees. We believe that each one of us, from the administration to the flight instructors, has a responsibility to make our workplaces safer for everyone. We support the open sharing of information on all safety issues and encourage all employees and students to report significant safety hazards or concerns.

#### INTEGRITY, HONESTY, AND TRUST

Integrity is the most valued employee trait. We believe that honesty is the foundation for interaction in all academic, administrative, and personal matters. The leadership team and each individual bear the responsibility for earning the trust of others.

#### **DIVERSITY**

We respect the rights and property of all individuals regardless of gender, race, ethnicity, national origin, age, physical disability, economic background, sexual orientation, or religious belief. We believe in a community where all members are welcome, and individual groups are free from harassment.

#### COMMUNICATION

We speak candidly and we listen well. We hold that if every involved party has taken part in a decision, then everyone will support the decision. We believe that clear and frequent communication is essential for our safety, our relationships, and our productivity.

#### PROCESS AND TEAMWORK

We believe that the process of collegially making decisions is usually at least as important as the quality of the decisions. We also understand and appreciate that the most successful outcomes occur when organizational units work cooperatively as a team.

#### CHARACTER

We accept responsibility for our actions. When we see a problem, we do not pass it off, we do not complain, we act. We involve others as appropriate to achieve our goals. We prize dedicated, committed, caring, conscientious, and creative individuals who strive for excellence in the performance of their duties and responsibilities.

#### CHANGE AND GROWTH

We appreciate that great organizations like Embry-Riddle are constantly changing, adapting to external pressures, and growing. All of our work units are constantly improving quality. We realize that our jobs require us to grow professionally and take on more responsibility. Growth requires calculated risk-taking and we empower one another to take appropriate risks and learn from our mistakes. We believe in a willingness to challenge traditions and constantly seek innovative ways to manage and solve problems.

# FISCAL SOUNDNESS AND INVESTMENTS

We understand we must operate efficiently and effectively so that investments can be made in ourselves and our capabilities. We invest in technology as appropriate, principally to increase the quality and frequency of our interactions in support of our mission.

#### ATTITUDE

We recognize, endorse, and empower leadership at all levels. We understand the joy of living in harmony with one another and strive to maintain an open, productive environment. We prize an upbeat, can-do attitude. We are members of the Embry-Riddle community because we want to be here, and this positive attitude is reflected in our communications with one another and our students.

### EMBRY-RIDDLE AERONAUTICAL UNIVERSITY

#### MISSION STATEMENT

Embry-Riddle Aeronautical University is an independent, nonsectarian, nonprofit, coeducational university with a history dating back to the early days of aviation. The University serves culturally diverse students motivated toward careers in aviation and aerospace. Residential campuses in Daytona Beach, Florida, and Prescott, Arizona, provide education in a traditional setting, while an extensive network of Extended Campus centers throughout the United States and abroad serves civilian and military working adults.

It is the purpose of Embry-Riddle to provide a comprehensive education to prepare graduates for productive careers and responsible citizenship with special emphasis on the needs of aviation, aerospace, engineering, and related fields. To achieve this purpose, the University is dedicated to the following:

To offer undergraduate and graduate degree programs that prepare students for immediate productivity and career growth while providing a broad-based education, with emphasis on communication and analytical skills.

To emphasize academic excellence in the teaching of all courses and programs; to recruit and develop excellent faculty and staff; and to pursue research and creative activities that maintain and extend knowledge in aviation, aerospace and related disciplines.

To develop mature, responsible graduates capable of examining, evaluating, and appreciating the economic, political, cultural, moral, and technological aspects of humankind and society, and to foster a better understanding of the workings of the free enterprise system and its social and economic benefits, and of the

profit motive, as vital forces to the potential of individuals and groups.

To promote ethical and responsible behavior among its students and graduates in the local, national, and international aviation and aerospace communities and in the community at large.

To develop and effectively deliver educational programs for the adult student and professional at the undergraduate and graduate levels, including off-campus degree programs, short courses, distance learning, noncredit programs, seminars, workshops and conferences.

To support each student's personal development by encouraging participation in programs and services that offer opportunities for enhanced physical, psychological, social, and spiritual growth and, by complementing the academic experience and contributing to the development of a well-rounded individual prepared for personal and professional success.

To engage in research, consulting services, and related activities that addresses the needs of aviation, aerospace, and related industries.



### MESSAGE FROM THE CHANCELLOR



or more than 30 years, the Extended Campus of Embry-Riddle Aeronautical University has created basic and advanced educational opportunities for the working professional of the aerospace and aviation industries, as well as for service members of the U.S. Armed Forces. Whereas the highly gifted young men and women who attend our two residential campuses in Daytona Beach and Prescott aspire to careers in aerospace and aviation, our students are established professionals in those exciting fields and are seeing the completion of a first or second undergraduate degree, the pursuit of graduate education, or are undertaking formal advanced training in any number of areas of career development.

Because our students are adult learners who must balance the demands of their careers, their families, and their communities with the discipline required to attend a university, the Extended Campus goes to extraordinary lengths to ensure they succeed. Ours is a student-centered campus in which we design curriculum that is relevant to the professional needs of our students, and we deliver that curriculum to our students on their terms – at times and places that are convenient to them. That is why you find Extended Campus centers at more than 130 sites in 37 states and in seven nations in Europe. It is also why you will find our curriculum delivered online via the Internet and the World Wide Web. Surrounding all of this is a superb student support system that is dedicated to excellence and provides a "best in class" service using the latest technologies.

We also offer our working adult student more than convenience and service; we also offer the quality of an Embry-Riddle Aeronautical University education. Our faculty are "scholarly practitioners" with stellar academic credentials in addition to more than 20,000 person-years of real-world experience in the aerospace and aviation fields. We are committed to, and stress, student-learning outcomes: what our students learn in the classroom on Saturday is usually applied in their workplace on Monday morning.

I am delighted to share with you through this catalog our great campus, our outstanding faculty and superb staff and service levels that are part of a great single Embry-Riddle Aeronautical University.

We welcome you to join this impressive academic team and our institution to advance your career.

Martin A. Smith Chancellor

### EXTENDED CAMPUS

#### MISSION STATEMENT

Our mission is to provide peerless academic degree and certificate programs, corporate training, and professional development services to adult learners and their employers in the aerospace and aviation industries. As a student-centered campus, we accomplish our mission by effectively developing, delivering, and continually assessing high-quality, high-demand, and highly relevant degree and nondegree professional programs through both face-to-face traditional classroom instruction and asynchronous, interactive online delivery. In so doing, we enable professional working adult learners to advance their personal and career goals in ways that meet their needs, regardless of geographic location or the constraints of time. Throughout the Extended Campus we accept, respect, include, appreciate, and affirm the dignity of all people. We embrace our differences as one of our greatest strengths and as a means of achieving and sustaining our vision.

Embry-Riddle Aeronautical University is the world's oldest, largest, and most prestigious university specializing in aviation and aerospace. It is the only regionally accredited aviation-oriented university in the world.

For more than 30 years Embry-Riddle has recognized that the people who work in aviation and aerospace regard education and professional development as top priorities. Opportunities to learn and grow are actively sought because aviation and aerospace are linked to advancing technology and industry personnel must respond quickly to changes in their environments.

The Extended Campus is dedicated to providing educational opportunities worldwide to adult learners who, for various life circumstances, want or need to pursue their education in a nonresidential environment. The Extended Campus includes the College of Career Education, Worldwide Center Operations, the Center for Professional Education, the Distance Learning Enrollment Office, and support departments.

#### COLLEGE OF CAREER EDUCATION

The College of Career Education is the academic organization within the Extended Campus responsible for hiring all faculty members and providing for the academic delivery of all degree programs through traditional classroom format at one of the Extended Campus Worldwide Centers, as well as through a Webbased distance learning format. The Extended Campus Faculty Senate, composed of College of Career Education faculty members, plans degree programs and develops all the courses for associate, bachelor, and master degrees as well as certificates of completion.

#### WORLDWIDE CENTERS

Extended Campus degree and nondegree programs are delivered through a worldwide network of more than 130 centers located throughout the United States, and in Canada, Europe, and the Middle East. Each center offers a full range of student services and academic programs. Classroom courses are taught by local and national faculty, with courses scheduled to meet the needs of our students. Students may also enroll in distance learning classes through a center or through the Distance Learning Enrollment Office.

Additionally, training and professional development courses may be offered at the center in conjunction with the Center for Professional Education. These courses are usually contracted through a local company or government agency.

#### DISTANCE LEARNING ENROLLMENT OFFICE

The Distance Learning Enrollment Office (DLEO) provides complete academic support, including advisement and course registration to distance learning students who are pursuing degree or certificate programs online and are not affiliated with one of Embry-Riddle's Extended Campus Centers.

The DLEO was established to ensure that thorough and reliable academic guidance is available for all Embry-

#### **EXTENDED CAMPUS**

Riddle students, regardless of geographical location. The DLEO staff is specially trained to address the needs and concerns of students engaged in the dynamic online educational method. Students who are associated with one of our over 130 Extended Centers may also enroll for distance learning courses through their centers.

#### DISTANCE LEARNING (ONLINE) ANYWHERE IN THE WORLD

Embry-Riddle's Distance Learning program combines the quality and prestige of an Embry-Riddle education with the flexibility and convenience of online learning. By giving students the opportunity to complete their degree or certificate programs online, Distance Learning eliminates a major barrier tht keeps many adults from advancing their education - fitting campus-based classes into their full schedules.

This dynamic educational method allows busy but motivated learners more freedom and control over the education process. Regardless of their geographical location and schedule, students enjoy diverse options for attending classes through the Distance Learning Program.

Distance Learning students may utilize flexible schedules, and may take courses exclusively via the Internet or participate in a mixed mode of classroom and online courses. And since Embry-Riddle administrators strive to incorporate the most innovative tools and technologies into the Distance Learning programs, distance learners always enjoy the same comprehensive academic counseling and admissions services as any Embry-Riddle student.

With Distance Learning, students from all over the world have access to Embry-Riddle's career-enhancing degree and certificate programs at both the undergraduate and graduate level. All courses are taught by dedicated, accessible, and accomplished faculty who bring real-world experience and relevance to the curriculum. Students are able to maintain close contact with faculty and with each other via an array of tools designed to maximize the online learning environment, including online support groups, e-mail discussion forums, an online help desk, online bookstores, and an online library. These interactive tools enhance the learning experience and make for an educational environment that is truly without limits.

With our commitment to innovative learning opportunities, Distance Learning through the Extended

Campus College of Career Education helps students realize personal and professional goals from anywhere in the world.

# CENTER FOR PROFESSIONAL EDUCATION

The Center for Professional Education (CPE) provides courses for working adults in the aviation and aerospace industries. The courses impart current knowledge and information, and present timely issues to employers and/or their employees. To access these training programs, individuals are encouraged to work through their companies or contact a representative from CPE or any member of the Extended Campus organization.

The CPE training courses typically do not lead to a degree. However, certificates of completion and/or Continuing Eduction Units (CEU's) are awarded when appropriate. Courses are scheduled to accommodate the needs of adult students. The training may be part time, one time, on-site, or through distance learning via the web.

#### **FACULTY**

The College of Career Education recruits highly qualified academicians and practitioners for full-time and part-time faculty positions. Recruitment and selection of College of Career Education faculty is based on an orderly process of screening and evaluation developed by the Extended Campus Faculty Senate and prosecuted under the direction of the Provost and the Dean of Academics. Academic preparation/degrees are the most important factors in faculty selection. A high priority is also placed on aviation/aerospace professional training and experience. Understanding of today's aviation/aerospace environment and current industry issues is an extremely important factor in faculty selection. An integral portion of the Extended Campus Mission is that the faculty must provide highly relevant courses that deal with today's aviation and aerospace issues and environment.

# ACCREDITATION AND AFFILIATIONS

Embry-Riddle is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools (1866 Southern Lane, Decatur, Georgia 30033-4097, Telephone: 404-679-4501) to award degrees at the associate, bachelor, and master's levels.

### EXTENDED CAMPUS

Embry-Riddle has developed creative, mutually beneficial partnerships and working relationships with numerous corporations, organizations, and government entities throughout the world. Relationship models include daily collaboration; sharing of vision, goals and resources; physical co-location arrangements; hiring agreements; cooperative education programs; corporate training programs; research projects; and joint ventures, to name a few. Embry-Riddle develops corporate and organization-specific relationships to meet the needs of aviation, aerospace, and related industries. For more information about corporate partnerships visit our website at http://www.erau.edu/ec/wwc/affiliations.html.

# SOUTH CAROLINA COMMISSION ON HIGHER EDUCATION

Licensed by South Carolina Commission on Higher Education (1333 Main Street, Suite 200, Columbia, SC 29201, Telephone: 803-737-2260). Licensure indicates only that minimum standards have been met; it is not equal to or synonymous with accreditation by an accrediting agency recognized by the Department of Education.

#### WASHINGTON STATE HEC BOARD ADDENDUM

Embry-Riddle Aeronautical University is authorized by the Washington Higher Education Coordinating Board

(HECB) and meets the requirements and minimum educational standards established for degree-granting institutions under the Degree Authorization Act. This authorization is valid until April 30, 2007, and authorizes Embry-Riddle Aeronautical University to offer the following degrees: Associate in Science in Aircraft Maintenance; Associate in Science in Professional Aeronautics; Associate in Science in Technical Management; Bachelor of Science in Aviation Maintenance Management; Bachelor of Science in Professional Aeronautics; Bachelor of Science in Technical Management; Master of Aeronautical Science; Master of Business Administration in Aviation; Master of Science in Management; Master of Science in Occupational Safety Management; Master of Science in Technical Management; Undergraduate certificate in Aviation Maintenance Technology; Undergraduate certificate in Aviation Safety; Undergraduate certificate in Logistics; Undergraduate certificate in Occupational Safety & Health; Undergraduate Certificate in Pre-Engineering Studies; Undergraduate certificate in Supply Chain Management; Graduate certificate in Aviation/Aerospace Safety; Graduate certificate in Instructional System Design; and Graduate certificate in Occupational Safety & Health. Any person desiring information about the requirements of the Act or the applicability of those requirements to the institution may contact the HECB office at P.O. Box 43430, Olympia, WA 98504-3430.



# RESIDENTIAL CAMPUSES

The year-round clear flying weather and the resort communities surrounding our residential campuses in Daytona Beach, Florida, and Prescott, Arizona, offer students outstanding environments in which to study, fly, and enjoy recreational activities.

Embry-Riddle offers many co-curricular activities that appeal to almost every taste. Students take advantage of the many opportunities for personal growth and development through social and pre-professional fraternities and sororities and cultural and recreational activities. Embry-Riddle's award-winning precision flight demonstration teams offer students the chance to compete nationally in precision air and ground events. Embry-Riddle has one of the largest all-volunteer Air Force ROTC detachments in the country and the fastest-growing Army ROTC detachment. The Naval ROTC and the Naval Aviation Club furnish the U.S. Navy with the second largest number of naval aviation officers, after the U.S. Naval Academy. Embry-Riddle athletes participate in intercollegiate and intramural competitions in many sports, including golf, tennis, baseball, basketball, lacrosse, wrestling, rugby, cross-country, softball, sailing, crew, and volleyball.

#### DAYTONA BEACH CAMPUS

The Daytona Beach, Fla., campus is located at the edge of Daytona Beach International Airport, approximately 50 miles up the Atlantic coast from Kennedy Space Center. The campus enrolls more than 4,700 undergraduate and graduate students from throughout the United States and the world.

The campus offers technologically advanced equipment and facilities. The College of Aviation Building houses classrooms and specialized laboratories that support the degrees in aeronautical science, air traffic management, applied meteorology, and safety science. A realistic air traffic control laboratory and an actual meteorology center give students realistic experience and training opportunities.

In the Air Traffic Management Research Laboratory, faculty and student investigators use sophisticated equipment simulating elements of the national airspace system to conduct research involving air traffic control, airport operations, and alternative routes.

Flight instruction is provided in a fleet of Cessna 172s and multi-engine Piper Seminole aircraft, plus a full range of single-engine, multi-engine, and turbine flight training devices, including the Canadair Regional Jet.

The Lehman Engineering and Technology Center features laboratories with the latest research and

computer equipment. The building includes subsonic and supersonic wind tunnels and a smoke tunnel, as well as laboratories for research involving structures, materials, aircraft design, and composite materials. A stereolithography unit lets students produce prototypes of aircraft structures and test their designs in a short period of time.

The Gill Robb Wilson Aviation Technology Center houses classrooms, single- and multi-engine simulators, a weather room, and dispatch headquarters.

The Samuel Goldman Aviation Maintenance Technology Center is the home for instruction in the maintenance and repair of fixed-wing and helicopter airframes, powerplants (reciprocating and turbine), and avionics. The FAA-certified Avionics Lab repair stations simulate the avionics environment that graduates will encounter in the workplace. Engine test cells let students test the effectiveness of their repairs. The FAA-certified advanced reciprocating engine lab overhauls the campus' training aircraft.

The John Paul Riddle Student Center offers a full-service cafeteria, bookstore, mailroom, health services, records and registration, parking office, safety communications office, information center, Flight Deck grill, Landing Strip snack bar, student activities offices, and conference rooms. The Student Success Center is designed to help students make the transition from high school to college more easily.

### RESIDENTIAL CAMPUSES



The Jack R. Hunt Memorial Library has a seating capacity of 800 and holds more than 90,000 books, as well as periodicals, documents, newspapers, microfilm, media programs, online services, and a historical aviation collection dating from 1909 to the present.

Additional facilities include a multi-function auditorium and instructional media center, a fieldhouse and several athletic fields, and an interfaith chapel.

#### PRESCOTT CAMPUS

Embry-Riddle's campus in Prescott, Ariz., is set in a mile-high town nestled between the rugged Bradshaw and Mingus mountain ranges. Known for its western flair and friendly spirit, the mile-high city offers a warm, friendly, and safe environment for students to live and learn.

The campus is located on 539 acres of high desert country, but student life is centered within a half-mile walking radius. Four mild seasons, with nearly 300 days of sunny weather a year, offer students an ideal climate in which to fly, study, or take off for the mountains in search of adventure.

The Prescott campus offers outstanding academic programs with a low student-to-faculty ratio of 17:1. Professors bring to their classes a wealth of academic and professional preparation and industrial experience.

The Prescott campus is undergoing an exciting period of expansion. The new Visitor Center has opened, and the "AXFAB" complex should be complete in Fall 2006. The Aerospace Experimentation and Fabrication Building with its high-bay engineering laboratory will provide an environment in which students can build and test aerospace components.

Another newer building, the Academic Complex, houses lecture halls, computer labs, classrooms and conference areas, faculty offices, and a meteorology suite.

The technologically advanced King Engineering and Technology Center is the hub of the College of Engineering. Students work in laboratories such as the circuitry, power, control, space systems, and senior design labs. The Wind Tunnel Laboratory houses research-quality subsonic and supersonic wind tunnels.

Aeronautical Science students train in modern, well-equipped single- and multi-engine aircraft. The fleet contains Cessna Skyhawks, Piper Seminoles, and fully aerobatic Decathlons. The Robertson Flight Simulation Center features Level-6 training devices, full-motion simulators, Cessna cockpit procedure trainers, and an Airbus A320 flight-training device.

Students learn aviation safety and crash investigation in the Robertson Aviation Safety Center's Crash Lab, a hands-on, outdoor classroom with more than a dozen salvaged aircraft reconfigured for intense study and examination.

The Global Intelligence Monitoring Center allows students who are studying security and global policies to focus on intelligence collection and analysis.

Air Force and Army ROTC programs are offered for those students interested in a military career. Students who graduate from these programs are commissioned as second lieutenants.

Students find professors, librarians, and staff who are eager to support their needs. In the Student Success Center, dedicated academic counselors and tutors help students achieve their goals. Students also are supported by counseling, health, and career services, as well as comprehensive athletic facilities.



### STUDENT SERVICES

Student Services' mission is to provide comprehensive services that are coordinated and personalized for financial, academic and career needs. These resources are geared toward addressing specific academic needs and contribute to the quality of each student's overall university experience. We strive for continuous improvement that extends through a culture of caring with the highest educational practices and professional standards. We are here to serve you.

### **ADMISSIONS**

he admissions process may be initiated online at www.embryriddle.edu/admissions or by contacting one of the Extended Campus centers, or the Distance Learning Enrollment Office. International applicants, please see the International Applications section of this catalog. Applicants who meet the admission criteria may apply for admission and concurrently enroll while their application for admission is being processed.

#### MATRICULATION

Matriculation occurs when a student has been officially accepted for admission and has enrolled in an Embry-Riddle course. The enrollment must occur either concurrent with the submission of the formal application for admission and fees, or within two years of the date of acceptance.

ERAU Student Email Accounts: ERAU issues an email account to each student of the Extended Campus. Please check your ERAU email frequently, as the University will use this account as a means of sending official notification on University matters. Although the software used to send some of these communications automatically includes an "unsubscribe" link at the bottom of each message, do not unsubscribe since this will hinder the process of the University providing you with important information. Upon registration for courses, students receive a letter informing them of their email address and password. Your ERAU email account will remain active up to two years after your last ERAU course. For your convenience, you may set up your account to forward messages to another email address you already use. For instructions on setting up your email account, see http://it.erau.edu/Help/webaccess.htm.

#### UNDERGRADUATE ADMISSIONS PROCEDURES

Embry-Riddle acknowledges that sometimes life experiences prevent individuals from attending college as a traditional student. Embry-Riddle Aeronautical University's Extended Campus is a geographically distributed student-centered campus that provides access to students who would otherwise be unable to pursue a post-secondary degree at a traditional residential campus. The primary mission of the Extended Campus is to offer educational opportunities to adult learners. To be admitted to the Extended Campus, applicants must possess either a high school diploma or a GED.

#### FIRST YEAR APPLICANTS

A person is considered to be a first year applicant if: they are non-military, have no prior post secondary education, have not earned credits from training and experience as evaluated by the American Council on Education (ACE), and is not concurrently enrolled with a two-year institution that is a sanctioned articulation partner with ERAU.

# TRANSFER STUDENT APPLICANTS Undergraduate

Previous college work must have been successfully completed with a cumulative GPA of at least 2.00 on a 4.00 scale. Waivers to the above will be reviewed on a case by case basis.

For the purpose of admission, transfer student is defined as any student who has earned college credit from other post-secondary institutions. Transfer students must arrange to have official transcripts submitted to the University by each institution attended.

#### ARTICULATIONS TRANSFER APPLICANTS

An Articulation Agreement is a cooperative agreement that facilitates the transfer of students from other institutions to Embry-Riddle Aeronautical University. Courses from the other institution are carefully reviewed and evaluated to ensure that their content and course objectives are the equivalent of those at the University.

The primary benefit of an Articulation Agreement is that a student is assured that the courses completed at the other institution will transfer to the University and will satisfy specified degree requirements. An important feature of the program is that the student becomes subject to the requirements of the curriculum specified in the catalog at the time of enrollment. As long as the student has signed the Articulation Agreement, he/she is assured that the courses taken will still apply even though the curriculum for that major may have undergone a significant change before the student has actually made the transfer to the University.

Refer to our website at <a href="http://www.erau.edu/ec/wwc/articulations.html">http://www.erau.edu/ec/wwc/articulations.html</a> for active Articulations.

# UNDERGRADUATE RETURNING STUDENTS

A degree-seeking student whose attendance at the University is interrupted may be required to apply for readmission. In the scenarios described below, a new application for admission must be filed:

- 1. Enroll at another institution without advance written approval.
- 2. Failure to enroll in at least one course at Embry-Riddle in any two-calendar-year period.
- 3. Academic suspension or dismissal from the University. A written petition is required for consideration for readmission.

#### NONDEGREE UNDERGRADUATE STUDENTS

Embry-Riddle recognizes the need for working adults who are interested in furthering their education through retraining or enhancement of professional skills. Students who meet admission requirements are permitted to enroll in courses as special students in a nondegree status. Transcripts must be submitted to the University before the student is allowed to enroll in courses. Nondegree students are limited to a total of 24 credit hours. Should a nondegree student subsequently apply for entry into a degree program, additional admission and all degree program requirements must be met.

Nondegree students must meet the same academic standards as degree-seeking students.



# GRADUATE ADMISSIONS PROCEDURES

For full admission into any graduate degree program, applicant must have earned a baccalaureate degree with a CGPA of 2.5 or higher.

# Applicants with an Undergraduate Degree and No Graduate Coursework

If earned in the United States, this degree must be from an appropriately accredited college, university or program. If earned outside the United States, the degree must be from an institution that offers a degree program that is equivalent to one in an appropriately accredited college, university or program in the United States. Such equivalency will be judged on the basis of past admission experience. Applicants educated at foreign schools must obtain an evaluation by submitting official certified documentation of their educational achievements to an international education evaluation organization specified by Embry-Riddle.

# TRANSFER STUDENT APPLICATIONS Graduate

Applicants with a Masters degree or graduate credit must have at least a 3.0 CGPA.

#### Applicants with a Master's Degree

Applicants who have earned a Masters degree from an appropriately accredited college, university or program must submit an official transcript from the institution that conferred the degree. Transcripts from the institution that conferred the undergraduate degree will be required to verify that prerequisites have been met.

# Applicants with Undergraduate Degree and Graduate Level Coursework

Applicants to a Masters degree program who have taken graduate coursework at another institution but not earned a Masters degree must provide official transcripts from the institution that conferred their undergraduate degree, as well as from the institution from which they took graduate coursework.

#### PROGRAM-SPECIFIC CRITERIA:

#### Master of Science in Technical Management

Applicants for admission to the Master of Science in Technical Management program are required to have an admission interview.

#### Master of Science in Management

Applicants for admission to the Master of Science in Management program must have prerequisite knowledge in the areas of:

- n Written Communications
- n Mathematics
- n Communications/Connectivity Skills

#### CONDITIONAL ADMISSION

- 1. Students who fail to satisfy the guidelines for full admission, but who are judged to have potential for success in a graduate program, may be granted conditional admission. Students admitted under conditional status must prove their ability to pursue a graduate program by meeting specific performance criteria after matriculation at the University.
- 2. Students admitted on conditional status will be monitored closely as to scholarly performance. Students who are admitted conditionally will be on conditional status until they have completed 9 hours of graduate work. During this period, students must maintain a B average or better, and receive no more than one grade of C and no grade of F. Students will not be permitted to repeat courses during this period.
- 3. The conditions of admission will be communicated to applicants in the letter of admission.

#### GRADUATE RETURNING STUDENTS

A student whose attendance at the University is interrupted may be required to apply for readmission. In the scenarios described below, a new application for admission must be filed.

- 1. Graduate students are expected to take all coursework with Embry-Riddle, once admitted into a degree program. Therefore, enrollment at another institution without advanced written approval will require readmission.
- 2. Failure to enroll in at least one course at Embry-Riddle in any two-calendar-year period.
- 3. Academic dismissal from the University. Students who have been academically dismissed are not eligible to reapply for two years from the dismissal date. A written petition for readmission must accompany the application for admission and fees. The dismissing campus renders the decision for readmission.
- 4. A student does not complete the degree requirements of a graduate program within 7 years of matriculation in the graduate program.
- 5. A student who has been dismissed from the University for any reason other than academics must first satisfy the conditions for readmission as indicated in the letter of dismissal. The dismissing campus renders the decision for readmission.

#### NON-DEGREE GRADUATE STUDENTS

Students who meet the general admission criteria may, based on an assessment of their preparedness to take graduate courses, be admitted as nondegree students. An application, including all undergraduate and graduate transcripts from a regionally accredited postsecondary institution, must be submitted to be considered for admission as a nondegree student.

Nondegree students will be limited to a total of 12 hours of graduate credit. Should a nondegree student subsequently apply for entry into a degree program, additional admission and all degree program requirements must be met.

Nondegree students must meet the same academic standards as degree seeking students.

#### ADMISSION-GRADUATE CERTIFICATES OF COMPLETION

Students who meet the general admission criteria may, based on an assessment of their preparedness to take graduate courses, be admitted to a graduate certificate program.

An application, including all undergraduate and graduate transcripts from a regionally accredited postsecondary institution, must be submitted to be considered for admission to a graduate certificate program.

Graduate certificate program students may only enroll in graduate courses outlined in the certificate programs. Should a certificate program student subsequently apply for entry into a degree program, additional admission and all degree program requirements must be met.

Graduate certificate students must meet the same academic standards as degree-seeking students.

#### INTERNATIONAL STUDENTS

An international student is defined as any non United States citizen intending to study at centers located outside the United States, students who live outside of the United States enrolled through distance learning, as well as non-residents, non-immigrants planning to study in the United States (typically on a F-1 or a J-1 Visa). For further information, contact the Student Success Center, International Student Affairs Counselor at toll free 866-509-0744.

An application for admission may be initiated online at www.embryriddle.edu/admissions or by contacting one of the Extended Campus worldwide centers, or the Distance Learning Enrollment Office. International Applicants must provide the following:

1. An official evaluation in English, which has been certified by a credential evaluating service. A fee is charged for the translation service and must be paid by the applicant. The results of the evaluation must be sent directly to Embry-Riddle by the evaluating service. For undergraduate level applicants, the evaluation must provide a course-by-course report of all courses completed. For graduate level applicants, the evaluation must provide evidence of college graduation equivalent to a baccalaureate degree in the US. A

course-by-course evaluation is not required. The Office of Student Services has approved a list of credential evaluating services which applicants must use:

- a.) American Association of Collegiate Registrars and Admissions Officers (AACRAO) One DuPont Circle NW Suite 520 Washington, DC 20036 (Tel) 202-293-9161, (Fax) 202-872-8857 www.aacrao.org/credential/
- b.) Educational Credential Evaluators, Inc.
   P.O. Box 514070, Milwaukee, WI 53203
   (Tel) 414-289-3400, (FAX) 414-289-3411
   www.ece.org
- c.) World Education Services (Main Office)
  P.O. Box 5087, Bowling Green Station
  New York, NY 10274-5087
  (Tel) 212-966-6311, 800-937-3895
  (FAX) 212-739-6100
  www.wes.org
   or World Education Services, Inc. (Southeast Office)
  P.O. Box 01-5060, Miami, FL 33101
  (Tel) 305-358-6688, 800-937-3899
  (FAX) 305-358-4411
  www.wes.org
- d.) Academic Credentials Evaluation Institute P.O. Box 6908, Beverly Hills, CA 90212 (Tel) 310-275-3530, 800-234-1597 (FAX) 310-275-3528 www.aceil.com
- e.) Foreign Credential Evaluations 1425 Market Blvd., NE Suite 330, PMB #305 Roswell, GA 30076 (Tel) 770-642-1108 (FAX) 770-641-8381 www.fceatlanta.com
- f.) Josef Silny & Associates, Inc International Education Consultants 7101 SW 102 Avenue, Miami, FL 33173 (Tel) 305-273-1616, (FAX) 305-273-1338 (Translations) 305-273-1984 www.jsilny.com
- 2. Applicants for whom English is not the primary language must:
- a.) Attain a minimum score on the Test of English as a Foreign Language (TOEFL) of 550 (paper based),

- 213 (computer based), or 79-80 (internet based)
- b.) Earn transferable credit for a course that is the equivalent of ENGL 123 English Composition at an accredited postsecondary institution.
- c.) TOEFL scores must be sent directly to Embry-Riddle by the testing agency. To obtain a Bulletin of Information, write:

  TOEFL/TSE Services
  Education Testing Service
  P.O. Box 6151, Princeton, NJ 08541-6151, USA 1-800-GO-TOEFL or 1-800-468-6335

  www.toefl.org
- 3. For international students intending to study in the U.S. on F-1 student visas; provide a bank letter and an affidavit of financial support, or a scholarship letter, documentation of immunity to vaccine preventable diseases, and an advanced deposit to cover tuition for three terms. Upon receipt, the University will issue the Certificate of Eligibility (I-20) form upon acceptance for admission.
- 4. The Extended Campus meets the needs of international students intending to study in the United States, with the assistance of a Principal Designated School Official (PDSO) and two Designated School Officials (DSO). This staff serves as the central point of contact for issues concerning international students at the Extended Campus. Students are provided with orientation materials with their acceptance letter. International students are eligible to study at the Orlando, Miami, and Ft. Lauderdale centers in Florida. They are also eligible to study at the center in Oakland, California. This staff also assists international students with the processing of forms and documentation of status required by foreign governments, sponsors, the U.S. government, and the University. For further information, contact the office of Student Services, International Student Advisor at toll-free 866-509-0744.

European Students interested in attending the Luxemburg Center may contact:

LUXEMBOURG CENTER Embry-Riddle Aeronatuical University C/o: Technoport Schlassgoart 66, rue de Luxembourg L-4221 Esch-sur-Alzette Luxembourg

Email: luxembourg.center@erau.edu

011-352-42-59-91-314 Fax: 011-352-42-59-91-322

### AWARDING CREDIT

# ATTENDANCE AT OTHER INSTITUTIONS

#### Undergraduate

Once admitted to the University as degree candidates, students are expected to complete all work to be applied toward their degrees with the University unless advance written authorization is granted.

Students applying prior academic work toward their Embry-Riddle degree program requirements must submit appropriate documents for such credit as part of the admission process. The request must be in writing and accompanied by official transcripts or equivalent evidence of such work prior to matriculation.

Prior academic work and courses taken at other institutions by Veteran students and/or eligible students receiving Veteran's Education Benefits will be evaluated and credit granted as appropriate and reported to the U.S. Department of Veterans' Affairs (DVA) as required by law.

The student must arrange to have official transcripts sent to Embry-Riddle Aeronautical University. Transcripts that have been in the possession of a student are not considered official. Transfer credit may be granted under the following conditions.

- a.) Appropriate coursework completed with a grade of A, B, C, Pass, Satisfactory or equivalent will be accepted. The grade points for the course must be equal to 2.0 on a 4.0 scale or higher.
- b.) When students are eligible to graduate with honors, both the grade point average of all courses taken at Embry-Riddle and the grade point average of all courses transferred from other institutions and applied to degree requirements will be taken into consideration.
- c.) Credit hours are transferable if earned at institutions listed as degree granting institutions in the Accredited Institutions of Postsecondary Education (AIPE) as published by the Council for Higher Education Accreditation (CHEA). Academic credit is accepted without regard to the date the course was completed. It is left to the discretion of the student, in consultation with the student's academic advisor, to determine whether to retake courses when placement testing indicates a deficiency. Embry-Riddle has sole discretion in determining which and

- how many transfer credit hours will be accepted toward degree requirements.
- d.) Previous academic credit is evaluated on a courseby-course basis. Acceptable transfer work will be recorded on the Embry-Riddle transcript. If courses are not applicable to the student's degree program at Embry-Riddle, they will be considered as electives in excess of minimum degree requirements. The level of credit (upper or lower division) is determined by evaluation of the course at Embry-Riddle.

Embry-Riddle may, at its discretion, require an evaluation examination for any course submitted for transfer credit if there is doubt concerning the equivalency of the transfer course with a similar course offered at Embry-Riddle. Embry-Riddle cannot guarantee that courses are transferable unless otherwise established by any contract or memorandum of understanding/agreement currently in effect. Courses are accepted at the discretion of the University.

The transfer student's records (transcripts, etc.) will be evaluated according to the rules and regulations as described in the catalog, and in accordance with University policies in effect at the time of the student's admission to a degree program. After evaluation, the student will be sent a course-by-course outline of all transfer credit accepted by the University.

#### **Advanced Standing Credit**

Advanced standing credit may be awarded for prior learning for postsecondary education, work and/or training experience, or from programs completed before enrollment at Embry-Riddle. It is the student's responsibility to ensure that all documentation of previous coursework, military learning experiences, credit by examination, and all FAA certificates is submitted for evaluation along with the formal application for admission as a degree-seeking student. Just as official transcripts are required to transfer credit from one university to another, documentation of prior learning through professional training and experience must be official.

1. Embry-Riddle will accept the minimum scores recommended by the American Council on Education (ACE) on all exams offered by CLEP, DANTES, and Excelsior College Examinations-ECE (formerly REC or ACT-PEP) for the award of undergraduate academic credit. In addition, the amount of academic credit and the academic level (upper or lower-level) recommended by ACE for a passing score on each of the exams will be accepted by the University. Credit for exams taken after admission to the University will not be awarded unless advanced written authorization

#### AWARDING CREDIT

is granted from the center director or the Distance Learning Enrollment Office.

- 2. Embry-Riddle will generally follow the recommendations of the American Council on Education (ACE) for courses listed in the National Guide to Educational Credit for Training Programs and the Guide to the Evaluation of Educational Experiences in the Armed Forces.
- 3. Credit may be granted on the basis of certain FAA licenses with appropriate rating.
- 4. In addition to course-equivalency exams, nontraditional Embry-Riddle undergraduate students who believe that their knowledge and prior learning experience qualify them for credit for a given Embry-Riddle course may compile a portfolio for evaluation after completing course PREP 102: Self-Assessment and Portfolio Preparation. (See Course Description section of the catalog.) The learning experience must have taken place following high school graduation and must have academic relevance to an Embry-Riddle course as described in the current catalog. There must be adequate documentation to support the authenticity and appropriateness of the learning experience for college-level credit. The student must demonstrate college-level writing skills. Portfolios must be submitted to the Portfolio Assessment Manager at the office of Student Services within six months from the term start date of the PREP 102 course.

#### Graduate

Credit hours are transferable if earned at institutions listed as degree granting institutions in the Accredited Institutions of Postsecondary Education (AIPE) as published by the Council for Higher Education Accreditation (CHEA). Credit may be received for certain graduate courses taken as nondegree graduate work or as part of another (completed or noncompleted) Embry-Riddle graduate degree program. When transferring from one Embry-Riddle graduate program to another this credit may include prior work on a GCP or thesis. The combined total credit applied to an Embry-Riddle graduate degree may not exceed 12 credit hours. A maximum of 6 credit hours may be applied to the Master of Science in Technical Management Program. In order to satisfy a graduate degree program requirement, the academic work for which such credit is sought must be determined to be specifically relevant to the applicant's graduate degree program at Embry-Riddle. The content of the applicable course or other program should be used to determine the nature of the credit to be applied to the student's degree requirement.

The appropriate department chair, program chair, or Dean of Academics will make these determinations.

Credit will be granted only if the student demonstrates performance expected of a graduate student at Embry-Riddle. This normally means that the course was completed with a B or better (3.0 on a 4.0 system). Credit for academic work used to satisfy the requirements of an undergraduate degree will not be accepted toward the requirements for a graduate degree. Credit will generally be accepted only for courses that were completed within the seven-year period immediately preceding the date the admissions application is received. This includes previously earned ERAU graduate credit that is over seven years old at the point of readmission. The seven-year time limit will not be applied to advanced standing credit for academic work at eligible senior military service schools if the service member is on active duty when accepted for admission. The sevenyear limit for such applicants commences on the date the service member separates from active military service.

# TRANSCRIBING TRANSFER AND ADVANCED STANDING CREDIT

Students are eligible for an Embry-Riddle transcript of the transfer and advanced standing credit awarded toward the degree program after matriculation.

Matriculation occurs when a student has been officially accepted for admission and has enrolled in an Embry-Riddle course. The enrollment must occur either concurrent with the submission of the formal application for admission and fees, or within two years of the date of acceptance.

#### MILITARY DEGREE COMPLETION PROGRAM FOR ACTIVE-DUTY PERSONNEL

All branches of the U.S. armed forces offer opportunities (sometimes referred to as "bootstrap") to accelerate completion of degree programs by qualified members. Completed applications must be submitted to the Extended Campus Office of Student Services at least 30 days before the first day of the term/semester in which the student desires to begin the program.

#### DEGREE COMPLETION TIME LIMIT

#### Graduate

All requirements for an Embry-Riddle master's degree must be completed within seven years from the date of initial enrollment.

# **TESTIMONIAL**



have been a student at the Embry-Riddle Fort Worth campus for over a year and have been treated with patience and professionalism from the staff and faculty. Their ability to set a standard of learning through the vast experience of the instructors is refreshing and inspiring. The student body is comprised of working aerospace personnel and we all have a common trait, the need for more than an average education. This college has camaraderie and compassion for the working student. By all accounts, a first rate education from a world class curriculum.

Associate/Bachelor of Science in Professional Aeronautics

Associate/Bachelor of Science in Technical Management

**Bachelor of Science in Technical Management-Logistics** 

Bachelor of Science in Technical Management-Occupational Safety & Health

**Bachelor of Science in Technical Management-Professional Valuations** 

Associate in Science in Aircraft Maintenance

**Bachelor of Science in Aviation Maintenance Management** 

#### **Minor Courses of Study**

Management
Logistics
Aviation Safety
Professional Valuations
Occupational Safety & Health
International Relations
Security and Intelligence

#### **Undergraduate Certificates of Completion**

Aviation Maintenance Technology Type 65
Aviation Safety
Logistics
Management
Occupational Safety & Health
Pre-Engineering Studies
Security and Intelligence
Space Studies
Supply Chain Management



# GENERAL EDUCATION REQUIREMENTS

Embry-Riddle Aeronautical University recognizes the importance of communications and quantitative skills in all areas of aviation. Successful pilots, airport managers, aviation maintenance technicians, and other aviation professionals must possess these skills to perform their jobs effectively.

#### INTRODUCTION

Recognizing its general and special missions in education, Embry-Riddle Aeronautical University embraces a general education program. This course of study ensures that students possess the attributes expected of all university graduates. Encouraging intellectual self-reliance and ability, the general education program enables students, regardless of their degree program, to understand the significance of acquiring a broad range of knowledge.

Throughout the general education program, students gain and enhance competence in written and oral

communication. They practice reasoning and critical thinking skills and demonstrate computer proficiency. As students engage in this course of study, they familiarize themselves with and investigate ideas and methodologies from several disciplines. These include the arts and humanities, the social sciences, and the natural sciences and mathematics. The program also helps students recognize interrelationships among the disciplines.

Promoting the appreciation of varied perspectives, the general education program provides intellectual stimulation, ensuring that students are broadly educated. This course of study empowers students to make informed value judgments, to expand their knowledge and understanding of themselves, and to lead meaningful, responsible, and satisfying lives as individuals, professionals, and concerned members of their society and the world.



#### GENERAL EDUCATION REQUIREMENTS

#### REQUIREMENTS

Embry-Riddle Aeronautical University's general education program encourages effective learning and provides a coherent base for students to pursue their academic specializations. In specific support of the goals of general education, candidates for bachelor degrees must complete course work or demonstrate competency in the following areas.

I. Communication Theory and Skills, 9 hours
In order to lead meaningful and responsible lives in complex societies, students produce, evaluate, articulate, and interpret information and meanings in oral and written communications. ENGL 123 will be a requirement for any student coming into the program who has not successfully completed or received credit for an English composition course.

#### II. Mathematics, 6 hours

In order to develop quantitative reasoning skills and to use and understand the language of science and technology, students must demonstrate mathematical proficiency for three of these hours by placement, examination, or course completion. One course must have college algebra as a prerequisite.



III. Computer Science/Information Technology, 3 hours
In order to use computers and to understand and
evaluate their significance in the solution of
problems, students study the concepts, techniques,
and tools of computing.

#### IV. Physical and Life Sciences, 6 hours

In order to appreciate current understandings of the natural world, students study the concepts and methods of the physical and life sciences, applying the techniques of scientific inquiry to problem solving.

V. Humanities, 3-6 hours lower-level
\*3 hours 300-400 level

In order to participate in the complexity of human experiences that arise in a framework of historical and social contexts, students are exposed to the Humanities. Areas of study may include cultural, aesthetic, philosophical, and spiritual dimensions of the human condition.

VI. Social Sciences, 3-6 hours lower-level
\*3 hours 300-400 level

In order to understand interrelationships between the individual and society and connections between historical memory and the future, students examine the social sciences, including history, economics, psychology, or sociology.

\* In order to experience advanced studies in either the Humanities or Social Sciences, students must choose at least one upper-level elective in the Humanities or Social Sciences.

### UNDERGRADUATE ACADEMIC PROGRAMS

#### PROFESSIONAL AERONAUTICS

Bachelor of Science or Associate in Science

If you have a passion for aviation and aeronautics and want to turn your enthusiasm into a career, then Embry-Riddle Aeronautical University's Professional Aeronautics program could be just what you're looking for--a ticket to the personal satisfaction and career opportunities that only a college degree can provide. Both the Bachelor of Science and Associate in Science degree programs in Professional Aeronautics are extremely popular with adult learners who have experience or hope to pursue careers in aviation or aerospace related professions. The Professional Aeronautics programs offer a comprehensive curriculum that includes general education courses such as communications, humanities, social science, computer science, mathematics, and physical science. As part of the curriculum, students may also choose a minor in Management, Logistics, Safety, Professional Valuations or Occupational Safety and Health.

These technical aviation degrees provide a foundation of knowledge, understanding and experience that will allow you to apply for jobs with the airlines, aircraft manufacturers, aviation/aerospace related companies, airports, corporate aviation, the Federal Aviation Administration (FAA) or National Transportation Safety Board. Members of military aviation organizations find that completion of these programs enhances promotion potential and eases the transition to civilian aviation upon retirement. One of the most attractive benefits of the Professional Aeronautics program is that students can gain credits toward a degree for certifications, skills and knowledge gained through previous experience in aviation or aerospace related fields. Plus, students currently employed in the aviation industry can improve their opportunities to advance into positions of greater responsibility.

#### AVIATION AREA OF CONCENTRATION

The Aviation Area of Concentration is the degree area where credit for prior aviation learning is housed or where students can take courses to learn about aviation. Minimum and maximum amounts of credit are established for the Associate and Bachelor degrees:

Associate Degree:

Minimum 12 semester hours Maximum 18 semester hours

**Bachelor Degree:** 

Minimum 18 semester hours Maximum 36 semester hours

Many students bring in all or part of this credit based on prior aviation training or experience. However, shortages in the minimum credit required can be made up by taking courses in the following aviation-related disciplines: Aeronautical Science, Aviation Maintenance, Air Traffic Control, Safety, Aviation History, and Management courses in Professional Valuations.

Sources of prior learning credit include the following:

- 1. Transfer credit earned at regionally accredited degreegranting colleges and universities.
- 2. The recommendations published by the American Council on Education for U.S. Military training and experience as well as training conducted by other government agencies and private organizations.
- 3. Prior-learning credit established by the University for certain aviation licenses and ratings as they relate to this degree.
- 4. Portfolio Assessment.

#### **DUPLICATE CREDIT**

Many Embry-Riddle courses are designed to teach the same skills and knowledge that Professional Aeronautics students have acquired through experience and training. Students who complete courses in the same aviation specialty for which they were granted Aviation Area of Concentration credit would be duplicating coverage of the same subject matter. Credit for completion of such courses will not be applied to degree requirements.

### **PROFESSIONAL AERONAUTICS**

#### **DEGREE REQUIREMENTS**

	A.S.	B.S.
AVIATION AREA OF CONCENTRATION	12-18	18-36

Make up shortages with HIST 130 (History of Aviation in America) and nonduplicating courses from the following disciplines: Aeronautical Science, Aviation Maintenance, Air Traffic Control, Safety.

COMMUNICA	ATION THEORY AND SKILLS	6	6
	glish Composition S/SOCIAL SCIENCES	3	3
Humanities Id	ower-level elective	3	3
Social Science	ce lower-level elective	3	6
•	se must be ECON 211 Macroeco Iumanities or Upper-Level	onomics)	
Social Science	ce elective	0	3
<b>Total Credits</b>		6	12
COMPUTER S CSCI 109 MGMT 120	Introduction to Computers and Applications - OR - Introduction to Computer Based Systems - OR -	2	2
Total Credits	Computer Science Elective	3 <b>3</b>	3 <b>3</b>
iolai Greuns		3	J
MATHEMATI College Algel		3	3
MATH 211	Statistics with Aviation Apps <b>OR</b> -	J	J
MATH 222	Business Statistics	3	3
<b>Total Credits</b>		6	6

PHYSICAL SO	CIENCES		
PHYS 102	1 1 1	3	3
PHYS	Elective	0	3
Total Credits		3	6
PROGRAM S	UPPORT		
ASCI 254	Aviation Legislation	3	3
	Aviation Law	0	3
	Microeconomics	3	3
MGMT 201		3	3
MGMT 210	Financial Accounting	0	3
<b>Total Credits</b>		9	15
PROFESSIONAL DEVELOPMENT ELECTIVES 0 21 Select from the list of upper-level courses in Aeronautical Science, Air Traffic Control, Management, Economics, and Safety.			
UPPER-DIVIS	SION ELECTIVES	0	12
OPEN ELECT	IVES	6-12	0-18
TOTAL DEGR	EE REQUIREMENTS	60	120



# UNDERGRADUATE ACADEMIC PROGRAMS

#### TECHNICAL MANAGEMENT

Bachelor of Science or Associate in Science

Many working adults who have a background in a technical specialty are looking for opportunities to move into management or supervisory positions as a way of advancing in their careers. For these individuals, Embry-Riddle Aeronautical University's Bachelor of Science or Associate of Science in Technical Management programs could be the key to gaining the experience and knowledge to make such a jump. One exciting benefit of these programs is that students can receive credits toward their degrees (up to 15) for prior experience or training including: CLEP, DANTES or certain military or industrial education programs. While Technical Management degrees are naturally attractive to students with an aviation and/or technical background, individuals without aviation experience find these programs to be excellent stepping-stones for entering the fields of aviation or aerospace. Regardless of background, Technical Management students gain valuable skills, learning how to organize, plan, staff and coordinate the resources of any organization toward its goals and objectives. Within the Bachelor of Science program, students may also choose an area of specialization, including: Logistics, Occupational Safety and Health or Professional Valuations. Depending on the specialization, graduates often go on to careers in fields such as military logistics, public or private transportation, or professional valuations and service.

#### **DEGREE REQUIREMENTS**

	A.S.	B.S.
Technical Specialty	9	15

#### GENERAL EDUCATION:

Embry-Riddle courses in the general education categories of Communication Theory and Skills, and Humanities and Social Sciences may be chosen from those listed below, assuming prerequisite requirements are met. Courses from other institutions are acceptable if they fall into these broad categories and are at the level specified.

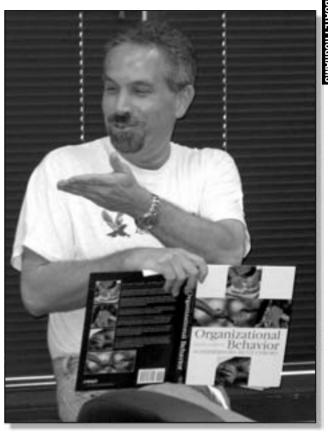
Communication Theory & Skills	6	6
ENGL 123 English Composition	3	3
Mathematics	3	6
Computer Science	3	3
Physical and Life Sciences	6	6
Humanities - Lower-level course	3	3
Social Sciences - Lower-level courses	3	3
ECON 210 Microeconomics	3	3
Humanities/Social Sciences -		
Upper-level Course	0	3
Total Credits	30	36

#### PROGRAM SUPPORT:

Course	Title	Cred	its
ECON 211	Macroeconomics	3	3
MATH 211	Statistics with Aviation A	pplications	
-(	DR-		
MATH 222	<b>Business Statistics</b>	3	3
<b>Total Credits</b>	S	6	6



		A.S.	B.S.
BUSINESS C	<del></del>		
Course	Title	• • • •	dits
MGMT 201	Principles of Management	3	3
MGMT 210	Financial Accounting	3	3
MGMT 221	Advanced Computer		
	Based Systems	3	3
MGMT 311	Marketing	0	3 3
MGMT 312	Managerial Accounting	0	3
MGMT 314	Human Resource		
	Management	0	3
MGMT 317	Organizational Behavior	0	3
MGMT 320	Business Information		
	Systems	0	3
MGMT 325	Social Responsibility and Ethi	cs	
	in Management	0	3
MGMT 335	International Business	0	3 3 3
MGMT 390	Business Law	0	3
<b>Total Credits</b>		9	33
MANAGEME	NT ELECTIVES:	0	12
300-400 uppe	r-level Management courses.		
OPEN ELECT 300-400 Leve	I <b>VES (Upper-Level)</b> : I Courses	0	9
OPEN ELECT	IVES (Lower-Level):	6	9
TOTAL DEGR	EE REQUIREMENTS	60	120



# **TESTIMONIAL**

Like many other members of the military I had the goal of completing my bachelor's degree, and like many, that goal was put aside for several years. ERAU made obtaining my degree painless and enjoyable starting with a thorough evaluation of my previous college and military experience. The Embry-Riddle staff is an outstanding group of professionals who understand the needs of both the traditional and non-traditional student. I started taking classes with ERAU during OIF and have been so pleased with the resident and online classes. I have since finished my degree and am now working on my masters.

Jeremie J. Zabko

# UNDERGRADUATE ACADEMIC PROGRAMS

# TECHNICAL MANAGEMENT LOGISTICS SPECIALTY

Bachelor of Science

As businesses become more complex and increasingly global, the need for logistics specialists increases as well. Embry-Riddle Aeronautical University's Logistics Specialty program is specifically designed to prepare students for a career in this burgeoning field. In conjunction with the Technical Management degree curriculum, this program gives students a foundation for supervising or managing the procurement, maintenance and transportation of material, personnel, equipment and facilities. To earn the Technical Management degree with the Logistics Specialization, degree-seeking students must complete the management electives, as listed in the catalog, and satisfy the Logistics Technical Specialty and upper-level open elective requirements as listed below. Graduates of this program find new opportunities in diverse fields such as public administration, aviation/aerospace, military logistics and public or private transportation.

Course	Title	Credits
ECON 315	Managerial Economics	3
ECON 420	Economics of Air Transportation	3
MGMT 308	Public Administration	3
MGMT 321	Aviation/Aerospace	
	Systems Analysis Methods	3
MGMT 331	Transportation Principles	3
MGMT 332	Corporate Finance I	3
MGMT 410	Management of Air Cargo	3
MGMT 411	Logistics Management for	
	Aviation/Aerospace	3
MGMT 422	Life Cycle Analysis for Systems and	
	Programs in Aviation/Aerospace	3
MGMT 440	Advanced Professional Logistics	3
MGMT 449	Strategic Marketing Management	3
LOGISTICS TI	ECHNICAL SPECIALTY	15

(Choose five courses from the above list)

#### **GENERAL EDUCATION:**

Embry-Riddle courses in the general education categories of Communication Theory and Skills, and Humanities and Social Sciences may be chosen from those listed below, assuming prerequisite requirements are met. Courses from other institutions are acceptable if they fall into these broad categories and are at the level specified.

Communica	tion Theory & Skills	6
ENGL 123 Er	nglish Composition	3
Mathematic	S	6
Computer S	cience	3
Physical and	d Life Sciences	6
Humanities	- Lower-level course	3
Social Scien	nces - Lower-level courses	3
<b>ECON 210 M</b>	licroeconomics	3
Humanities/	Social Science - Upper-level	3
Total Credits		36
PROGRAM S	SUPPORT:	
ECON 211	Macroeconomics	3
MATH 211	Statistics with Aviation Applications	
	- OR -	

**Business Statistics** 

MATH 222
Total Credits



# **TECHNICAL MANAGEMENT**

BUSINESS CO	ORE:		MANAGEME	NT ELECTIVES:	
MGMT 201	Principles of Management	3	ASCI 419	Aviation Maintenance Management	3
MGMT 210	Financial Accounting	3	MGMT 406	Strategic Management of	
MGMT 221	Advanced Computer Based Systems	3		Technical Operations	3
MGMT 311	Marketing	3	MGMT 420	The Management of Production	
MGMT 312	Managerial Accounting	3		and Operations	3
MGMT 314	Human Resource Management	3	MGMT 424	Project Management in	
MGMT 317	Organizational Behavior	3		Aviation Operations	3
MGMT 320	Business Information Systems	3	Total Credits	•	12
MGMT 325	Social Responsibility and Ethics				
	in Management	3	OPEN ELECT	IVES (Upper-Level):	9
MGMT 335	International Business	3	300-400 Leve		
MGMT 390	Business Law	3			
Total Credits		33	OPEN ELECT	IVES (Lower-Level):	9
			TOTAL DEGR	EE REQUIREMENTS	120



# UNDERGRADUATE ACADEMIC PROGRAMS

#### TECHNICAL MANAGEMENT OCCUPATIONAL SAFETY AND HEALTH SPECIALTY

Bachelor of Science

Creating and maintaining a safe work environment and protecting workers from hazards have become a critical issue in nearly every industry. The Occupational Safety and Health Specialty was developed to prepare students for supervisory or management positions relating to occupational safety and health in environmental compliance, ergonomics, industrial hygiene and toxicology, construction, fire protection and systems design. This program is geared toward students who are seeking new opportunities in the public or private sector such as service or manufacturing industries, local, state, or federal agencies, and the military. To earn the Technical Management degree with an Occupational Safety and Health Specialization, degree-seeking students must complete the program support, business core and management electives, as listed in the catalog, as well as the specified upper-level open elective requirements for this specialization.



#### **SAFETY COURSES:**

CALLIT GOOTIGES.				
Course	Title	Credits		
SFTY 311	Fundamentals of Occupational			
	Safety and Health	3		
SFTY 315	Environmental Compliance and			
	Safety	3		
SFTY 321	Ergonomics	3		
SFTY 355	Industrial Hygiene & Toxicology	3		
SFTY 360	Construction Safety	3		
SFTY 365	Fire Protection	3		
SFTY 410	Design of Engineering Hazard Contro	ls		
	- OR -			
SFTY 420	Systems Design for Fire and			
	Life Safety	3		
SFTY 470	Advanced Occupational Safety			
	and Health Technology	3		
	3,			
OCCUPATION	AL SAFETY AND HEALTH			
SPECIALTY		15		

#### **GENERAL EDUCATION:**

Embry-Riddle courses in the general education categories of Communication Theory and Skills, and Humanities and Social Sciences may be chosen from those listed below, assuming prerequisite requirements are met. Courses from other institutions are acceptable if they fall into these broad categories and are at the level specified.

Communication Theory & Skills	6
ENGL 123 English Composition	3
Mathematics	6
Computer Science	3
Physical and Life Sciences	6
(This Specialty requires Physics)	
Humanities - Lower-level course	3
Social Sciences - Lower-level course	3
(This Specialty requires Psychology)	
ECON 210 Microeconomics	3
Humanities/Social Sciences - Upper-level	3
Total Credits	36

# **TECHNICAL MANAGEMENT**

UPPORT:		MANAGEMI	ENT ELECTIVES:	
Macroeconomics	3	MGMT 420	Management of Production	
Statistics with Aviation Applications			and Operations	3
- OR -		SFTY 341	•	
Business Statistics	3		•	3
	6	SFTY 440	· ·	3
		SFTY 450	, ,	3
ORE:				12
Principles of Management	3			
Financial Accounting	3	OPEN ELECT	(IVES (Upper-Level):	9
Advanced Computer Based Systems	3		• • •	
Marketing	3			
Managerial Accounting	3	OPEN ELECT	「IVES (Lower-Level):	9
Human Resource Management	3			
Organizational Behavior	3	TOTAL DEGR	REE REQUIREMENTS	120
Business Information Systems	3			
Social Responsibility and Ethics				
in Management	3			
International Business	3			
Business Law	3			
	33			
	Macroeconomics Statistics with Aviation Applications - OR - Business Statistics  ORE: Principles of Management Financial Accounting Advanced Computer Based Systems Marketing Managerial Accounting Human Resource Management Organizational Behavior Business Information Systems Social Responsibility and Ethics in Management International Business Business Law	Macroeconomics Statistics with Aviation Applications OR - Business Statistics  ORE: Principles of Management Financial Accounting Advanced Computer Based Systems Marketing Managerial Accounting Human Resource Management Organizational Behavior Business Information Systems Social Responsibility and Ethics in Management International Business Business Law  3  3  3  3  3  3  3  3  3  3  3  3  3	Macroeconomics Statistics with Aviation Applications - OR - Business Statistics  ORE: Principles of Management Financial Accounting Advanced Computer Based Systems Marketing Managerial Accounting Managerial Accounting Managerial Accounting Managerial Accounting Social Responsibility and Ethics in Management International Business Business Law  MGMT 420  SFTY 341  SFTY 341  OPEN ELECT  Total Credits  3  OPEN ELECT  4  TOTAL DEGI  3  TOTAL DEGI  3  International Business 3  Business Law	Macroeconomics Statistics with Aviation Applications - OR - Business Statistics  ORE:  Principles of Management Advanced Computer Based Systems Marketing Managerial Accounting Managerial Accounting Managerial Accounting Managerial Accounting Managerial Accounting Organizational Behavior Business Information Systems Social Responsibility and Ethics in Management



### UNDERGRADUATE ACADEMIC PROGRAMS

#### TECHNICAL MANAGEMENT PROFESSIONAL VALUATIONS SPECIALTY

Bachelor of Science

Individuals who possess specific professional skills have a natural advantage in today's hotly contested job market. Embry-Riddle Aeronautical University's Professional Valuations Specialty is designed to prepare students in the Technical Management degree program for the Professional Valuations career approved by the American Society of Appraisers (ASA). Graduates of this specialty will have learned the skills necessary to supervise or manage professional valuations in the areas of aerospace business, aviation machinery and equipment, and income property. To earn the Technical Management degree with a Professional Valuations Specialization, degree-seeking students must complete the degree requirements from the management courses as detailed below. These courses, approved by the ASA, provide a basic set of elements required to qualify as an Accredited Member of the Society.

Course	Title Cre	dits
MGMT 340	Principles of Aerospace Business Valuation	2
MGMT 413	Aviation Machinery and	J
	Equipment Valuation	3
MGMT 423	Aviation Machinery and	
MGMT 433	Equipment Methodology Advanced Topics in Machinery an	۲ 3
IVIUIVII 433	Equipment Valuation	u 3
MGMT 443	Applications in Income	
	Property Valuation	3

#### **DEGREE REQUIREMENTS:**

#### PROFESSIONAL VALUATIONS SPECIALTY

15

#### **GENERAL EDUCATION:**

Embry-Riddle courses in the general education categories of Communication Theory and Skills, and Humanities and Social Sciences may be chosen from those listed below, assuming prerequisite requirements are met. Courses from other institutions are acceptable if they fall into these broad categories and are at the level specified.

Communication Theory & Skills ENGL 123 English Composition	6
Mathematics	6
Computer Science	3
Physical and Life Sciences	6
Humanities - Lower-level course	3
Social Sciences - Lower-level course	3
ECON 210 Microeconomics	3
Humanities/Social Science - Upper-level	3
Total Credits	36

#### PROGRAM SUPPORT

i ilouliani o	01 1 0111.	
ECON 211	Macroeconomics	3
MATH 211	Statistics with Aviation Applications - <b>OR</b> -	
MATH 222	Business Statistics	3
<b>Total Credits</b>		6



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BOSINESS CORE:				
Course	Title	Credits		
MGMT 201	Principles of Management	3		
MGMT 210	Financial Accounting	3		
MGMT 221	Advanced Computer Based Systems	3		
MGMT 311	Marketing	3 3 3 3 3 3		
MGMT 312	Managerial Accounting	3		
MGMT 314	Human Resource Management	3		
MGMT 317	Organizational Behavior	3		
MGMT 320	Business Information Systems	3		
MGMT 325	Social Responsibility and			
	Ethics in Management	3		
MGMT 335	International Business	3		
MGMT 390	Business Law	3		
<b>Total Credits</b>		33		
	NT ELECTIVES: r-level Management courses	12		
<b>OPEN ELECTIVES (Upper-Level)</b> : 300-400 Level Courses				
OPEN ELECTIVES (Lower-Level):				
TOTAL DEGREE REQUIREMENTS				



# **TESTIMONIAL**

never thought I'd be able to earn a masters degree while working full time, flying as an Air Force reservist, and raising three children. Embry-Riddle has allowed me to further my education by giving me the flexibility I need. The instructors are top-notch and understand the balancing act most graduate students have to deal with. They really go out of their way to accommodate student requests. Thanks Embry-Riddle for giving me the opportunity to 'kick it up a notch'."

Michael Sipos

## UNDERGRADUATE ACADEMIC PROGRAMS

## AIRCRAFT MAINTENANCE

Associate in Science

The Associate in Science in Aircraft Maintenance (ASAM) program offers experienced maintenance technicians an opportunity to broaden their knowledge of aviation maintenance while gaining a solid foundation in the principles of management and communication. Students who enter the program holding an FAA Airframe & Powerplant Certificate are awarded 30 credit hours toward their degree. Others can earn their Certificate as part of the overall curriculum. Students may also apply ASAM credits toward an Embry-Riddle Bachelors Degree in Aviation Maintenance Management, or any of the other related degrees.

#### **DEGREE REQUIREMENTS:**

#### **Core Courses:**

Course	Title	Credits
AMNT 240	<b>General Aeronautics and Applications</b>	3
AMNT 260	Aircraft Electrical Systems Theory	3
AMNT 270	Airframe Structures and Applications	4
AMNT 271	Airframe Systems Structures and	
	Applications	3
AMNT 280	Powerplant Theory and Applications	4
AMNT 281	Aircraft Propulsion Systems	
	and Applications	4

**Electives**: Aviation Maintenance, Aeronautical Science, Avionics Technology, Management, Computer Science, Electrical Engineering Technology,

AMNT 285 Advanced Aircraft Maintenance
Practicum

Practicum

9

Total Credits

Total Engineering Technology,
- OR Aircraft Maintenance Practicum and
Advanced Aircraft Maintenance
9

Total Credits

30

-AND-



## **AIRCRAFT MAINTENANCE**

33 designate	ed credits as follows:	
	tion Theory and Skills	6
ENGL 123 Er	nglish Compostion	3
Lower-level	Humanities .	3
Lower-level	Social Sciences	6
Course	Title	Credits
MGMT 120	Introduction to Computer Bas	sed Systems

Lower-level Social Sciences		6
Course	Title	Credit
MGMT 120	Introduction to Computer Based System - <b>OR</b> -	ıs
CSCI 109	Introduction to Computers	
	and Applications	3
MGMT 201	Principles of Management	3
MATH 111	College Mathematics for Aviation I - <b>OR</b> -	
MATH 120	Quantitative Methods I - <b>OR</b> -	
MATH 140	College Algebra	3
MATH 112	College Mathematics for Aviation II - OR -	
MATH 211	Statistics with Aviation Applications - <b>OR</b> -	
MATH 222	Business Statistics	3
PHYS 102	Explorations in Physics	3
<b>Total Credits:</b>		33

Embry-Riddle courses in the general education categories of Communication Theory and Skills, and Humanities and Social Sciences may be chosen from those listed below, assuming prerequisite requirements are met. Courses from other institutions are acceptable if they fall into these broad categories and are at the level specified.

### **COMMUNICATION THEORY AND SKILLS:**

ENGL 123, SPCH 219, ENGL 221, ENGL 222 or equivalent.

### **HUMANITIES**: Lower-Level:

HUMN 140, HUMN 141, HUMN 142, ENGL 143.

### **SOCIAL SCIENCES:** Lower-Level:

PSYC 220, HIST 110, HIST 130, SOCI 210



## UNDERGRADUATE ACADEMIC PROGRAMS

# AVIATION MAINTENANCE MANAGEMENT

Bachelor of Science

In this degree program, students who have the FAA Airframe and Powerplant Maintenance Certificate gain a comprehensive business foundation that complements the FAA certification. They gain the management skills needed to effectively manage aviation maintenance. Although the program is geared toward aviation and aerospace, its curriculum prepares graduates for success with companies in any industry. The total degree requirements are 126 credit hours.

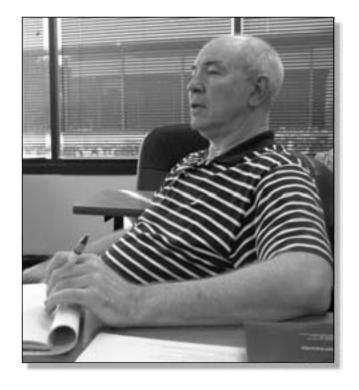
#### **DEGREE REQUIREMENTS:**

Core Courses:	1	
Course	Title Credi	ts
FAA Airframe	& Powerplant Maintenance Certificate - <b>OR</b> -	36
Type 65 Aviati	on Maintenance Technology Course Work	
AMNT 240	General Aeronautics and Applications	3
AMNT 260	Aircraft Electrical Systems Theory	3
AMNT 270	Airframe Structures and Applications	4
AMNT 271	Airframe Systems Structures and	
	Applications	3
AMNT 280	Powerplant Theory and Applications	4
AMNT 281	Aircraft Propulsion Systems	
	and Applications	4
<b>ELECTIVES</b> : A	viation Maintenance, Aeronautical Science	€,
	nology, Management, Computer Science,	
<b>Electrical Eng</b>	ineering Technology,	
	- OR -	
AMNT 275	Aircraft Maintenance Practicum	
	and Applications	
AMNT 285	Advanced Aircraft	
	Maintenance Practicum	15
<b>Total Credits</b>		36

#### **GENERAL EDUCATION:**

Embry-Riddle courses in the general education categories of Communication Theory and Skills, and Humanities and Social Sciences may be chosen from those listed below, assuming prerequisite requirements are met. Courses from other institutions are acceptable if they fall into these broad categories and are at the level specified.

Communication Theory and Skills	6
ENGL 123 English Composition	3
Mathematics	6
Computer Science	3
Physical and Life Sciences	6
Humanities Lower-level course	3
Social Sciences Lower-level courses;	
(one course must include economics)	6
Humanities/Social Sciences Upper-level course	3
Total Credits	36



## **AVIATION MAINTENANCE MANAGEMENT**

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PROGRAM SU	JPPORT:	
MATH 211	Statistics with Aviation Applications	
	- OR -	
MATH 222	Business Statistics	3
MATH 320	Decision Math	3
<b>Total Credits</b>		6

iotai Greuits		0
BUSINESS CO	DRE:	
ASCI 419	Aviation Maintenance Management	3
ECON 315	Managerial Economics	3
MGMT 201	Principles of Management	3
MGMT 210	Financial Accounting	3
MGMT 212	Advanced Financial Accounting	3
MGMT 221	Advanced Computer Based Systems	3
MGMT 311	Marketing	3
MGMT 312	Managerial Accounting	3
MGMT 314	Human Resource Management	
	- OR -	
MGMT 317	Organizational Behavior	3
MGMT 320	Business Information Systems	3
MGMT 324	Aviation Labor Relations	3
MGMT 325	Social Responsibility and	
	Ethics in Management	3
MGMT 332	Corporate Finance I	3
MGMT 390	Business Law	3
MGMT 420	Management of Production	
	and Operations	3
MGMT 422	Life Cycle Analysis for Systems	
	and Programs in Aviation / Aerospace	3
Total Credits		48

**TOTAL DEGREE REQUIREMENTS** 

126



## MINOR COURSES OF STUDY

Minor courses of study are academic programs designed to satisfy students' personal interest and to meet their professional needs. Students explore, in some depth, the offerings in a field of study. A minor course of study provides the student with significant experience in a discipline organized around skills, methodology, and subject matter. To gain the greatest value from their academic experience, students are encouraged to select minors that complement their degree program and/or other minors that they are pursuing.

The student becomes subject to the requirements of the minor as stated in the catalog in effect at the time the minor is declared. The department/program chair responsible for a particular minor determines how students fulfill deficits in credits for a minor and certifies that students are qualified to receive the minor.

## MINOR IN MANAGEMENT

Not open to students in the BS Technical Management or BS in Aviation Maintenance Management Programs.

Course ECON 210 MGMT 201 MGMT 210 MGMT 311	Title Microeconomics Principles of Management Financial Accounting Marketing	Credits 3 3 3 3
SPECIFIED ELECTIVES IN MANAGEMENT Choose any two Upper-level MGMT courses. Total Credits		6 <b>18</b>

## MINOR IN LOGISTICS

Not open to students in the BS Technical Management Logistics Specialty Program.

Course	Title	Credits
MGMT 331	Transportation Principles	3
MGMT 410	Management of Air Cargo	3
MGMT 411	Logistics Management for	
	Aviation/Aerospace	3
MGMT 422	Life Cycle Analysis for Systems &	
	Programs in Aviation/Aerospace	3
(Choose any two of the following courses):		
MGMT 321, ASCI 419, or MGMT 420		6
Total Credits		18

## MINOR IN AVIATION SAFETY

Course	Title	Credits
SFTY 320	Human Factors in Aviation Safety -OR-	
<b>ASCI 321</b>	Human Factors in Aviation Safety	3
SFTY 330	Aircraft Accident Investigation	
	-OR-	
ASCI 330	Aircraft Accident Investigation	3
SFTY 409	Aviation Safety	
	-OR-	
ASCI 409	Aviation Safety	3

Nine additional credit hours must be completed from the following:

SFTY 335	Mechanical and Structural Factors in Aviation Safety	
ASCI 335	Mechanical and Structural Factors in Aviation Safety	3
SFTY 345	Aviation Safety Program Management -OR-	
ASCI 345 SFTY 350	Aviation Safety Program Management Aircraft Crash & Emergency Management -0R-	3
ASCI 350	Aircraft Crash & Emergency Management	3
SFTY 375	Propulsion Plant Investigation -OR-	
<b>ASCI 375</b>	Propulsion Plant Investigation	3
SFTY 435	Aircraft Crash Survival Analysis and Design -0R-	
ASCI 435	Aircraft Crash Survival Analysis and Design	3
SFTY 440	System Safety Management -OR-	
ASCI 440	System Safety Management	3
SFTY 462	Health, Safety, and Aviation Law -OR-	
ASCI 462 Total Credits	Health, Safety, and Aviation Law	3 <b>18</b>

## **MINOR COURSES OF STUDY**

# MINOR IN PROFESSIONAL VALUATIONS

Course	Title	Credits
MGMT 340	Principles of Aerospace	
	Business Valuation	3
MGMT 413	Aviation Machinery and	
	Equipment Valuation	3
MGMT 423	Aviation Machinery and	
	Equipment Methodology	3
MGMT 433	Advanced Topics in Machinery	
	and Equipment Valuation	3
MGMT 443	Applications in Income	
	Property Valuation	3
<b>Total Credits</b>	Toporty valuation	15

# MINOR IN OCCUPATIONAL SAFETY AND HEALTH

Not open to students in the BS Technical Management Occupational Saftey and Health Specialty.

Course	Title	Credits
SFTY 311	Fundamentals of Occupational	
	Safety and Health	3
SFTY 321	Ergonomics	3
SFTY 355	Industrial Hygiene & Toxicology	3

Nine additional credit hours must be completed from the following:

SFTY 315 SFTY 341	Environmental Compliance and Safety Occupational Safety and Health	3
	Program Management	3
SFTY 365	Fire Protection	3
SFTY 360	Construction Safety	3
SFTY 410	Design of Engineering Hazard	
	Controls	3
SFTY 420	Systems Design for Fire	
	and Life Safety	3
SFTY 440	System Safety Management	3
SFTY 450	Loss Control and Insurance	3
SFTY 470	Advanced Occupational Safety and	
	Health Technology	3
<b>Total Credits</b>		18

# MINOR IN INTERNATIONAL RELATIONS

<b>Course</b> GOVT 331	<b>Title</b> Current Issues In America	Credits
Three semes following:	ster hours must be completed from the	he
ECON 211 HIST 130	Macroeconomics History of Aviation in America	3 3
Nine semest following:	ter hours must be completed from the	e
GOVT 325	International Studies	3
GOVT 340	American Foreign Policy	3
GOVT 363	Inter-American Relations	3
MGMT 335	International Business	3
<b>Total Credits</b>		15

# MINOR IN SECURITY AND INTELLIGENCE

Course	Title	Credits
GOVT 340	American Foreign Policy	3
SCTY 312	Global Crime and	
	Criminal Justice Systems	3
SCTY 315	Studies in Intelligence I	3
SCTY 385	Intelligence Analysis-Writing	
	and Briefing	3
SCTY 415	Studies in Intelligence II	3
SCTY 485	Corporate Security	3
<b>SCTY 488</b>	National Security Issues	
	and Terrorism	3
<b>Total Credits</b>		21

## UNDERGRADUATE CERTIFICATES OF COMPLETION

Undergraduate Certificates of Completion are focused academic programs in which students complete a series of courses in Aviation Maintenance Technology Type 65, Aviation Safety, Logistics, Management, Occupational Safety and Health, Pre-Engineering Studies, Security and Intelligence, Space Studies, or Supply Chain Management.

Certificates are available to both degree seeking and non-degree seeking students. To be eligible for the award of any undergraduate certificate, a student must achieve a cumulative GPA of 2.0 or higher for the courses included in the program. The cumulative GPA for the series of courses is specific to each certificate of completion, ranging from 2.0 to 2.8 on a 4.0 scale.

## AVIATION MAINTENANCE TECHNOLOGY TYPE 65

Certificate of Completion

The Aviation Maintenance Technology Certificate provides broad knowledge of general aeronautics, airframe systems, and powerplant systems. The curriculum consists of six courses, taken in-residence or online.

Courses taken in this Certificate of Completion can be used to prepare for the A & P testing process. For those individuals who meet the experience requirements established by the FAA, these courses help prepare the applicant for the written, oral, and practical examinations. Experience requirements can be found in Part 65 of the Federal Aviation Regulations.

#### **REQUIRED COURSES:**

Course	Title	Credits	
AMNT 240	General Aeronautics and Application	ns 3	
AMNT 260	Aircraft Electrical Systems Theory	3	
AMNT 270	Airframe Structures and Application	ns 4	
AMNT 271	Airframe Systems Structures		
	and Applications	3	
AMNT 280	Powerplant Theory and Application	s 4	
AMNT 281	Aircraft Propulsion Systems		
	and Applications	4	
<b>Total Credits:</b>		21	

#### **AVIATION SAFETY**

Certificate of Completion

Aviation is an integral part of our society and there is a growing need for qualified Aviation Safety personnel. There is a growing interest for a program that provides a comprehensive understanding of the theories and concepts of Aviation Safety.

The objectives of the Aviation Safety Certificate of Completion are to provide degree and nondegree seeking students an opportunity to complement their practical experience in the field of Aviation Safety with a thorough study of the theories and concepts in the discipline.

The University has approved a Certificate of Completion in Aviation Safety for those students who complete a specified series of Aviation Safety courses with a cumulative GPA of 2.8. The required courses are as follows:

Take the follo	wing six courses:	
Course	Title	Credits
SFTY 320	Human Factors in Aviation Safety -OR-	
ASCI 321	Human Factors in Aviation Safety	3
SFTY 330	Aircraft Accident Investigation -OR-	
ASCI 330	Aircraft Accident Investigation	3
SFTY 345	Aviation Safety Program Management -OR-	
ASCI 345	Aviation Safety Program	
	Management	3
SFTY 335	Mechanical and Structural Factors	
	in Aviation Safety	
	-OR-	
ASCI 335	Mechanical and Structural Factors	
	in Aviation Safety	
	-OR-	
SFTY 435	Aircraft Crash Survival Analysis & Desig	gn
ASCI 435	Aircraft Crash Survival Analysis &	
	Design	3
SFTY 409	Aviation Safety	
	-OR-	
ASCI 409	Aviation Safety	3
SFTY 440	System Safety Management -OR-	
ASCI 440	System Safety Management	3

## **CERTIFICATES OF COMPLETION**

#### Take two of the following courses:

, lollowing obulocs.	
ītle	Credits
Aircraft Crash & Emergency Manageme	ent
OR-	
Aircraft Crash & Emergency	
/lanagement	3
ndustrial Hygiene & Toxicology	3
ire Protection	3
Propulsion Plant Investigation	
OR-	
Propulsion Plant Investigation	3
lealth, Safety, and Aviation Law	
OR-	
lealth, Safety, and Aviation Law	3
	24
	itle ircraft Crash & Emergency Manageme DR- ircraft Crash & Emergency Management Industrial Hygiene & Toxicology ire Protection ropulsion Plant Investigation DR- ropulsion Plant Investigation ealth, Safety, and Aviation Law DR-



## **LOGISTICS**

Certificate of Completion

Logistics, the science and management of procuring, maintaining, and transporting personnel and materials, is one of today's fastest-growing business specialties. Logistics has become critical to the success of organizations. Logistics professionals are increasingly in demand in the aviation and aerospace industries. Employment opportunities for logisticians include positions as transportation analysts, logistics analysts, and transportation supervisors.

Embry-Riddle Aeronautical University offers a logistic certificate program that gives non-degree-seeking students an opportunity to complement their practical experience in logistics with a thorough study of the theories and methods of the discipline. In addition, the program's courses cover much of the material used in the Certified Professional Logistician (CPL) examination administered by the Society of Logistical Engineers.

The University awards a Certificate of Completion in Logistics to those who complete the following courses with a cumulative grade point average of at least 2.8.

Course	Title	Credits
<b>ASCI 419</b>	Aviation Maintenance Management	3
MGMT 321	Aviation/Aerospace Systems	
	Analysis and Methods	3
MGMT 331	Transportation Principles	3
MGMT 410	Management of Air Cargo	3
MGMT 411	Logistics Management for	
	Aviation/Aerospace	3
MGMT 420	Management of Production	
	and Operations	3
MGMT 422	Life Cycle Analysis for Systems and	
	Programs in Aviation/Aerospace	3
MGMT 440	Advanced Professional Logistics	
	-OR-	
MGMT 499	Special Topics in Management	3
<b>Total Credits:</b>		24

## UNDERGRADUATE CERTIFICATES OF COMPLETION

### MANAGEMENT

Certificate of Completion

Management is a key component of any industry, especially in today's complex, highly integrated, global environment. There is a growing need for a focused program in which students will gain a comprehensive understanding of the theories, concepts, and practical applications of management techniques. The objectives of the Management Certificate are to provide degree and non-degree seeking students an opportunity to complement their practical experience with the skills necessary to succeed in roles of leadership and management.

The University awards a Certificate of Completion in Management to those students who complete the following courses with an overall combined CGPA of 2.75.

Course	Title	Credits
MGMT 201	DRE COURSES: Principles of Management	<b>12</b> 3
MGMT 314 MGMT 317 MGMT 424	Human Resources Management -OR- Organizational Behavior Project Management in Aviation	3
	Operations	3
MGMT 436	Strategic Management	3
Choose any 2	of the following Electives:	6
MGMT 324	Aviation Labor Relations	3
MGMT 325	Social Responsibility and Ethics in Management	3
MGMT 411	Logistics Management for Aviation/ Aerospace	3
MGMT 419 MGMT 420	Aviation Maintenance Management Management of Production	3
	and Operations	3
MGMT 427	Management of the Multicultural Workforce	3
SFTY 341	Occupational Safety and Health	Ū
	Program Management	3
SFTY 345 Total Credits:	Aviation Safety Program Management	3 <b>18</b>

# OCCUPATIONAL SAFETY AND HEALTH

Certificate of Completion

The safety professional brings technical knowledge, skill, and expertise along with management abilities developed through education and practical experience to protect the workforce and the general public from injury and illness. The safety professional has the responsibility for studying materials, structures, codes, and operations in order to find the best way to use resources to control hazards.

There is a growing interest for a program that will provide a comprehensive understanding of the theories and concepts of Occupational Safety and Health.

The objectives of the Occupational Safety and Health Certificate program are to provide degree and non-degree-seeking students an opportunity to complement their practical experience in the field of Occupational Safety and Health with a thorough study of the theories and concepts in the discipline.

The University has approved a Certificate of Completion in Occupational Safety and Health for those students who complete a specified series of Occupational Safety and Health courses with a cumulative GPA of 2.8.

Course	Title	Credits
SFTY 311	Fundamentals of Occupational	
	Safety and Health	3
SFTY 315	<b>Environmental Compliance and Safety</b>	/ 3
SFTY 321	Ergonomics	3
SFTY 341	Occupational Safety and Health	
	Program Management	3
SFTY 355	Industrial Hygiene & Toxicology	3
SFTY 410	Design of Engineering Hazard Control -OR-	S
SFTY 440	System Safety Management	3
SFTY 420	Systems Design for Fire and Life Safe -OR-	ty
SFTY 450	Loss Control and Insurance	3
SFTY 470	Advanced Occupational Safety and	
	Health Technology	3
Total Credits:		24

### PRE-ENGINEERING STUDIES

Certificate of Completion

This nine-course, 31-hour Pre-Engineering Certificate of Completion provides an entry-level pre-engineering studies curriculum for working adults interested in (1) gaining a solid engineering foundation for job applications; (2) pursuing an undergraduate engineering degree; or (3) qualifying for graduate engineering programs that require a sound engineering foundation. This entry-level engineering certificate was specifically designed, in accordance with engineering industry certification standards, as a foundation for a wide variety of undergraduate engineering degrees, such as Aerospace, Electrical, Computer, Civil, Engineering Physics, Software, etc. Every regionally accredited engineering school requires the student to obtain a sound foundation in mathematics and physics during the first two years of college. Successful completion of this certificate will qualify students for aviation/aerospace industry positions requiring an engineering foundation and the pursuit of undergraduate and graduate engineering programs.

#### **REQUIRED COURSES:**

Course	Title	Credits
Choose 2 of the	ne following 6 CESC/CSCI/ECSI	
	courses:	6
CESC 220	Digital Circuit Design	3
CSCI 210	Scientific Programming	3
ESCI 201	Statics	3
ESCI 202	Solid Mechanics	3 3
ESCI 204	Dynamics	
ESCI 206	Fluid Mechanics	3
Complete the	following 5 MATH courses:	16
MATH 250	Calculus and Analytic Geometry I	3
MATH 251	Calculus and Analytic Geometry II	3
MATH 252	Calculus and Analytic Geometry III	3
MATH 253	Calculus and Analytic Geometry IV	3
MATH 345	Differential Equations and Matrix	
	Methods	4
Complete the	following 3 PHYS courses:	9
PHYS 150	Physics I for Engineers	3
PHYS 160	Physics II for Engineers	3
PHYS 250	Physics III for Engineers	3
<b>Total Credits:</b>		31

#### SECURITY AND INTELLIGENCE

Certificate of Completion

The Security and Intelligence Certificate of Completion provides non-degree seeking students an opportunity to complement their practical experience in the field of security and intelligence with a thorough study of the theories and concepts in the discipline. The Security and Intelligence Certificate of Completion complements the Security and Intelligence Minor for the Professional Aeronautics and Technical Management degree programs.

The University awards a Certificate of Completion in Security and Intelligence to those who complete the following specified series of courses with a cumulative GPA of at least 2.8.

Course	Title	Credits
Take the follo	owing 3 courses:	
SCTY 312	Global Crime and Criminal Justice	
	Systems	3
SCTY 315	Studies in Intelligence I	3
SCTY 385	Intelligence Analysis-Writing and	
	Briefing	3
Choose 2 of t	he following courses:	
GOVT 340	American Foreign Policy	3
GOVT 401	American Constitutional Law	3
GOVT 402	International Politics	3
Choose 3 of t	he following courses:	
SCTY 400	Airport Security	3
SCTY 415	Studies in Intelligence II	3
SCTY 485	Corporate Security	3
SCTY 488	National Security Issues and	
	Terrorism	3
Total Credits:		24

## UNDERGRADUATE CERTIFICATES OF COMPLETION

### SPACE STUDIES

Certificate of Completion

The Space Studies Certificate of Completion provides an initial space studies curriculum for working adults interested in joining the growing field of space-related companies and applications. This entry-level, sevencourse program is offered to parallel both military and space industry current space programs and anticipated expansion in space sector programs and operations. Whether to pursue additional education involving matriculation into a degree program, or to fulfill a job or personal need to acquire space industry knowledge, this certificate is designed with both in mind. It was designed specifically for junior airmen at space-related bases, civilian contractor personnel serving DOD installations, and other military and civilian aviation and aerospace industry personnel desiring further education and employment opportunities in the aerospace and space industries.

#### **REQUIRED COURSES:**

Course	Title	Credits
ASCI 110	Introduction to Space Flight	3
ASCI 210	Space Transportation Systems	3
ASCI 215	Space Stations Systems and Operations	3
ASCI 220	Life Support Systems	3
ASCI 300	Satellite and Spacecraft Systems	3
ASCI 400	Introduction to Space Navigation	3
ASCI 425	Selected Topics in Space and Aerospac	e 3
<b>Total Credits:</b>		21

### SUPPLY CHAIN MANAGEMENT

Certificate of Completion

The Supply Chain Management Certificate prepares students who are supply/logistics professionals to take the American Production and Inventory Control Society (APICS) Certification in Production and Inventory Management (CPIM) exam.

Courses taken for this certificate are geared around the Society of Logistics Engineers (SOLE) certification. SOLE certification requires a minimum of 10 years of experience unless the applicant has significant education. The APICS certification requires only two years of experience.

Course	Title	Credits
<b>ASCI 419</b>	<b>Aviation Maintenance Management</b>	3
MGMT 411	Logistics Management for	
	Aviation/Aerospace	3
MGMT 420	Management of Production	
	and Operations	3
MGMT 424	Project Management in Aviation	
	Operations	3
<b>Total Credits:</b>		12



Master of Aeronautical Science

Master of Science in Management

Master of Science in Project Management

Master of Science in Technical Management

## **Graduate Certificates of Completion**

Air Transportation Management
Aviation/Aerospace Industrial Management
Aviation/Aerospace Safety
Aviation Enterprises in the Global Environment
Integrated Logistics Management
Instructional System Design
Project Management



## GRADUATE ACADEMIC PROGRAMS

# MASTER OF AERONAUTICAL SCIENCE

In today's global workplace, a graduate-level education is becoming more and more critical in order to reach the upper levels of management. The Master of Aeronautical Science Degree from Embry-Riddle Aeronautical University can help you broaden your knowledge, diversify your talents and give you an edge on the competitive playing field of aviation. Historically, this degree program has been one of the most popular at Embry-Riddle, with an enrollment of more than three times that of any other graduate program.

Upon completion of this multi-disciplinary program, students will have learned to master the application of concepts, methods and tools used in the development, manufacture and operation of aircraft and spacecraft as well as the infrastructure that supports them. The Master of Aeronautical Science curriculum combines a solid core with eight areas of specialization that take students deeper into their areas of interest, including Aeronautics, Education Technology, Aerospace Management, Operations, Safety Systems, Human Factors in Aviation Systems, Space Studies, and Space Operations Management. These areas of specialization give air traffic control personnel, aviation educators, flight crewmembers, flight operations specialists, space operations managers and aviation/aerospace industry technical representatives an unparalleled opportunity to enhance their knowledge. The structure of the degree provides additional academic opportunities for individuals in diverse fields related to aviation or aerospace. Students can focus their academic efforts on areas directly related to their current positions or future opportunities. While one area of specialization is required for completion of the degree, many students choose to further broaden their academic credentials by pursuing multiple specializations.

Ultimately, MAS graduates have gone on to positions in all areas of aviation/aerospace including aircraft/spacecraft manufacturing, airport and airline management, airline and air cargo operations, federal state and county aeronautical organizations and military and commercial space operations.

#### **DEGREE REQUIREMENTS:**

Course	Title	Credits
ASCI 602	The Air Transportation System	3
ASCI 603	Aircraft and Spacecraft Developmen	t 3
ASCI 604	Human Factors in the Aviation/	
	Aerospace Industry	3
GCPP 605	Methods and Procedures for the	
	Graduate Capstone Project	3
<b>Core Credits</b>	,	12

#### **AREAS OF SPECIALIZATION\***

12

Choose at least one 12-credit-hour specialization. MAS students may complete courses leading to multiple specializations. Students wishing to complete multiple specializations must have 12 unduplicated credits in each of the specializations. Students must submit an evaluation request form to declare the desired specializations.

#### **ELECTIVES/GCP**

<b>Total Credits:</b>		12
ASCI/MGMT	Electives (500-600 level)	9
ASCI 690	Graduate Capstone Project	3

#### **TOTAL DEGREE REQUIREMENTS\***

36-39

#### **SPECIALIZATIONS:**

Specialization 1

#### **AERONAUTICS**

Students must complete 12 credit hours from the following list of courses:

Course	Title	Credits
ASCI 509	Advanced Aerodynamics	3
<b>ASCI 510</b>	Advanced Aircraft Performance	3
<b>ASCI 515</b>	Aviation/Aerospace Simulation Syste	m 3
<b>ASCI 516</b>	Applications in Crew	
	Resource Management	3
<b>ASCI 517</b>	Advanced Meteorology	3
ASCI 560	Rotorcraft Operations	3
ASCI 607	Advanced Aircraft/Spacecraft System	ns 3

<sup>\*</sup> For Specialization 1 – 7, the degree requirements are 36 semester hours. For Dual Specialization or Specialization 8, the degree requirements are 39 semester hours.

## **AERONAUTICAL SCIENCE**

Specialization 2

## AVIATION/AEROSPACE EDUCATION TECHNOLOGY

Students must complete 12 credit hours from the following list of courses:

Course	Title	Credits
ASCI 514	Computer-Based Instruction	3
ASCI 515	Aviation/Aerospace Simulation Syste	ems 3
ASCI 550	Aviation Education Foundations	3
ASCI 614	Advanced Aviation/Aerospace	
	Curriculum Development	3
ASCI 652	Continuing Education's Role in Aviati	on 3
ASCI 654	Adult Teaching and Learning Technic	ques 3
ASCI 663	Memory and Cognition	3

Specialization 3

# AVIATION/AEROSPACE MANAGEMENT

Students must complete 12 credit hours from the following list of courses:

Course	Title	Credits
ASCI 609	Aircraft Maintenance Management	3
ASCI 612	Aviation/Aerospace Industrial	
	Safety Management	3
ASCI 641	Production and Procurement Manag	gement
	in the Aviation/Aerospace Industry	3
ASCI 642	International Aviation Policy	3
ASCI 643	Management of Research & Develo	pment
	for the Aviation/Aerospace Industry	3
ASCI 644	Integrated Logistics in	
	Aviation Management	3
ASCI 645	Airport Operations and Managemen	t 3
ASCI 646	Airline Operations and Managemen	t 3

Specialization 4

## AVIATION/AEROSPACE OPERATIONS

Students must complete 12 credit hours from the following list of courses:

Course	Title Cred	its
ASCI 515	Aviation/Aerospace Simulation Systems	3
<b>ASCI 518</b>	Aviation/Aerospace Operations	
	Research	3
ASCI 560	Rotorcraft Operations	3
ASCI 606	Aviation/Aerospace Communication/	
	Control Systems	3
ASCI 620	Air Carrier Operations	3
ASCI 622	Corporate Aviation Operations	3

Specialization 5

# AVIATION/AEROSPACE SAFETY SYSTEMS

Students must complete 12 credit hours from the following list of courses:

Course	Title	Credits
ASCI 611	Aviation/Aerospace System Safety	3
ASCI 612	Aviation/Aerospace Industrial	
	Safety Management	3
ASCI 615	Aviation/Aerospace Accident	
	Investigation and Analysis	3
<b>ASCI 616</b>	Transportation Security	3
ASCI 617	Airport Safety and Certification	3
ASCI 618	Aviation/Aerospace Safety Program	
	Management	3
ASCI 634	Aviation/Aerospace Psychology	3

Specialization 6

# HUMAN FACTORS IN AVIATION SYSTEMS

Students must complete 12 credit hours from the following list of courses:

Course	Title	Credits
ASCI 634	Aviation/Aerospace Psychology	3
ASCI 660	Sensation and Perception	3
ASCI 661	Human-Computer Interaction	3
ASCI 663	Memory and Cognition	3
ASCI 665	Applied Experimental Design	3



## GRADUATE ACADEMIC PROGRAMS

Specialization 7

### SPACE STUDIES

Students must complete the following four courses:

Course	Title Cre	dits
ASCI 511	Earth Observation and Remote Sensing	3
ASCI 512	Space Mission and Launch Operations	3
ASCI 513	Space Habitation and	
	Life Support Systems	3
ASCI 601	Applications in Space: Commerce,	
	Defense, and Exploration	3

Specialization 8

### SPACE OPERATIONS MANAGEMENT

Students must complete the following eight courses:

Course	Title Credits	5
ASCI 511	Earth Observation and Remote Sensing	3
ASCI 512 ASCI 513	Space Mission and Launch Operations Space Habitation and Life	3
	Support Systems	3
ASCI 518	Aviation/Aerospace Operations	
	Research	3
ASCI 521	Aviation/Aerospace Information	
	Management	3
ASCI 601	Applications in Space:	
	Commerce, Defense, and Exploration	3
ASCI 636	Advanced Aviation/Aerospace	
	Planning Systems	3
ASCI 641	Production and Procurement Management in the Aviation/Aerospace Industry	3



# MASTER OF SCIENCE IN MANAGEMENT

In the field of aviation, exciting opportunities abound for those who have the unique combination of technical knowledge and managerial skill. The Master of Science in Management provides students with an opportunity to expand their knowledge and understanding in the interdisciplinary field of management. With a greater emphasis on operations than a traditional MBA, the MSM from Embry-Riddle Aeronautical University gives students the practical knowledge to help them move ahead of their peers. The core courses of this program provide exposure to a broad spectrum of subjects that will enhance performance and knowledge of management and decision-making in any endeavor. This degree also provides an opportunity to select a specialization of particular interest including: Integrated Logistics Management, Air Transportation Management, Aviation/Aerospace Industrial Management and Aviation Enterprises in the Global Environment. All MSM students gain quantitative analytic skills, quality management know-how, knowledge of ethical and regulatory requirements, an understanding of organizational structure, a grasp of the theory and practice of good communication skills, familiarity with formulating and managing budgets and research and problem-solving skills. As a result, MSM graduates are leaders in their organizations, handling day-to-day planning, managing employees and directing important projects. Moreover, this dynamic program provides personal satisfaction and career firepower, helping graduates achieve the financial and creative rewards that accompany a move into management. Students are required to have prerequisite knowledge in written communications, mathematics and communications/connectivity skills. The prerequisite subject knowledge for a specific graduate course must be satisfied before enrollment in that specific course is permitted.

## DEGREE REQUIREMENTS

#### **AREA OF SPECIALIZATION**

Choose at least one of the five specializations, which include the Graduate Capstone Project.

Air Transportation Management Aviation/Aerospace Industrial Management Aviation Enterprises in the Global Environment Management of Integrated Logistics General Management Option

## Specialization Credits 12

#### **MANAGEMENT CORE:**

Course	Title	Credits
GCPP 605	Methods and Procedures for the	
	Graduate Capstone Project	3
MGMT 531	Structure and Application of Analytica	al
	Decision Processes I	3
MGMT 532	Philosophy, Principles, and Practices	
	in Management of Quality	3
MGMT 533	Legal, Ethical, and Regulatory Bases	
	of Management Practices	3
MGMT 534	Anatomy of Work Organizations	3
MGMT 535	Theory and Application of	
	Managerial Communications	3
MGMT 631	Structure and Application of Analytica	al
	Decision Processes II	3
MGMT 633	Principles and Practices of Financial	
	Accounting and Control for Managers	3
Core Credits		24
TOTAL DEGRE	E REQUIREMENTS	36

## Specialization 1

**SPECIALIZATIONS:** 

# AIR TRANSPORTATION MANAGEMENT

Course	Title	Credits
MGMT 641	Airport Management	3
MGMT 642	Air Carrier, Passenger, and	
	Cargo Management	3
MGMT 643	Labor Issues in Air Transportation	3
MGMT 644	Graduate Capstone Project,	
	Air Transportation Management	3

## **MANAGEMENT**

#### Specialization 2

# AVIATION/AEROSPACE INDUSTRIAL MANAGEMENT

Course	Title Cred	its
MGMT 651	Production & Procurement in Aviation	
	and Aerospace Industries	3
MGMT 652	Concepts and Practices of	
	Project Management	3
MGMT 653	Labor Issues in an Industrial Environment	3
MGMT 654	Graduate Capstone Project, Aviation/	
	Aerospace Industrial Management	3

#### Specialization 3

# AVIATION ENTERPRISES IN THE GLOBAL ENVIRONMENT

Course	Title	Credits
MGMT 671	Entrepreneurship and Leadership	3
MGMT 672	Planning and Execution of Strategy	3
MGMT 673	Global Economic Analysis	3
MGMT 674	Graduate Capstone Project, Aviation	
	Enterprises in the Global Environmen	t 3

### Specialization 4

# MANAGEMENT OF INTEGRATED LOGISTICS

Course	Title Cre	dits
MGMT 681	Principles and Application of	
	Logistical Science	3
MGMT 682	Concepts of Integrated Logistics	3
MGMT 683	Supply Chain Management	3
MGMT 684	Graduate Capstone Project, Managemen	t
	of Integrated Logistics	3

#### Specialization 5

## GENERAL MANAGEMENT OPTION

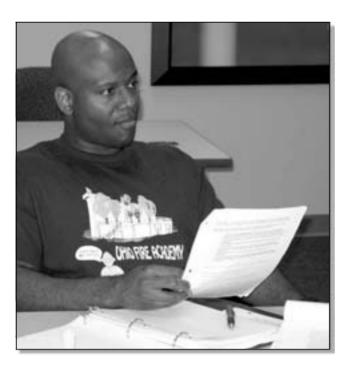
Course Title	Credits
Choose any 3 courses from	
Specializations 1 through 5	9
MGMT 690 Management Capstone Project	3

## GRADUATE ACADEMIC PROGRAMS

# MASTER OF SCIENCE IN TECHNICAL MANAGEMENT

Developed in cooperation with aviation and aerospace industry representatives, this unique degree has evolved into a technical program relating to industry as a whole. The curriculum emphasizes modern management concepts and methods and gives students a set of well-defined technical tools. It also focuses on building the communication and management skills that are needed in technically oriented enterprises. Because of the cohesive and integrated nature of the program, no more than 6 credits may be transferred from previous graduate work.

Major management disciplines are studied as a foundation for large-scale planning and decision making, and students enhance classroom interaction by sharing perspectives and experiences from their work situations.



#### **DEGREE REQUIREMENTS**

Course	Title	Credits
MGMT 646	Structure and Applications of	
	Quantitative Decision Processes for	_
	the Technical Manager	3
TMGT 501*	Computer Skills for a Technical	
	Environment	3
TMGT 502*	Communication Skills in a Technical	
	Environment	3
TMGT 503*	Quantitative Methods and Statistics	3
TMGT 605	Organization Theory in a Technical	
	Environment	3
TMGT 610	Managing Effective Technical	
	Work Teams	3
TMGT 616	<b>Production Operations Management</b>	
TMGT 621	Regulations, Ethics, and the	
	Legal System	3
TMGT 625	Marketing in the Technical	-
	Environment	3
TMGT 630	Technical Management Information	
111101 000	Systems	3
TMGT 635	Financial and Managerial Accounting	_
110101 000	and Control for Technical Managers	3
TMGT 641	Project Management: Concepts	J
110101 041	and Practices	3
TMGT 651		3
TIVIOT 031	Quality Management and	2
TMCT cco	Quality Control	3
TMGT 660	Project Development Techniques	2
TMGT 660L	Technical Management	4
	Capstone Project	1

\* Successful completion of these courses is required to continue in this program.

42

**TOTAL DEGREE REQUIREMENTS** 

# MASTER OF SCIENCE IN PROJECT MANAGEMENT

The Master of Science in Project Management (MSPM) provides the opportunity for working professionals to gain masters level knowledge and experience in planning and executing complex projects. Working within a variety of organizational settings, from aviation aerospace to non-profit organizations, this program enables graduates to undertake increasing roles in the leadership and management of projects within corporations as well as across corporate, cultural, and international boundaries.

This program incorporates international standards, as set forth by the Guide to the Project Management Body of Knowledge® (Project Management Institute), with practical application and use of project management software tools. The course of study covers all aspects of project management, including: analytical decision processes, integrated planning and scheduling, cost estimation management, risk and quality management, financial accounting, ethics and legal considerations, information technology, organizational structures, and managerial communications.

This comprehensive curriculum will help individuals develop a grasp of essential project management and general management principles. Those who will benefit from this program include project team members, project managers, program managers, consultants, senior and executive management, and individuals who aspire to these positions. Instruction incorporates both theoretical and practical applications, including: projects, case studies, and discussions of actual workplace experience. Earning the Master of Science in Project Management will give graduates the knowledge and confidence to take on project management responsibilities at the highest levels of their industry.

The curriculum for this program was developed entirely by certified Project Management Professionals (PMPs), the recognized global standard for project management knowledge and experience. Professional certification is issued by the Project Management Institute (PMI), the worldwide leader in the development of standards for the evolving profession of Project Management.

Students are required to have prerequisite knowledge in written communications, mathematics, and communications/connectivity skills. The prerequisite

## PROJECT MANAGEMENT

subject knowledge for a specific graduate course must be satisfied before enrollment in that specific course.

Upon completion, graduates are well prepared for the PMI-PMP and the American Society for Quality (ASQ) Certified Manager of Quality/Organizational Excellence (CMO/OE) examinations.

#### **DEGREE REQUIREMENTS**

Course	Title Credits	
MGMT 531	Structure and Applications of Analytical	
	Decision Processes for Managers I	3
MGMT 533	Legal, Ethical, and Regulatory Bases of	
	Management Practices	3
MGMT 532	Philosophy, Principals, and Practices	_
	in Management of Quality	3
MGMT 631	Structure and Applications of Analytical	
	Decision Processes for Managers II	3
MGMT 633	Principles and Practices of Financial	
	Accounting and Control for Managers	3
PMGT 501	Fundamentals of Project Management	3
PMGT 502	Effective Communications for Managing	
	Projects	3
PMGT 611	Anatomy of Project Organizations	3
PMGT 612	Leading Projects Across Cultural,	
	Corporate, and International	
	Boundaries	3
PMGT 613	Assessing and Managing Project Risk	3
PMGT 614	Planning, Directing, and	
	Controlling Projects	3
PMGT 690	Project Management Capstone	3
TOTAL DEGRE	E REQUIREMENTS	36

## GRADUATE CERTIFICATES OF COMPLETION

Graduate Certificates of Completion are focused academic programs in which students complete a series of courses in Air Transportation Management, Aviation/Aerospace Industrial Management, Aviation Enterprises in the Global Environment, Integrated Logistics Management, Instructional System Design, Aviation/Aerospace Safety, or Project Management.

Graduate Certificates are available to both degree seeking and non-degree seeking students. To be eligible for the award of any graduate certificate, a student must meet the graduate general admissions criteria and must achieve a cumulative GPA of 3.0 or higher on a 4.0 scale, for the series of courses in the certificate program.

### INSTRUCTIONAL SYSTEM DESIGN

Certificate of Completion

The Instructional System Design Certificate of Completion provides aviation/aerospace industry leaders with skills to develop curricula. These graduate-level courses lead to the mastery of these skills in advanced aviation and aerospace education technology.

#### **Required Courses:**

Course	Title	Credits
ASCI 514	Computer-Based Instruction	3
ASCI 515	Aviation/Aerospace Simulation	
	Systems	3
ASCI 610	Instructional System Design Project	3
ASCI 614	Advanced Aviation/Aerospace	
	Curriculum Development	3
ASCI 654	Adult Teaching and Learning	
	Techniques	3
<b>Total Credits:</b>		15

## AVIATION/AEROSPACE SAFETY

Certificate of Completion

The Aviation/Aerospace Safety Certificate at the graduate level provides the student a background in advanced safety topics application in a variety of aviation, aerospace, and other industrial settings.

Three courses are required, and the students select additional courses for a total of 18 credit hours. The University has approved a Master Certificate of Completion in Aviation/Aerospace Safety for those students who complete a specified series of graduate safety courses with a cumulative GPA of 3.0.

#### **Required Courses:**

Course	litle	Credits		
ASCI 611	Aviation/Aerospace System Safety	3		
ASCI 617	Airport Safety and Certification	3		
ASCI 618	Aviation/Aerospace Safety Program			
	Management	3		
Select three courses from the following:				
ASCI 612	Aviation/Aerospace Industrial Safety			
	Management	3		
ASCI 615	Aviation/Aerospace Accident			
	Investigation and Analysis	3		
ASCI 616	Transportation Security	3		
ASCI 634	Aviation/Aerospace Psychology	3		
<b>Total Credits</b>		18		

# AIR TRANSPORTATION MANAGEMENT

Certificate of Completion

In order to give yourself options in today's highly competitive workplace, it is essential that you develop leadership and managerial skills. Embry-Riddle Aeronautical University's Air Transportation Management program is the first step in gaining those skills. This hands-on curriculum provides students with general decision analysis and managerial knowledge that will enable them to become effective leaders, managers and supervisors in organizations related to aviation and aerospace. This program provides a thorough background of both the air side-related directly to the movement of aerial vehicles-and the support side, dealing with all the activities necessary for safe, efficient and profitable operations of the entire transportation system. Graduates exit the program prepared to manage such diverse areas as air operations, cargo handling, surface carrier integration, passenger service facilities or any other facet related to the movement of goods and people by air.

## Required Courses:

nequired courses.		
Course	Title	Credits
MGMT 641	Airport Management	3
MGMT 642	Air Carrier, Passenger	
	and Cargo Management	3
MGMT 643	Labor Issues in Air Transportation	3
MGMT 531	Structure and Application of	
	Analytical Decision Processes I	3
MGMT 631	Structure and Application of	
	Analytical Decision Processes II	3
MGMT 652	Concept and Practices of Project	
	Management	3
<b>Total Credits</b>		18

## **CERTIFICATES OF COMPLETION**

# AVIATION/AEROSPACE INDUSTRIAL MANAGEMENT

Certificate of Completion

Individuals with the skills to effectively and efficiently manage material, personnel and information have the ability to take control of their careers. The Aviation/Aerospace Industrial Management program gives students experience in those areas as well as production and procurement, quality control, dealing with labor issues and national standards for project management. This advanced course of study also provides students with an enhanced understanding of the diverse aspects related to the management of industrial processes. Decision theory, communications theory and practice, and other managerial topics are also integrated into this broad field of study. For those already involved in production scheduling/control, production management, project management or management of integrated work teams, this program will enhance your understanding and performance. While this program is rooted in the aviation and aerospace industrial environment, the knowledge gained is applicable to all types of industrial organizations.

#### Required Courses

nequired Courses.				
Course	Title	Credits		
MGMT 531	Structure and Application of			
	Analytical Decision Processes I	3		
MGMT 532	Philosophy, Principles, and			
	Practices in Management of Quality	3		
MGMT 651	Production and Procurement			
	in Aviation Aerospace Industry	3		
MGMT 652	Concept and Practices of Project			
	Management	3		
MGMT 653	Labor Issues in an Industrial			
	Environment	3		
MGMT 631	Structure and Application of			
	Analytical Decision Processes II	3		
<b>Total Credits</b>	•	18		

# AVIATION ENTERPRISES IN THE GLOBAL ENVIRONMENT

Certificate of Completion

Embry-Riddle Aeronautical University's Enterprises in Global Management program caters to individuals with an entrepreneurial inclination. This specialized course of study touches on diverse areas such as leadership, strategic planning and detailed economic analyses through projects that are innovative, far-reaching and offer a global perspective. The objective is to give students the knowledge, skills and expertise that will assist them in understanding and competing in the global industrial and business environment. Understanding the global arena, recognizing and capitalizing on unique opportunities, including formulating strategies of success are the hallmarks of this degree. This specialized knowledge is coupled with a broad foundation of managerial studies. Anyone involved in or anticipating involvement in multi-national or global business will benefit greatly from this degree.

#### **Required Courses:**

Course	Title	Credits
MGMT 531	Structure and Application of	
	Analytical Decision Processes I	3
MGMT 631	Structure and Application of	
	Analytical Decision Processes II	3
MGMT 652	Concept and Practices of Project	
	Management	3
MGMT 671	Entrepreneurship and	
	Leadership	3
MGMT 672	Planning and Execution of Strategy	3
MGMT 673	Global Economic Analysis	3
<b>Total Credits</b>	•	18



## GRADUATE CERTIFICATES OF COMPLETION

# INTEGRATED LOGISTICS MANAGEMENT

Certificate of Completion

Today, in both the government and private sector, there is a growing need for individuals who understand and can develop, manage and lead the complex integration of goods and services. In order to prepare workers for these challenging and rewarding positions, Embry-Riddle Aeronautical University has developed a specialized program-the certificate of completion in Integrated Logistics. This graduate level curriculum is designed for those involved or interested in the field of logistics and supply chain management, helping students expand and improve their knowledge and performance in this dynamic area. This broad course of study includes classes in numerical decision processes, quality studies and managerial theory to form a knowledge base that prepares graduates for success in a multitude of fields including, but not limited to, aviation and aerospace.

#### **Required Courses:**

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Course	Title	Credits
MGMT 531	Structure and Application of	
	Analytical Decision Processes I	3
MGMT 631	Structure and Application of	
	Analytical Decision Processes II	3
MGMT 652	Concept and Practices of	
	Project Management	3
MGMT 681	Principle and Applications	
	of Logistic Science	3
MGMT 682	Concepts of Integrated	
	Logistics	3
MGMT 683	Supply Chain Management	3
<b>Total Credits</b>		18

## PROJECT MANAGEMENT

Certificate of Completion

Rapidly changing technology and requirements for new and improved goods and services have created a high demand for project managers who deliver on-time and on-budget.

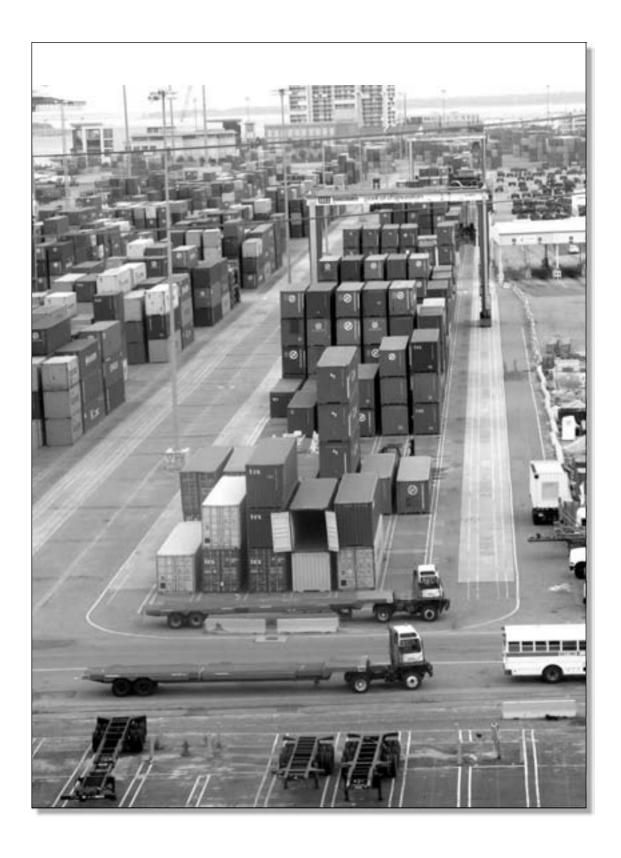
Complex work must be accomplished quickly and efficiently, and Project Management is the powerful tool that makes it happen. Those who possess a through knowledge of the art and science of project management are in demand throughout all organizations, including government, industry, financial services, and the not-for-profit sector.

This program of study provides both practicing project managers and those aspiring to manage or oversee projects the solid foundation on which to build project management success. This program, developed by experienced project managers holding the PMP® designation, will greatly assist those who may desire to take the Project Management Profession (PMP)® examination.

PMP® is a registered trademark of the project Management institute

#### **Required Courses:**

Course	Title	Credits
MGMT 531	Structure and Applications of	
	Analytical Decision Processes	
	for Managers I	3
MGMT 631	Structure and Applications of	
	Analytical Decision Processes for	
	Managers II	3
PMGT 501	Fundamentals of Project Management	3
PMGT 502	Effective Communications for	
	Managing Projects	3
PMGT 613	Assessing and Managing Project Risk	3
PMGT 614	Planning, Directing, and Controlling	
	Projects	3
<b>Total Credits</b>	-	18



## CENTER FOR PROFESSIONAL EDUCATION

#### MISSION STATEMENT

The mission of the Center for Professional Education is to provide quality non-degree courses to meet the needs of working professionals in the aerospace, aviation and other transportation industries.

#### COURSES OFFERED:

## CORPORATE AVIATION MANAGEMENT CERTIFICATE PROGRAM

(Web-based)

# Certificate of Completion/NBAA Certificate of Completion/CEUs

This Certificate is designed for individuals who want to maintain their upward mobility in today's world of corporate aviation. This training has been seen as giving participating students the 'edge' for promotion or simply enhancing their managerial knowledge of the corporate aviation environment. This program is described as an ideal compliment for Line Pilots, Chief Pilots, Schedulers and Dispatchers, Flight Attendants, Maintenance Managers and Flight Operation Managers.

The Corporate Aviation Management Certificate Program (CAMC) was created to meet all 27 National Business Aviation Association's (NBAA) learning objectives set forth for Corporate Aviation Managers. Upon completion of all 26 courses, the student will receive a Certificate of Completion of the CAMC Program from ERAU. The student will also receive a Certificate from the NBAA. Completion of this program prepares students to take the NBAA's Certified Aviation Manager (CAM) Exam. If the student passes this exam (given by the NBAA) they will hold the title of 'Certified Aviation Manager'.

NOTE: The CAMC course material is currently being revised to meet new NBAA criteria. The anticipated completion date is October 31, 2006. Revised course descriptions will be posted in the catalog supplement online as they become available.

#### COURSE DESCRIPTIONS

#### **MANAGEMENT COURSES:**

#### CE 221-1 AVIATION SAFETY & SECURITY

This course covers definitions, measurements, concepts, philosophy, and models associated with aviation safety management. Management and preparedness requirements for successful accident investigation as well as accident/incident prevention strategies are also included.

#### **CE 221-2 GOAL SETTING**

This course discusses goal setting as the process of developing and setting motivational performance objectives for individuals in their jobs. Additional topics include characteristics of goals, the motivating effect they have on the workforce, and their ability to promote more effective communication within a company. Conflict solving techniques are also included.

## CE 221-3 AIRCRAFT SELECTION, OUTFITTING & RETROFITTING

This course covers project management as an appropriate technique leading to effective decision making in the aircraft selection process. The role of the project manager, the project management model, and the importance of a transportation study are also discussed.

## CE 221-4 MANAGEMENT CONTROL PROCEDURES

This course discusses flight department budgeting techniques, inventory control procedures, quality assurance processes, aircraft ownership, hangar, and fueling facilities options.

## CE 221-5 IN-FLIGHT & MAINTENANCE OPERATION MANAGEMENT

This course discusses the techniques necessary to manage effective and efficient flight operations and the associated maintenance and dispatch functions. The development and application of professional standards for all aspects of aircraft and facility maintenance are also covered.

## CE 221-6 HAZARDOUS MATERIAL REGULATION

This course discusses the importance of implementing and enforcing rules associated with the unique requirements for dealing with hazardous materials.

## CE 221-7 LEGAL ISSUES IN AVIATION MANAGEMENT

This course identifies the insurance and legal requirements for operating a corporate flight department in compliance with international, Federal, state, and local regulations.

### LEADERSHIP COURSES

#### CE 222-1 STRATEGIC PLANNING

This course discusses the importance of developing a strategic view for flight department operations. How to strategically analyze situations, development of appropriate strategic vision, objectives, and strategies, as well as techniques on strategy implementation are also included.

## CE 222-2 FLIGHT DEPARTMENT LEADERSHIP & MOTIVATION

This course explores the fundamental concepts of leadership and supervision as well as appropriate strategies for motivating flight department personnel toward implementing organizational plans and goals

#### CE 222-3 CORPORATE AVIATION ETHICS

This course covers the modern view of issues and problems involved in corporate ethics and the rights of workers, including employment, wages, and unions. Also included is a self-assessment analysis worksheet for personal ethics.

## CE 222-4 INTERDEPARTMENTAL & INTERPERSONAL RELATIONS

This course discusses the role of the flight department and each flight department employee with respect to the corporation. Interpersonal and community relations, conflict resolution methods, as well as various policies and

levels of appeal processes that may be used in a corporate flight department are also explored.

## CE 222-5 TEAM BUILDING & ORGANIZATIONAL BEHAVIOR

This course describes effective techniques that can be used to build and lead effective work teams. Individual, group, and organizational behavior as well as organizational structure, corporate culture, and organizational change are also addressed.

### COMMUNICATION COURSES

#### CE 223-1 WRITTEN COMMUNICATION

This course will assist the participant in writing for clarity and understanding. It will also help the writer in the selection of the appropriate form of written communication to use in addressing specific situations.

#### CE 223-2 PRESENTATION SKILLS

This course will assist the participant in understanding how to determine what an audience needs, expects, and responds to in a presentation. Preparation and use of information, supporting media aids appropriate to the presentation, and utilization of techniques for keeping an audience focused during a presentation are included as well.

## CE 223-3 CREW RESOURCE MANAGEMENT & PROBLEM SOLVING

This course is designed to develop a detailed knowledge of the interpersonal skills and organizational behavior of professional flight crews. The crew resource management concepts of communication processes, problem solving, group dynamics, workload management, and situational awareness are investigated.

# CE 223-4 INTERPERSONAL COMMUNICATIONS

This course enables the participant to use content, voice, and body language to send an understandable message to others in routine as well as in difficult and/or uncomfortable situations. How to identify and adapt to the communication styles of listeners is also presented.

## CE 223-5 GROUP DYNAMICS & WORK TEAM COMMUNICATION

This course discusses the basic elements of effective groups, the differences in communication styles, decision making styles, work team rules and roles, and things that cause groups to fail, in order to start and run an effective work group.

## CENTER FOR PROFESSIONAL EDUCATION

## CE 223-6 ELECTRONIC COMMUNICATION FORMATS

This course describes effective techniques for using voice mail and the use of e-mail to create, send, receive and respond to electronic messages. Also discussed are services available on the Internet and the use of the Web to find useful information.

# BUSINESS ADMINISTRATION COURSES

## CE 224-1 MANAGEMENT/ADMINISTRATIVE POLICIES & PROCEDURES

This course enables the participant to develop a sample flight department business plan, a mission statement that coincides with the overall company vision, an ordered plan of promotion and succession, and an understanding of the requirements involved with facilities management.

#### CE 224-2 ORGANIZATIONAL DEVELOPMENT

This course is designed to help participants develop a flight department organizational structure based on functional units within the department.

#### CE 224-3 OPERATIONAL ASSESSMENT

This course is designed to help participants gain an understanding of communication and information systems used by flight departments. An understanding of these concepts helps facilitate financial analysis and forecasting pertinent to capital investments in the flight department.

#### CE 224-4 APPLIED ECONOMICS & MARKETING

This course discusses basic economic and marketing terms and concepts. Also discussed are the concepts and techniques used to perform a travel analysis for a company and to transform that data into an acquisition recommendation for a specific aircraft.

## CE 224-5 FLIGHT DEPARTMENT CUSTOMER SERVICE

This course discusses the concepts of charge backs and recovery rates in relation to aircraft utilization and company philosophy, as well as basic issues of passenger (customer) satisfaction.

#### CE 224-6 FINANCIAL IMPACT OF DECISIONS

This course is designed to assist the participant in understanding basic communication skills, procedures for negotiating contracts, and an appreciation for the essential elements of legally binding agreements.

## CE 224-7 CORPORATE AVIATION FINANCE & BUDGETING

This course describes financial statements from a managerial perspective and the skills and concepts used for aviation budgeting, planning, and financial decision making.

## CE 224-8 INFORMATION MANAGEMENT & BUSINESS INFORMATION SYSTEMS

Contact Hours: 10 PDP Objective: BA8
This course discusses the importance of understanding how information in an organization is a resource that needs to be managed and used in the making of strategic decisions. The creation of information systems and basic terminology is also discussed. Software packages are reviewed and demonstrated. Some information on ethics/social responsibility and technology is also included.





Being a college student is tough; being a college student and an active duty Soldier, with a family of four and time constraints, at 36 is even more difficult. Embry-Riddle was able to help me balance all of that. The staff and faculty of the Distance Learning campus at Fort Campbell are some of the most knowledgeable and professional people I've ever had the pleasure of being taught by or associated with. They were always there for me and greatly enhanced my experience and education by their willingness to help with ordering books, tests, and class scheduling conflicts that are typical of most military students. They are all assets to the university. My education experiences at ERAU have helped me to develop the knowledge and confidence that will help me excel in any career path I choose upon my retirement from the military. Attending ERAU is one of the best decisions I've made in my life. I am very proud of the experiences and education that I received from ERAU. Embry-Riddle Aeronautical University is a "top-notch" institution.

Aaron S. Helms

## SPECIAL ACADEMIC PROGRAMS & OPPORTUNITIES

## SERVICEMEMBERS OPPORTUNITY COLLEGES (SOC)

Embry-Riddle has been a member of SOC for almost 20 years. Even before becoming a member, the University employed practices reflecting the criteria governing transfer credit, academic residency requirements, credit for prior learning from military training and experience, and credit for extrainstitutional learning that SOC has established to guide member institutions. Embry-Riddle continues, in practice, to apply SOC criteria to all eligible students.

The University participates in associate and bachelor degree programs in several curriculum networks coordinated by SOC members of the Army, Navy, and Marine Corps. A list of programs and networks follows:

■ Associate Degrees

Army: SOCAD-2 Navy: SOCNAV-2 Marines: SOCMAR-2 Coast Guard: SOCCST-2

- Aviation Maintenance Network
  Associate in Science in Aircraft Maintenance
- General Studies
  Associate in Science in Professional Aeronautics
  Associate in Science in Technical Management
- Bachelor Degree

Army: SOCAD-4 Navy: SOCNAV-4 Marines: SOCMAR-4 Coast Guard: SOCCST-4

- Professional Aeronautics Network Bachelor of Science in Professional Aeronautics
- Technical Management Network
  Bachelor of Science in Technical Management
  SOC degree programs provide servicemembers the
  security of knowing that they will be able to continue

pursuing their Embry-Riddle degrees even if they are transferred to another installation where the University is not represented, if they leave the service, or if the University changes or discontinues its participation in SOC. All institutions participating in the curriculum network have agreed to accept specified courses completed at other schools in the same network to satisfy most curriculum requirements. Students are obligated to follow the normal University rules and regulations, to obtain advance approval for taking certain courses, and to provide official transcripts from other schools where they may have earned credit once or twice a year. For more information, contact the ERAU representative, Dr. Douglas Mikutel at (386) 947-5207 or email: Douglas.Mikutel @erau.edu.



## COURSE DESCRIPTIONS

Ourses numbered 001-099 are basic skills courses and do not apply toward degree requirements. Courses numbered 100-200 are lower-division courses and are generally taken in the freshman and sophomore years. Many lower-division courses serve as prerequisites for other coursework, and students are urged to plan ahead to meet necessary prerequisites. Courses numbered 300-400 are upper-division courses, reflecting advanced levels of technical skills and disciplinary knowledge. Upper-division work is generally taken in the junior and senior years. Graduate courses are numbered at 500 and above.

Course numbers ending in 95 designate time-limited offerings, such as those taught by a visiting lecturer. Course numbers ending in 96 or 97 identify special

sequential courses. Those ending in 98 provide students with a unique, collective program of learning activities supervised by a professor. Courses ending in 99 denote individual study between professor and student.

Numbers in parentheses, immediately following course titles and numbers, indicate lecture and laboratory hours that a class meets each week. For example, (3,3) signifies that the course consists of three lecture hours and three laboratory hours weekly.

The following courses are not necessarily offered every term, nor are they necessarily offered at all locations.

Embry-Riddle Aeronautical University Extended Campus course offerings are listed on the following pages in alphabetical order.



## UNDERGRADUATE COURSES

# AIR TRAFFIC CONTROL

## AT 300

Air Traffic Management I (3,0) 3 Credits

AT 300 is the entry-level course in the Air Traffic Management (ATM) degree sequence. It is also the first of the courses required in the FAA's Collegiate Training Initiative (CTI) program the FAA is using to meet ATC staffing requirements. This course provides students with a fundamental knowledge of the U.S. air traffic control system and develops content knowledge in the following areas: (a) the Federal Aviation Administration, its mission, organization, and operation; (b) the air traffic control career; (c) navigational aids, current and future; (d) airspace; (e) communications; (f) federal aviation regulations; (g) ATC procedures; (h) control tower operations; (i) nonradar operations; (i) radar operations; and (k) future air traffic control systems. The course also provides essential information that is useful for pilots and other aviation professionals.

### AT 302 Air Traffic Management II (3,0) 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.

## AVIATION MAINTENANCE TECHNOLOGY

AMNT courses designated as Type 65 are available at the Extended Campus only.

## AMNT 240 General Aeronautics and Applications (3,0)

3 Credits

This course is an introduction to general aeronautics. It includes the study of physical mathematics, weight and balance, FAA regulations, common and special tools and measuring devices, fluid lines, hardware, aircraft servicing, and documentation (Type 65).

## AMNT 260 Aircraft Electrical Systems Theory (3,0)

3 Credits

Students are given an introduction to aircraft electrical systems. Discussions include a study of the principles and concepts of basic DC and AC electrical theory, magnetism, batteries, generators, motors, voltage regulators, circuit protection, and electrical component installations (Type 65).

## AMNT 265 Aeronautical Electronics for Aviation Maintenance Technicians (3,0)

3 Credits

Aircraft radio communication and radar systems used on modern aircraft will be studied in this course. Students will become familiarized with radio laws and regulations, radio wave propagation, electrical and electronic principles, radio practice, circuit components, practical circuits, signals and emissions, radar systems and antennas, and power feeder lines. System knowledge will be applied to the activities of maintenance technicians required to possess the Federal Communications Commission's "General Radiotelephone Operator's License." This course should be limited to those with aviation maintenance/avionics experience or permission of the instructor.

## AMNT 270 Airframe Structures and Applications (4,0)

4 Credits

This course focuses on a study of aircraft wood, dope, fabric, sheet metal, welding theory, and methods of fabrication (Type 65).

### AMNT 271 Airframe Systems Structures and Applications (3,0)

3 Credits

A study of airframe systems such as aircraft electrical system, fuel systems, cabin atmosphere control systems, instrument systems, communication and navigation systems, ice and rain control systems, fire protection systems, and aircraft inspection. (Type 65).

## AMNT 272 Fundamentals of Aircraft Avionics (3,0)

3 Credits

This course is an introduction to aircraft avionics systems. It includes a study of the principles, theories, and concepts of basic solid-state devices, electronic bridges, synchros, bridges, servos, gyros, compass systems, navigation systems, instrument landing systems, autopilot controls and systems, flight management computers, weather, radar, and communications systems. Students taking this course should have significant aviation maintenance

## **COURSE DESCRIPTIONS**

experience or permission of the instructor.

## AMNT 275 Aircraft Maintenance Practicum (0,0)

8 Credits

Enrolled students who have a minimum of 18 months on-the-job experience subsequent to technical training in an approved aircraft maintenance specialty may receive credit for this course after completion of all required Type 65 AMT coursework. (This course applies only to the Type 65 AMT Program.)

### AMNT 280 Powerplant Theory and Applications (4,0)

4 Credits

The goal of this course is to provide an in-depth study of the reciprocating engine. Topics include theory, construction, fuel metering, lubrication, exhaust, engine installation and overhaul, and operational maintenance procedures (Type 65).

## AMNT 281 Aircraft Propulsion Systems and Applications (4,0)

4 Credits

Theory, principles of operation, and controls and systems for propellers and turbine engines are analyzed in this course (Type 65).

### AMNT 285 Advanced Aircraft Maintenance Practicum (0,0)

4 Credits

Enrolled students who are qualified for the award of AMNT 275 credit and have a minimum of 30 months on-the-job experience subsequent to technical training in an approved aircraft maintenance specialty may receive credit for this course after completion of all required Type 65

AMT coursework. (This course applies only to the Type 65 AMT Program.)

# AERONAUTICAL SCIENCE

## ASCI 110 Introduction to Space Flight (3,0)

3 Credits

A survey of the major aspects of space flight. Topics covered include the history of space flight, space shuttle operations, and present and future commercial, industrial, and military applications in space.

## ASCI 185

### Basic Ground School (3,0)

3 Credits

Upon completion of this course, the student will have been adequately prepared to know and understand the fundamental concepts of theories of basic flight (aerodynamics and aircraft performance), air navigation, weather reports and forecasts, and relevant Federal Aviation Regulations.

## ASCI 210 Space Transportation System (3,0)

3 Credits

A survey course of the Space Transportation System (STS) at the introductory physics level.

Included

are manned space flight operations, supporting systems and the space shuttle mission, both present and future. A review of space shuttle flight profiles, guidance and navigation control, proximity operations, and rendezvous and a brief review of hypersonic orbiter aerodynamics are included. Also covered are future STS applications to space station logistical operations, commercial

applications, and Department of Defense operations.

#### **ASCI 215**

## Space Stations Systems and Operation (3,0)

3 Credits

This course is designed to provide a brief study of the space station flight operations, its supporting elements and planned systems. The survey study will include commercial applications, logistical support, maintenance, and servicing design concepts at the introductory level.

### ASCI 220 Life Support Systems (3,0)

3 Credits

This course is a survey, at the elementary physics level, of the requirements and design considerations for life support systems in space and on other planets. Included are an introduction to basic human physiology, a description of the space environment and a survey of historical life support systems, and a presentation of spacecraft limitations and requirements.

## ASCI 254 Aviation Legislation (3,0)

3 Credits

Aviation Legislation is a study of the evolution of federal civil aviation regulations in the United States. Students will examine the past and present problems prompting regulation of the industry, the resultant safety legislation, airport development funding legislation, and international aviation legislation.

## ASCI 300 Satellite and Spacecraft Systems (3,0)

3 Credits

Orbital satellites and spacecraft are discussed according to

## UNDERGRADUATE COURSES

their application, design, and environment. The power systems, shielding and communication systems are reviewed along with their missions, space environment, and limitations. The course will be taught at the introductory physics level.

## ASCI 309 Aerodynamics (3,0)

3 Credits

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

### ASCI 310 Aircraft Performance (3,0)

3 Credits

The nature of aerodynamic performance of aircraft powered by reciprocating, turboprop, or jet turbine engines is explored. Additional topics address stability and control, weight and balance, and operating data.

### ASCI 320 Commuter Aviation (3,0)

3 Credits

This course acquaints the student with the development, administrative policies, and operational factors peculiar to commuter aviation, especially since passage of the Airline Deregulation Act of 1978. The impact of mergers and acquisitions, profiles of passenger and cargo carrying commuters, and analysis of commuter successes and failures are discussed. Emphasis is placed on the establishment of a new commuter airline, which includes

market and financial analysis, the company plan, aircraft selection and acquisition, route structure and timetable, marketing strategy and pertinent regulatory requirements. The course culminates in a formal proposal soliciting for venture capital to start a commuter airline.

### ASCI 321 Human Factors in Aviation Safety

3 Credits

This course focuses on the major causative agent in aircraft accidents: the human being. Emphasis is placed on psychological and physiological factors that enhance the accident probability. Included is a detailed analysis of ergonomics (human engineering) and its influence in aviation design.

### ASCI 330 Aircraft Accident Investigation

3 Credits

This course is a detailed evaluation of methods and procedures involved in aircraft accident investigation. The organization, duties, and procedures of the Aircraft Accident Board are analyzed. The student explores procedures for determining accident causes through analysis of such elements as the function and techniques employed by the trained accident investigator and the role of the specialized laboratory. Analysis is also made of reporting procedures and the all-important follow-up work designed to avoid similar or related aircraft accidents.

### ASCI 335 Mechanical and Structural Factors in Aviation Safety

3 Credits

Students will conduct a thorough examination of design, manufacturing, metallurgy, and maintenance to determine the influence each has on aircraft accidents. A detailed analysis of the failure process will be conducted. Additional topics include stress and design loading, fatigue, corrosion, and the envelope of operation.

### ASCI 345 Aviation Safety Program Management

3 Credits

The principles of the development and management of an effective aviation safety program will be studied in this course. The philosophy and historical development of major concepts are examined, with particular emphasis on areas of special concern in organizational accident prevention. Students analyze the influence of morale, education, and training, the role of the supervisor, and other substantial program elements of value to the aviation safety manager.

### ASCI 350 Aircraft Crash and Emergency Management

3 Credits

Theory, practices, and techniques used in the response phase of aircraft crashes and emergencies are examined. This course is designed as a real-world introduction to the field of emergency response at the CFR agency level, the airport response and administration levels, and the related and associated entities involved in aircraft mishaps.

## ASCI 357 Flight Physiology (3,0)

3 Credits

This course concentrates on aeromedical information. Causes, symptoms, prevention, and treatment of flight environment disorders are discussed. Altitude effects, spatial disorientation, body heat imbalance, visual anomalies, and psychological factors are included as they relate to pilot performance and survival effectiveness.

### ASCI 375 Propulsion Plant Investigation

3 Credits

This is a technical course in aircraft reciprocating and turbine engine fundamentals and relevant accident investigative procedures. Areas of study include basic construction and design, with emphasis on major sections, components, and their mechanical relationships. Power plant systems and system mishap investigation is also covered and includes fuel, lubrication, ignition, and start systems. A study of propeller basics and investigative techniques is also included.

## ASCI 400 Introduction to Space Navigation (3,0)

3 Credits

This course will introduce the student to basic elements of space navigation at the introductory physics level. The consequences of Newton's Law of Gravitation and Central Force Motion, including Kepler's three laws of planetary motion, are explained. The physical characteristics of the solar system and the Earth/Moon system are reviewed. The basic methods and techniques of navigating in near-Earth orbit and the Moon and planets are described.

## ASCI 401 Airport Development and Operations (3,0)

3 Credits

Managerial problems of small and medium size airports and fixed base operations are examined, with emphasis on federal, state, and local obligations; leases; internal guidelines; and community relations.

## ASCI 405 Aviation Law (3,0)

3 Credits

Aviation Law explores the chronological development, federal and state regulatory functions, and rights and liabilities of pilots and operators. Students will examine case histories, liens, and security interest in aircraft, as well as international conferences, bilateral and multilateral agreements, and criminal statutes.

### ASCI 409 Aviation Safety

3 Credits

This course is aviation safety for nonflying students. Major problem areas in aviation safety, safety program evaluation, and impact of accidents on industry are covered. The focus is on human factors, basic accident prevention programs, and the roles of various government and industry organizations in preventing accidents.

#### **ASCI 412**

## Corporate and Business Aviation (3,0)

3 Credits

The course provides an overview of the operation of a corporate flight department. Students will be introduced to topics that include value of management mobility, aircraft and equipment evaluation, maintenance, flight operations, administration, and fiscal considerations.

## ASCI 419 Aviation Maintenance Management (3,0)

3 Credits Students will perform a comprehensive examination of organizational maintenance policies, programs, and procedures. Emphasis is on maintenance planning, forecasting and cost control, reliability, safety, and flight schedule performance.

### ASCI 425 Selected Topics in Space and Aerospace (3,0)

3 Credits

This course introduces students to problems in space operations, space flight, or other space-related topics that can be critically addressed from a knowledge base of elementary calculus, elementary physics, and the subject matter of any two Space Studies courses. The specific topics will be selected by the course monitor and instructor and published in the course schedule.

### ASCI 435 Aircraft Crash Survival Analysis and Design

3 Credits

The student will conduct an in-depth analysis of the accident environment, with particular emphasis on the protection of the occupants, in this course. The injury mechanisms and causes will be analyzed, as will the physics and kinematics of the impact sequence. The intent of the course is to familiarize the student with what can be done to minimize the effects of an accident on the human occupants. Prerequisite: MATH 106.

#### **ASCI 440**

## System Safety Management (3,0) *3 Credits*

The development and implementation of the system safety discipline in technical industries, including aviation, is reviewed in this course. System safety entails specialized integration of skills and

## UNDERGRADUATE COURSES

resources in all phases of the life cycle of a given system in furtherance of accident prevention. Its heritage is systems engineering and management theory, but amplified to include modern safety practices derived from numerous disciplines. Students will acquire an understanding of how accident prevention is designed into equipment processes, and facilities under development, evaluated and enhanced during testing, and assured or otherwise controlled during operational use. Prerequisite: MATH 106.

### ASCI 462 Health, Safety, and Aviation Law

3 Credits

This course introduces the student to the legal issues and concerns confronting the health and safety industry. Included is an overview of the historical legal precedence established for the aviation industry as well as a comprehensive examination of the laws, regulations, and legislation that govern the actions and authority of the health and safety professional. This course also provides an introduction to the governing bodies and associations tasked with setting the legal standards by which the industry must operate.

### ASCI 199, 299, 399, 499 Special Topics in Aeronautical Science

1-3 Credits

Individual independent or directed studies of selected topics in general aviation. Prerequisites: Consent of instructor and approval of department and program chairs. May be repeated with a change of subject. Special topics courses involving flight training are offered in selected areas for the purpose of gaining proficiency in required pilot operations for various certificates and ratings.

# COOPERATIVE EDUCATION

### ASCI 396, 397, 398 Coop Ed Aeronautical Science

1-6 Credits

The student will gain practical learning experience in full-time or part-time employment that is related to the student's degree program and career goals. Course title and level are based on the work assignment.

## ASCI 496, 497, 498 Coop Ed Aeronautical Science

1-6 Credits

These courses offer practical learning experience in full-time or part-time employment that is related to the student's degree program and career goals. Course title and level are based on the work assignment. Continuation of ASCI 396, 397, 398.

#### LIFE SCIENCE

## BIOL 107 Elements of Biological Science (3,0)

3 Credits

This is a physical science course with emphasis on anatomy and physiology of man, including chemical and cellular basis of life, biology of organisms, and ecology.

## COMPUTER ENGINEERING

## CESC 220 Digital Circuit Design (3,0)

3 Credits

Introduction to logic design and interfacing digital circuits. Boolean algebra, combinatorial logic circuits, digital multiplexers, circuit minimization techniques, flip-flop storage elements, shift registers, counting devices, and sequential logic circuits.

### COMPUTER SCIENCE

#### **CSCI 109**

# Introduction to Computers and Applications (3,0)

3 Credits

Students are given an introduction to computers and PC applications. Computer literacy is presented through lectures on the computer process, the impact of computers on society, emerging technologies, and hardware and software purchasing decisions. A hands-on overview of the most popular computer applications such as word processing, spreadsheet, database, electronic mail, and Internet is provided.

## CSCI 210 Scientific Programming (3,0)

3 Credits

Introduction to problem-solving methods, algorithm development, program design, coding, debugging, testing, use of subprograms and documentation, and programming in a block-structured high-level language covering control structures and simple data structures such as arrays and files. This course emphasizes scientific/engineering programming techniques and applications. Corequisite: MATH 112 or MATH 241.

## CSCI 299, 399, 499 Special Topics in Computer Science

1-6 Credits

These are individual independent or directed studies of selected topics in computer science. Consent of the instructor and the department chair is required.

#### **ECONOMICS**

## ECON 210 Microeconomics (3,0)

3 Credits

This course offers an introduction

## **COURSE DESCRIPTIONS**

to the economic principles of free enterprise supply and demand, private and social implications of profit maximization, market structure, and resource markets. Current microeconomic issues in aviation (such as liability reform, evolution of airline competition, etc.) are discussed. Prerequisites: MATH 111 or equivalent and ENGL 123, 143 or equivalent.

### ECON 211 Macroeconomics (3,0)

3 Credits

The goal of this course is to provide an introductory analysis of employment, inflation, recession, GDP economic growth, and international trade with an emphasis on practical policy alternatives. Macroeconomic aviation applications such as the countercyclical growth of start-up airlines and consideration of ATC privatization are incorporated. Prerequisites: MATH 111 or equivalent and ENGL 123, 143 or equivalent.

## ECON 315 Managerial Economics (3,0)

3 Credits

This course presents an analytical approach to the manager's role in understanding pricing, costing, production and forecasting. The course concentrates on simple quantitative models to explain the firm's position in the market and how the manager can react to and control this information. Aviation topics commonly discussed include airport privatization and employee ownership of airlines. Prerequisites: Microeconomics, Business Statistics, and junior standing.

## ECON 420 Economics of Air Transportation (3,0)

*3 Credits* In this course, students will explore

the economic aspects of airline service with consideration given to the impact of federal aid and regulation, types of aircraft, airport problems, consumer interests and competitive practices. Prerequisites: ECON 210, ECON 211.

## ECON 399, 499 Special Topics in Economics

1-4 Credits

These courses are individual independent or directed studies of combinations of selected topics in economics. Prerequisite: Consent of instructor and approval of the department chair.

## COMMUNICATION THEORY & SKILLS

## ENGL 123 English Composition (3,0)

3 Credits

This course focuses on learning to use writing as a tool for thinking as well as a tool for expression of thoughts and ideas. It addresses the composing process, research and documentation, and rhetorical strategies for various audiences and purposes.

## ENGL 143 Studies in Rhetorical Theory (3,0)

3 Credits

This course focuses on a broad survey of speculation concerning the nature and techniques of persuasion. This writing-intensive course will focus on enduring issues in the study of rhetoric - its value, the nature of audiences, the most effective techniques - and on how those issues were continually reframed to meet changing circumstances.

## ENGL 221 Technical Report Writing (3,0)

3 Credits

In this course, students will focus

on the preparation of formal and informal technical reports, abstracts, résumés, and business correspondence. The course places a major emphasis on the long technical paper and the acquisition of advanced writing skills.

### ENGL 222 Business Communication (3,0)

3 Credits

An introduction to effective business communication, this course covers topics in oral, written, nonverbal, and intercultural communication. Research methods, effective speaking, and the preparation of letters, memoranda, and reports are emphasized.

## ENGL 355 Creative Writing (3,0)

3 Credits

The course culminates the interpretive and expressive elements of communications classes. The study, practice, and use of a personal style of creative composition, examples of contemporary literature, and submittal of publications are included in this course.

#### **ENGINEERING**

## ENGR 120 Graphical Communications (2,0)

2 Credits

Free-hand pencil sketching and CAD as tools for graphical communication of engineering designs. Standard forms for design graphics and view layout, orthographic projection, section and auxiliary views, dimensioning, tolerancing, introduction to shop processes. Prerequisite: Enrollment in an engineering program.

## UNDERGRADUATE COURSES

## ENGINEERING SCIENCE

## ESCI 201 Statics (3,0)

3 Credits

A vector treatment of the concepts and characteristics of forces and couples. Distributed forces. Center of mass, centroid. Equilibrium of particles and rigid bodies. Trusses and frames. Internal forces. Shear and moment distribution in beams. Area moments of inertia.

Prerequisite: PHYS 150. Corequisite: MATH 243.

### ESCI 202 Solid Mechanics (3,0)

3 Credits

The concepts of stress and strain and their tensor properties. Elastic stress strain relations. Analysis of stress and deformation in members subject to axial, torsional, bending and combined loading. Column stability. Prerequisite: ESCI 201.

### ESCI 204 Dynamics (3,0) 3 Credits

A vector treatment of the kinematics and kinetics of particles and rigid bodies. Acceleration, work, energy, power, impulse, and momentum. Prerequisite: ESCI 201. Corequisite: MATH 345.

## ESCI 206 Fluid Mechanics (3,0)

3 Credits

Physical characteristics of the fluid state. Fluid statics. Kinematics of fluid motion. Flow of an incompressible ideal fluid. The impulse-momentum principles. Similitude and dimensional analysis; fluid measurements. Prerequisite: ESCI 201.

### SOCIAL SCIENCES

#### **GOVT 320**

## American National Government (3,0)

3 Credits

This course covers basic issues of American democracy, constitutional principles, and the executive, legislative, and judicial branches of government.

### GOVT 325 International Studies (3,0)

3 Credits

An overview of the land, the people, the culture, and the history of one region of the world, this course emphasizes current events and policies on the global scene. Specific content varies from year to year.

### GOVT 331 Current Issues in America (3,0)

3 Credite

Students will become familiarized with selected political-economic issues of national and international importance. Extensive use of journals, magazines, and newspapers will supplement lectures and discussions.

### GOVT 340 American Foreign Policy (3,0)

3 Credits

A survey of the evolution of present American foreign policy, this course stresses the factors that affect and shape this policy. Attention is given to present governmental offices, agencies, and departments, and the role each plays in policy formulation. Emphasis is on the period since World War II.

## GOVT 363 Inter-American Relations (3,0)

3 Credit

An exploration of the development

of U.S. political and economic relations with Latin America from their beginnings in the 19<sup>th</sup> century to the present.

### GOVT 401 American Constitutional Law (3.0)

3 Credits

This course is a study of the basics of the United States Constitution and the rights of the individual. Included is the study of the First Amendment freedoms of speech, press, assembly, association, and religion; the right to privacy; and Fourteenth Amendment equal protection. Constitutional law pertaining to the rights of the criminally accused and the duties and responsibilities of the officer to protect and respect such rights is also studied.

## GOVT 402 International Politics (3,0)

3 Credits

This course will provide an introduction to international politics in the context of the ending of the Cold War and the intensification of economic exchange between market economies on a global scale ('globalization'). The course will examine a number of theories that try to explain world politics and a number of issues that have taken a prominent place on the world stage. Finally, there will be a particular focus on the events of September 11, 2001 and the consequences of these events in the international community.

## HIST 110 World History (3,0)

3 Credits

The course is designed primarily as a survey of the development and evolution of Western Civilization from 1500 to the present. Emphasis is placed on the effects of Western influence on the world.

## HIST 130 History of Aviation in America (3,0)

3 Credits

A survey of the history of America in the 20<sup>th</sup> century, the course emphasizes the explosive growth of aviation as a major influence upon the economic, military, and societal development of the United States.

## HIST 302 Evolution of Scientific Thought (3,0)

3 Credits

This course traces the development of science from the earliest times through the modern period, with particular emphasis given to our changing concepts of nature and of science itself. (Also offered as PHYS 302. Students receive either social science elective credit or physical science elective credit, but not both.)

### HIST 305 American Military History (3,0)

3 Credits

Students are provided an overview of military history in the United States. Emphasis will be on military policy, organization, and technology as they relate to political, economic, and social developments from 1775 to the present.

## **HUMANITIES**

## HUMN 140 Western Humanities I: Antiquity and the Middle Ages (3,0)

3 Credits

This course offers an interdisciplinary emphasis. Using examples from art, architecture, music, philosophy, and literature,

the course traces the evolution of the Western humanistic tradition from antiquity to the Middle Ages. Emphasized are writing, reading, and appreciation skills.

## HUMN 141 Western Humanities II: Renaissance to Postmodern (3,0)

3 Credits

This course traces the evolution of the Western humanistic tradition from the Renaissance to the Postmodern, using examples from art, architecture, music, philosophy, and literature. Writing, reading, and appreciation skills are emphasized.

## HUMN 142 Studies in Literature (3,0)

3 Credits

This course presents a survey of literature. Reading materials include selected novels, poems, and plays. Concentration is on writing, reading, and appreciation skills.

### HUMN 300 World Literature (3,0)

3 Credits

Major works and literary trends in world literature are examined and discussed. Course content varies by instructor and is listed in the Schedule of Courses.

### HUMN 310 American Literature (3,0)

3 Credits

The course provides a survey of intellectual backgrounds, major works, and literary trends in American literature. Course content varies by instructor and is listed in the Schedule of Courses.

## HUMN 325 Exploring Film (3,0)

3 Credits

This course presents a survey

of the art of the film and explores the history of the cinema. Topics include: basic elements, photography, continuity and rhythm, movement, imaging, music and sound, script writing, directing, editing, acting, great film artists/directors, cinematographers, actors, etc.

## HUMN 330 Values and Ethics (3,0)

3 Credits

This course focuses on the process of practical ethics as a way of resolving moral conflict and of understanding professional responsibility in a multiculturally diverse society without devaluing specific viewpoints of ethical or metaphysical theory, ideology, or religion. Students will use proposals, value judgments, observation statements, assumptions, and alternate-world assumptions in arguing contemporary issues of moral importance. With this basic moral logic, students will resolve issues in terms of rights, responsibilities, and the community of rational beings; in terms of consequences and contingencies; and in terms of habituated virtues and character. Free and unrestricted discourse will be encouraged to let students find common ground in diversity.

## HUMN, 299, 399, 499 Special Topics in Humanities

1-6 Credits

These courses are individual independent or directed studies of selected topics in the humanities. Prerequisite: Consent of instructor and approval of the department chair.

### UNDERGRADUATE COURSES

#### **MATHEMATICS**

All students enrolling in ERAU for the first time who do not possess a transfer credit equivalent to MATH 106 or above, or who took the course over 10 years ago, must take the mathematics assessment test or enroll in MATH 106. If the assessment test is taken and the score is unsatisfactory. the student must either enroll in MATH 106 or study individually to improve basic mathematics skills and take another version of the mathematics assessment test within six months. If the score is still unsatisfactory, the student will be required to take MATH 106.

#### MATH 005 Quantitative Skills (3,0)

3 Credits

Fundamentals and theory of algebra, including exponents, radicals, factoring, linear equations, rational expressions, quadratic equations, polynomial arithmetic, and solutions to applied problems. (Credit not applicable to any degree.) Required of all students who are placed in this course.

#### MATH 006 Intermediate Algebra (3,0)

3 Credits

This intermediate-level algebra course includes fundamental concepts of algebra; linear equations and inequalities; polynomials; rational expressions; exponents and radicals; quadratic equations; functions and graphing; systems of linear equations and inequalities. Prerequisite: MATH 005 or placement. (Credit not applicable to any degree.)

## MATH 106 Basic Algebra and Trigonometry (3,0)

3 Credits

The course includes study of the

basic laws of numbers, fractions, exponents, complex numbers, and radicals, as well as an understanding of a variety of expressions and equations, including equalities, inequalities, polynomials, and quadratics. The elements of trigonometry will also be reviewed.

#### MATH 111 College Mathematics for Aviation I (3,0)

3 Credits

This is a pre-calculus course designed for the student of aviation. Topics reviewed will include fundamentals of algebra; linear equations and inequalities; quadratic equations; variation; polynomial, rational, exponential, logarithmic, and trigonometric functions; radian measure; right triangle solutions; vectors; and the laws of sines and cosines. Prerequisite: ERAU placement test, or MATH 106.

#### MATH 112 College Mathematics for Aviation II (3,0)

3 Credits

Designed for the student of aviation, this course provides knowledge of basic calculus, including differentiation and integration of algebraic functions with applications to velocity, acceleration, area, curve sketching, and computation of extreme values. Prerequisite: MATH 111.

#### MATH 120 Quantitative Methods I (3,0)

3 Credits

This is an algebra methods course with applications to business and economics. Students will learn about operations, relations, functions, modeling, problem solving, and systems of linear equations and inequalities. Prerequisite: ERAU placement test, or MATH 106.

#### MATH 140 College Algebra (3,0)

3 Credits

This course focuses on fundamentals of exponents, radicals, linear, quadratic and absolute value equations, inequalities, and complex numbers. An introduction to functions, curve sketching, elementary theory of equations, sequences and series, matrix algebra, and systems of equations will be provided. Prerequisite: ERAU placement test, or MATH 106.

#### MATH 142 Trigonometry (3,0)

3 Credits

Students will be introduced to trigonometric functions and their graphs; identities; radian measure with applications; compound, half, and double angle identities; and solving elementary trigonometric equations. Other topics include right and oblique triangles; law of sines and cosines; exponential, logarithmic, and inverse trigonometric functions; vectors, and trigonometric form of a complex number.

## Prerequisite: MATH 140.

#### MATH 145 College Algebra and Trigonometry (5,0)

5 Credits

Fundamentals of exponents, radicals, linear and quadratic equations, inequalities, elementary theory of equations, sequences and series, functions, exponential, logarithmic, and trigonometric functions, radian measure, trigonometric identities and equations, vectors, laws of sines,

cosines, solutions of right triangles, and complex numbers. Prerequisite: MATH 106, or placement test.

#### MATH 211 Statistics with Aviation Applications (3,0)

3 Credits

Topics emphasized in this course include descriptive statistics, populations and samples, measures of central tendency and dispersion, elementary probability, binomial and normal distributions and their interrelationship, and random variables. Students will also examine one and two sample hypothesis testing involving proportions and means for large and small samples, estimation and confidence intervals, Chi-square distribution, correlation coefficient, and least squares line. Prerequisite: MATH 111.

#### MATH 220 Quantitative Methods II (3,0)

3 Credits

Students are introduced to the methods and concepts of calculus with applications to business and economics, marginal functions, graphing, extreme values, and area problems. A brief introduction to descriptive statistics is also provided. Prequisite: MATH 111 or MATH 120.

#### MATH 222 Business Statistics (3,0)

3 Credits

Topics to be studied in this course include the following: measures of central tendency and dispersion; histograms; algebra of probability; sample spaces; dependent events; Bayes' Theorem with applications; binomial, Poisson, and normal distributions and their interrelationships; sampling distributions; hypothesis testing;

and confidence intervals. Prequisite: MATH 111 or MATH 140.

#### MATH 250 Calculus and Analytic Geometry I (3,0)

3 Credits

Introduction to vectors and polar coordinates, graphs and functions; limits and continuity; differentiation of algebraic and elementary trigonometric functions; parametric equations; differentials and their applications; applications of first and second derivatives. Prerequisite: MATH 140 or MATH 145. Corequisite: MATH 142

#### MATH 251 Calculus and Analytic Geometry II (3,0)

3 Credits

Integration of algebraic and elementary trigonometric functions; application of integrals to the calculation of area, volume and curve length and to selected physical problems; differentiation and Integration of transcendental functions and inverse functions. Prerequisite: MATH 250

#### MATH 252 Calculus and Analytic Geometry III (3,0)

3 Credits

Techniques of integration; polar coordinates; applications of the definite integral; indeterminate forms and improper integrals; numerical methods of integration; parametric equations; vectors and calculus of vector valued functions. Prerequisite: MATH 251.

#### **MATH 253**

## Calculus and Analytic Geometry IV (3,0)

3 Credits

Solid analytical geometry; vector functions in three dimensions; elements of infinite series; partial differentiation; directional derivative and gradient; multiple integrals; geometric and Taylor series. Prerequisite: MATH 252.

#### MATH 320 Decision Mathematics (3,0)

3 Credits

The mathematical concepts and applications in mathematical model building and problem solving will be explored. Included are mathematical areas that are basic to decision theory. Prequisite: MATH 211 or MATH 222.

#### MATH 345 Differential Equations and Matrix Methods (4,0)

4 Credits

Treatment of ordinary differential equations to include principal types of first and second order equations; methods of substitution on simple higher order differential equations; linear equations and systems of linear equations with constant coefficients; methods of undetermined coefficients and variation of parameters; Laplace transforms; series solutions; linear algebra and matrix methods of solutions; applications to physics and engineering. Prerequisite: MATH 243.

#### **MANAGEMENT**

#### MGMT 120 Introduction to Computer Based Systems (3,0)

3 Credits

This course offers an overview

## UNDERGRADUATE COURSES

of computing in the business environment, and an introduction to the tools, techniques, and strategies of computer-based information system development. The emphasis is on developing computer literacy through the use of computers in the design and presentation of business communications such as plans, proposals, spreadsheets, graphs, and charts.

#### MGMT 201 Principles of Management (3,0)

3 Credits

A comprehensive overview of relevant management principles and practices as applied in contemporary organizations, this course focuses on management theories, philosophies, and functions.

#### MGMT 210 Financial Accounting (3,0)

3 Credits

This course introduces the student to accounting information systems and financial reports. Included are accounting concepts and analysis and interpretation of financial reports, with an emphasis on the operating activities of aviationrelated businesses.

## MGMT 212 Advanced Financial Accounting (3,0)

3 Credits

The goal of this course is to provide an in-depth study of accounting information systems and financial reports used in a management environment, including analysis and interpretation of financial reports. Emphasis will be on the operating, investing, and financing activities of all types of organizations, including airline and aviation related companies.

#### MGMT 221 Advanced Computer Based Systems (3,0)

3 Credits

This course is a continuation of MGMT 120. It covers advanced concepts of spreadsheet use, database management systems, and presentation graphics. Students perform macro and command language programming in applications packages. In addition, the course provides experience in locating and retrieving graphical and text-based information from the Internet to support management activities.

#### MGMT 308 Public Administration (3,0)

3 Credits

The characteristics of organization and management in government will be discussed in this course. Thecourse will center on the impact of political processes and public pressures on administration action, the role of regulatory agencies, governmental personnel, and budgetary procedures, and the unique qualifications of the public administrator.

#### MGMT 311 Marketing (3,0)

3 Credits

This course centers on marketing theory, marketing management, sales management, and market research. In addition, public and customer relations, advertising, and distribution will be explored.

#### MGMT 312 Managerial Accounting (3,0)

3 Credits

The course emphasizes management's use of cost information in internal decision making. Decision-making processes include cost analysis, control, allocation, and planning. A variety of accounting techniques applicable to aviation/aerospace companies are presented.

#### MGMT 314 Human Resource Management (3,0)

3 Credits

The focus of this course is on the functions to be accomplished in effectively managing human resources. An in-depth study of the interrelationship of managers, organizational staff, and/or specialists, will assist the student in understanding and applying management theories to real-world human resource planning. Areas of concentration include human resource planning; recruitment and selection; training and development; compensation and benefits; safety and health; and employee and labor relations.

#### MGMT 317 Organizational Behavior (3,0)

3 Credits

This course provides an overview and analysis of various behavioral concepts affecting human behavior in business organizations, with emphasis on research, theory, and practice.

#### MGMT 320 Business Information Systems (3,0)

3 Credits

A management approach to understanding business information systems is introduced in this course. The general characteristics, potential, and limitations of business systems are covered. Major emphasis is on understanding the inputs, processing, and outputs of a variety of business systems; the ways in which business systems are interrelated; and the inherent management problems involved in the implementation and control of such systems.

#### MGMT 321 Aviation/Aerospace Systems Analysis Methods (3,0)

3 Credits

An overview of the system development life cycle is provided in this course. Emphasis is on current system documentation through the use of both classical and structured tools/techniques for describing process flows, data flows, data structures, file designs, input and output designs, and program specifications.

#### MGMT 322 Aviation Insurance (3,0)

3 Credits

An introduction to the basic principles of insurance and risk with special application to the aviation industry will be presented. The course offers an in-depth review of the aviation insurance industry in the United States, including the market and types of aviation insurers.

#### MGMT 324 Aviation Labor Relations (3,0)

3 Credits

This course focuses on an investigation of labor-management relations in the aviation industry. Examined are the history of unionism, structure of unions, legal environment, and the Railway Labor Act, collective bargaining, public sector relationships, grievance procedures, and conflict resolution.

#### MGMT 325 Social Responsibility and Ethics in Management (3,0)

3 Credits

The course provides a comprehensive inquiry into the major components of social responsibility and a study of moral and ethical issues that relate to problems in business. Focus will be on the economic, legal, political,

ethical, and societal issues involving the interaction of business, government, and society.

#### MGMT 331 Transportation Principles (3,0)

3 Credits

The basic principles of the several modes of transportation (air, sea, rail, highway, and pipeline) are analyzed. Topics include problems of competition, the importance of each in the economy, and future developmental prospects.

#### MGMT 332 Corporate Finance I (3,0)

3 Credits

Students will learn about the finance function as used by management, including financial analysis and control; financial planning; short, intermediate, and long-term financing; and the theory of cost of capital and leverage in planning financial strategies. Aviation-related businesses are emphasized.

## MGMT 333 Personal Financial Planning (3,0)

3 Credits

The nature of the personal financial planning process is examined. Areas of concentration include taxes, investments, purchase of housing/auto, insurance needs and analysis, use of credit, and retirement and estate planning. Students will develop a personal financial plan and will invest in a \$500,000 portfolio of securities.

#### MGMT 335 International Business (3,0)

3 Credits

This course presents an analysis of economic development and international trade in modern times, with an examination of current U.S. relations with other nations. Attention will be focused on the impact of foreign trade on the aviation industry and the industry's contribution to economic development.

#### MGMT 340 Principles of Aerospace Business Valuation (3,0)

3 Credits

This course develops the elements of valuation as they pertain to the determination of the market values of businesses and physical assets used in commerce, including case studies. Introduced is the specialized area of aviation/aerospace valuation applications.

#### MGMT 390 Business Law (3,0)

3 Credits

A survey of the legal aspects of business transactions is provided. Areas covered include contracts, agency, bailment, negotiable instruments, partnerships, corporations, consumer credit, and the government's influence on business law.

## MGMT 405 General Aviation Marketing (3,0)

3 Credits

Marketing and management concepts applicable to FBOs and other general aviation enterprises are studied. Travel analysis is performed to determine the need for a business aircraft.

#### MGMT 406 Strategic Management of Technical Operations (3,0)

3 Credits

An advanced study of strategic management theory, technical management, and management of technology within a global aviation industry is presented. Detailed

### UNDERGRADUATE COURSES

coverage of the aviation technical management field is provided, as well as that of the working aviation environment and system integration, where the effective management of research, design, production, technical sales, and services functions are employed.

#### MGMT 408 Airport Management (3,0)

3 Credits

The focus of this course will be an examination of the management of airports. Emphasis is on the facilities that comprise an airport system, including airspace, airfield, terminal, and ground access operations.

#### MGMT 410 Management of Air Cargo (3,0)

3 Credits

This course offers intensive study of the practices and problems of management with respect to air cargo. The importance of air cargo service to the economy, development of the industry, regulation, complexity of the market, carriers, freight forwarders and third party logistics, along with rate and tariff problems, aircraft, terminal facilities, and future prospects are all discussed.

#### MGMT 411 Logistics Management for Aviation/Aerospace (3,0)

3 Credits

Students are provided with an opportunity to examine ways to optimize the physical flow of goods and materials within a firm from acquisition through production, and movement through channels of distribution. The course focuses on applying logistics theory to aviation management problems in materials handling, managing inventory, planning capacities, and locating distribution centers. Case studies with aviation/aerospace applications

using computer models are included.

#### MGMT 412 Airport Planning and Design Standards (3,0)

3 Credits

The principles of airport master planning and system planning are studied. Fundamental principles of airport layout and design are covered, including geometric design, airport drainage, pavement design, passenger and cargo terminal layout, and capacity and delay effects.

#### MGMT 413 Aviation Machinery and Equipment Valuation (3,0)

3 Credits

Theories of machinery and equipment valuation in industry and how they apply to machinery and equipment used in the aviation/aerospace industry will be addressed in this course.

#### MGMT 415 Airline Management (3,0)

3 Credits

An introduction to the administrative aspects of airline operation and management is provided in this course. Topics include the annual profit plan, uniform system of accounts and reports, demand analysis, scheduling, the theory of pricing, fleet planning, facilities planning, and airline financing.

#### MGMT 418 Airport Administration and Finance (3,0)

3 Credits

The student will be presented with an opportunity for advanced study of the organizational, political, and financial administration of public and private civil use airports. Areas of emphasis include public relations management, safety and security issues, employee organizational structures, financial and accounting strategies, revenue and expense sources, economic impacts of airport operations, airport performance measurement standards, and current trends and issues of direct concern to airport administrators.

#### MGMT 419 Aviation Maintenance Management (3,0)

3 Credits

Students will perform a comprehensive examination of organizational maintenance policies, programs, and procedures. Emphasis is on maintenance planning, forecasting and cost control, reliability, safety, and flight schedule performance.

#### MGMT 420 Management of Production and Operations (3,0)

3 Credits

An intensive study of management of production and operations in all organizations, both service-oriented and product-oriented, will be conducted. Scheduling, inventory control procurement, quality control, and safety are investigated. Particular attention is given to applications of aviation-oriented activities.

#### MGMT 421 Small Business Management (3,0)

3 Credits

The student will undertake an analysis of the theoretical and practical knowledge necessary to be successful in conceiving, initiating, organizing, and operating a small business. Special focus will be placed on small businesses in the aviation field.

#### MGMT 422 Life Cycle Analysis for Systems and Programs in Aviation/Aerospace (3,0)

3 Credits

System theory and its relationship to aviation/aerospace systems management are emphasized. The course explores a brief history of system theory and system life cycle, and presents the major activities in each phase of a system's life cycle. Also emphasized are specific topics related to system design and support, including reliability, maintainability, availability, testing, quality control, customer support, product-improvement program analysis, and the role of data collection and analysis in the operational phase. Related areas covered are cost-effectiveness analysis and project management. Applications and case studies specific to aviation/aerospace, including military applications and computer simulation models, will be analyzed.

#### MGMT 423 Aviation Machinery and Equipment Methodology (3,0)

3 Credits

This course develops the theoretical methodologies used in the assessment of the values of business and equipment and provides actual valuation experiences.

#### MGMT 424 Project Management in Aviation Operations (3,0)

3 Credits

This course introduces the student to the concept of project management in aviation operations. It addresses the three-dimensional goals of every project: the accomplishment of work in accordance with budget, schedule, and performance requirements. The procedures for planning, managing, and developing projects

in an aeronautical environment are covered, as well as the aspects of controlling project configuration from inception to completion. Automated tools used to determine cost, schedule, staffing, and resource allocation are covered, as well as the process of determining the effectiveness and technical validity of aviation-related projects.

#### MGMT 425 Trends and Current Problems in Air Transportation (3,0)

3 Credits

An analysis of selected contemporary issues, problems, and trends facing management in various segments of the aviation industry, including general aviation and the airlines, will be covered. Students apply previously learned concepts to practical problems to develop increased understanding and demonstrate knowledge of the subject.

#### MGMT 426 International Aviation Management (3,0)

3 Credits

The student will perform an investigation of international aviation management and its three elements: the nature of international aviation business; working in a foreign environment; and managing in an international environment.

#### MGMT 427 Management of the Multicultural Workforce (3,0)

3 Credits

Students are provided with an opportunity to explore management of the multicultural workforce. The elements of cultural anthropology and international business, communicating across cultures, contrasting cultural values, and managing and maintaining organizational culture are addressed in the context of international aviation management.

#### MGMT 433 Advanced Topics in Machinery and Equipment Valuation (3,0)

3 Credits

This course develops applications of valuation theory in complex integration of machinery and equipment used in manufacturing, production, and operations applications involving various businesses. Development of appraisal reporting and analysis of valuation principles used to conform to requirements of National Uniform Standards of Professional Practice is also addressed. Prerequisites: Successful completion of MGMT 423.

#### MGMT 436 Strategic Management (3,0)

3 Credits

Strategic management principles involving strategy, formulation, implementation, evaluation, and organization analysis are studied in this business capstone course. Case analysis and the use of strategic management principles are used to examine and solve organization problems. Total Quality Management concepts are studied for improvement of organizational effectiveness.

## MGMT 440 Advanced Professional Logistics (3,0)

3 Credits

In the advanced professional logistics course, a heavy emphasis is placed on the analysis of the Systems Engineering, Integrated Logistics Support and other previously learned business logistics theories and concepts so as to determine their appropriate application. A secondary emphasis

## UNDERGRADUATE COURSES

is placed on the horizontal integration of these theories and concepts in a practical framework, which will serve as professional guidance for the business logistics manager. Prerequisites: MGMT 321, 331, 410, 411, 419, 420, and 422 or the equivalent of each of these courses.

#### MGMT 443 Applications in Income Property Valuation (3,0)

3 Credits

In this course, students analyze financial statements, ratio analysis, fair market value, and classification of property used in industrial operations, specifically in the aviation/aerospace industry. Prerequisite: Successful completion of MGMT 433.

## MGMT 449 Strategic Marketing Management (3,0)

3 Credits

This is a capstone marketing course that focuses on strategic analysis and planning by aviation marketing managers. Emphasis will be given to corporate and marketing strategy, market analysis, and targeting, strategic marketing programming, and market control.

#### MGMT 450 Airline/Airport Marketing (3,0)

3 Credits

Students will conduct an investigation of the role of marketing in the aviation/airport industries. Issues covered include consumer segmentation, database management, integrated marketing communications, public relations, vendor relations, and retailing.

#### MGMT 299, 399, 499 Special Topics in Management

1-4 Credits

These are individual independent

or directed studies of selected topics in management. Prerequisite: Consent of instructor and approval of the department chair.

## COOPERATIVE EDUCATION

#### MGMT 396, 397, 398 Coop Education Management

1-6 Credits

The student will gain practical learning experience in full-time or part-time employment that is related to the student's degree program and career goals. Course title and level are based on the work assignment.

#### MGMT 496, 497, 498 Coop Education Management

1-6 Credits

The student receives practical learning experience in full-time or part-time employment that is related to the student's degree program and career goals. Course title and level are based on the work assignment. Continuation of MGMT 396, 397, 398.

#### PHYSICAL SCIENCE & APPLIED METEOROLOGY

#### PHYS 102 Explorations in Physics (3,0)

3 Credits

This is a survey course in elementary physics. Stress will be placed on basic concepts, principles, and history of the development of physics. Presentations will include selected topics in mechanics, heat, light, sound, electricity, magnetism, and modern physics. (This course cannot be used for credit in physics toward degrees in Computer Science, Engineering Physics, Civil, Aerospace or Electrical Engineering, Aircraft Engineering Technology,

Aeronautical Science, or Avionics Technology.) Prerequisite: MATH 106, 111 or 140.

#### **PHYS 142**

## Introduction to Environmental Science (3,0)

3 Credits

This introductory course stresses the interrelations of all aspects of the living and the nonliving world. It introduces the student to key concepts and principles that govern how nature works and the application of these concepts and principles to possible solutions to environmental and resource problems.

#### PHYS 150 Physics I for Engineers (3,0)

3 Credits

Vectors and scalar quantities, geometrical optics, kinematics, Newton's laws of motion, work, work-energy, conversion of energy, conversion of momentum, center of mass and its motion.

#### PHYS 160 Physics II for Engineers (3,0)

3 Credits

Special theory of relativity, rotational motion, simple harmonic motion, waves, fluid, heat, kinetic energy, thermodynamics. Prerequisite: PHYS 150.

#### PHYS 201 Meteorology I (3,0)

Corequisite: MATH 242.

3 Credits

This is a survey course in atmospheric science that includes applications to flight. Included is a systematic development of the following: thermal patterns, atmospheric moisture, horizontal and vertical pressure patterns, clouds, atmospheric circulation, local winds, stability, air masses, fronts, fog, icing, thunderstorms, jet

streams and turbulence. Students will study and make use of surface weather observations, surface maps, and constant pressure maps.

#### PHYS 250 Physics III for Engineers (3,0)

3 Credits

Gravitational fields, electric and magnetic fields, Gauss's law, electric potential, linear accelerators, cyclotrons, capacitors, Ohm's law, Kirchoff's laws, Ampere's law, Faraday's law, Lenz's law, Maxwell's equations, selected topics from modern physics. Prerequisites: PHYS 160, MATH 242.

#### PHYS 301 Astronomy (3,0)

3 Credits

This descriptive course deals with the structure and evolution of the physical universe. Topics include the solar system (Earth, Moon, Sun, and planets), stars, black holes, galaxies, quasars, cosmology, and exobiology. Planetarium trips and night observing sessions are optional.

## PHYS 302 Evolution of Scientific Thought (3,0)

3 Credits

The development of science, from the earliest times through the modern period, is traced in this course. Particular emphasis is given to our changing concepts of nature and of science itself. (Also offered as HIST 302. Students receive either social science elective credit or physical science elective credit, but not both.)

#### PHYS 304 Environmental Science (3,0)

3 Credits

Problems arising from human use and abuse of the environment will be the focus of this survey course. Ecological, economic, sociologic, and technologic principles will be applied to the management control of pollution of the atmosphere and water sources of the earth.

#### PHYS 352 Meteorology II (3,0)

3 Credits

An expansion of Meteorology I, this course includes the following theoretical concepts: hydrostatic instability, baroclinic instability, thermal wind, and kinematic fields. These will be integrated into realtime weather analysis of synoptic patterns involving mid-latitude cyclones, frontal systems, and jet streams. The anatomy of severe thunderstorms, particularly as applied to aviation hazards, will be treated in detail through analysis of recent synoptic data. Practical application will be achieved in current weather discussions, which will be given by teams of students. In addition, study of weather radar, solar aspects, and satellite meteorology will be accomplished. Prerequisite: PHYS 201.

#### PHYS 199, 299, 399, 499 Special Topics in Physical Science

1-4 Credits

These are individual independent or directed studies of topics in the fields of the physical sciences impinging on aerospace development or practices, and which are of current or anticipated interest. Prerequisite: Consent of instructor and approval of the department chair.

#### PORTFOLIO PREPARATION

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 selfassessment 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 degreeseeking student at ERAU.

#### SOCIAL SCIENCES

#### PSYC 220 Introduction to Psychology (3,0)

3 Credits

This course offers a survey of the biopsychosocial continuum and the intrapsychic, interpersonal, and organizational factors affecting human behavior. A primary feature of the course is its focus on the scientific method as the route to psychological knowledge. Students examine the rationalist, empiricist, and experimental foundations of the scientific method and how these foundations can be critiqued. Topics include sensation, perception, learning, memory, personality, psychopathology, physiological psychology, and social processes. Emphasis is placed on the application of the basic principles of psychology to engineering, aviation, public policy, and business.

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#### PSYC 320 Aviation Psychology (3,0)

3 Credits

Students will explore the complexities of human factors research in aviation. Drawing extensively on such diverse areas as human physiology, basic learning theory, aviation safety, and pilot training, the course surveys the study of human behavior as it relates to the aviator's adaptation to the flight environment.

#### PSYC 350 Social Psychology (3,0)

3 Credits

The interactional forces between groups and the individual in society will be the focus of this course. Since the major emphasis of the course is on social interactions, such diverse topics as group dynamics, interpersonal relationships, prejudice, discrimination, and antisocial behavior will be considered. Special attention is given to the topic of stress in the aviation environment.

#### PSYC 400 Introduction to Cognitive Science (3,0)

3 Credits

An introduction to the science of the mind from the perspective of cognitive psychology, this course is a study of linguistics, neuroscience, philosophy, and artificial intelligence. The focus is on the similarities and differences in the approaches taken by researchers in their study of cognitive mechanisms in these different fields. Issues to be addressed include: What does it mean to be able to think? What kind of computational architecture(s) is most appropriate to describe cognitive mechanisms? Is the mind an emergent property of the brain? What kind of hardware is required for thinking to occur? Can a computer have a mind?

#### SECURITY SCIENCE

All the SCTY courses fulfill Technical Operational Specialty requirements in the BSTM degree program.

\*These courses will also satisfy Social Sciences requirements.

#### SCTY 312 Global Crime And Criminal Justice Systems (3,0)

3 Credits

In this course, students will be presented the current status and predicted trends in global crime and criminal justice systems. They will be given descriptions of the three types of terrorism: domestic (U.S.), international (group directed), and state sponsored. Concepts and theories will be applied in discussions on how to best combat the threat.

#### \*SCTY 315 Studies in Intelligence I (3,0)

3 Credits

In this course, the student will be provided descriptions of the varied ways strategic intelligence is used by world leaders to shape policy and its effect on world events. Intelligence collection, analysis, and dissemination and counterintelligence will be among the issues examined and discussed. Prerequisites: one psychology course and one government/history course, or permission of the instructor.

#### SCTY 385 Intelligence Analysis-Writing and Briefing (3,0)

3 Credits

In this course, the student will be given the opportunity to gain practical experience in the intelligence functions of analysis, writing, and briefing. The student will be expected to demonstrate an "intelligenceoriented mind" and ability to work under time pressure. The student will become familiar with analytical methodologies and writing styles that make complex world events explicable to military decision makers and senior policy makers.

#### SCTY 400 Airport Security (3,0)

3 Credits

This course will cover specific facets of aviation related security to include physical and procedural controls, regulations of the Department of Homeland Security, the Transportation Security Administration, the Federal Aviation Administration and ICAO, as well as international treaties. The course will also discuss the current threat, counter terrorism measures, new technologies in the field and the importance to the aviation industry, both passenger and cargo to the global economy.

#### \*SCTY 415 Studies in Intelligence II (3,0)

3 Credits

The course is a simulation of intelligence officers' activities. The student will function as an intelligence desk officer for either a government, global corporation, terrorist group, global criminal organization, or multilateral political organization. Using the simulation, the student will study and practice many components of tactical and strategic intelligence. Some components included will be intelligence collection, evaluation, analysis, production, and dissemination; intelligence oversight; covert and clandestine operations; intelligence bureaucracies; espionage; ethical and moral issues in intelligence; and counterintelligence. The course emphasizes functional interactions.

#### SCTY 485 Corporate Security (3,0)

3 Credits

The student will be exposed to issues in the field of private/ corporate security. Private security firms work with public law enforcement strengthening the overall security posture of firms, schools, etc. Beginning with a discussion of the differences between public and private police, students will analyze security needs of business and private establishments, in detail, and the threats that might emanate from tapped phones, bugged offices, stolen papers, covert recording, undercover employees, phony repair people, fax intercepts, etc. The substance of the course will include practical and theoretical elements affecting the field.

#### \*SCTY 488 National Security Issues and Terrorism (3,0)

3 Credits

Although terrorism has been a known phenomenon for centuries, it has become the most frequent form of conflict in the late 20th century. Success in preventing nuclear warfare and in curbing the outbreak of most conventional war has resulted in more forms of low intensity violence, a significant feature of which is overt terrorism. Ideological hardening, ethnic militancy, and religious revivalism have fueled terrorist ambitions. Broadly speaking, there are three types of terrorism, classified on the basis of actors. The course will address all three types: domestic (U.S.), international or group directed, and state sponsored.

#### SAFETY SCIENCE

#### **SFTY 311**

## Fundamentals of Occupational Safety and Health (3,0)

3 Credits

The student will be provided an introduction and overview of the Occupational Safety and Health (OSH) Act and how provisions of the Act are implemented in the workplace. The course is designed for the beginning safety student and is a prerequisite for most of the higher level safety courses. Material presented covers the rights and responsibilities under the OSH Act, the appeals process, recordkeeping, and voluntary protection programs. The course also includes an introduction to OSHA's general industry standards and an overview of the requirements of the more frequently referenced standards.

#### SFTY 315 Environmental Compliance and Safety (3,0)

3 Credits

The focus of this course is on matters associated with health and safety relating to the environment, including air, water quality, and sanitation. Areas of concentration include hazardous materials, their storage, handling, and transportation. Additional study includes waste management and cleanup as well as a detailed study of environmental laws, regulations, and protection of workers involved in activities associated with hazardous materials.

#### SFTY 320 Human Factors in Aviation Safety (3,0)

3 Credits

This course focuses on the major causative agent in aircraft accidents: the human being. Emphasis is placed on psychological and physiological factors that enhance the accident probability. Included is a detailed analysis of ergonomics (human engineering) and its influence in aviation design.

#### SFTY 321 Ergonomics (3,0)

3 Credits

The concepts and physiological aspects of ergonomics will be examined in this course. Material presented covers anthropometric principles in workspace and equipment design, workspace design, human-machine systems, analysis and design of displays and controls, and environmental factors affecting work environment.

## SFTY 330 Aircraft Accident Investigation (3,0)

3 Credits

This course is a detailed evaluation of methods and procedures involved in aircraft accident investigation. The organization, duties, and procedures of the Aircraft Accident Board are analyzed. The student explores procedures for determining accident causes through analysis of such elements as the function and techniques employed by the trained accident investigator and the role of the specialized laboratory. Analysis is also made of reporting procedures and the all-important follow-up work designed to avoid similar or related aircraft accidents.

#### SFTY 335 Mechanical and Structural Factors in Aviation Safety (3,0)

3 Credits

Students will conduct a thorough examination of design, manufacturing, metallurgy, and maintenance to determine the influence each has on aircraft accidents. A detailed analysis of the

### UNDERGRADUATE COURSES

failure process will be conducted. Additional topics include stress and design loading, fatigue, corrosion, and the envelope of operation.

#### SFTY 341 Occupational Safety and Health Program Management (3,0)

3 Credits

Students will learn about the principles of the development and management of materials, techniques, and procedures used in the implementation of occupational safety and health programs and their application in a variety of occupational settings. Examined will be the management techniques, governmental regulations, and safety and health programs developed for industry. The course will focus on the history of the safety and health movement; government regulations; safety and health program organization; hazard information and analysis process; and implementation of an occupational safety and health program.

#### SFTY 345 Aviation Safety Program Management (3,0)

3 Credits

The principles of the development and management of an effective aviation safety program will be studied in this course. The philosophy and historical development of major concepts are examined with particular emphasis on areas of special concern in organizational accident prevention. Students analyze the influence of morale, education, and training, the role of the supervisor, and other substantial program elements of value to the aviation safety manager.

### SFTY 350

## Aircraft Crash and Emergency Management (3,0)

3 Credits

Theory, practices, and techniques used in the response phase of aircraft crashes and emergencies are examined. This course is designed as a real-world introduction to the field of emergency response at the CFR agency level, the airport response and administration levels, and the related and associated entities involved in aircraft mishaps.

## SFTY 355 Industrial Hygiene & Toxicology (3,0)

3 Credits

An evaluation of principles associated with industrial hygiene is the focus of this course. Topics include recognition, evaluation, and control of hazards related to noise, vibration, ionizing and nonionizing radiation, thermal conditions, pressure, chemicals, airborne contaminants, and biological substances. These subjects will be discussed in relation to all regulatory requirements using both engineering and nonengineering controls. Prerequisites: PHYS 102, SFTY 311.

#### SFTY 360 Construction Safety (3,0)

3 Credits

The student is provided with an opportunity for an in-depth study of construction safety and the importance of safety and health in the construction industry. The Code of Federal Regulations (29 CFR 1926) governing the construction industry will be examined. The focus is the management and application of the regulations in the workplace, typically through safety inspections, job safety planning, organizing and conducting health and safety training, investigating and

maintaining records of construction accidents, incidents, and injuries and illnesses.

#### SFTY 365 Fire Protection (3,0)

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. Prerequisites: PHYS 102, SFTY 311.

## SFTY 375 Propulsion Plant Investigation (3,0)

3 Credits

This is a technical course in aircraft reciprocating and turbine engine fundamentals and relevant accident investigative procedures. Areas of study include basic construction and design, with emphasis on major sections, components, and their mechanical relationships. Power plant systems and system mishap investigation is also covered and includes fuel, lubrication, ignition, and start systems. A study of propeller basics and investigative techniques is also included.

#### SFTY 409 Aviation Safety (3,0)

3 Credits

This course is aviation safety for nonflying students. Major problem areas in aviation safety, safety program evaluation, and impact of accidents on industry are covered. The focus is on human factors, basic accident prevention programs, and the roles of various government and industry organizations in preventing accidents.

#### SFTY 410 Design of Engineering Hazard Controls (3,0)

3 Credits

This course addresses the application of scientific and engineering principles and methods to achieve optimum safety and health through the analysis and design of processes, equipment, products, facilities, operations, and environments. Subjects will include product design, plant layout, construction maintenance, pressure vessels, and transportation vehicles and systems. These subjects will be discussed in relation to all regulatory requirements. Prerequisites: PHYS 102, SFTY 311.

#### SFTY 420 Systems Design for Fire and Life Safety (3,0)

3 Credits

This course centers on design principles involved in building construction standards and building codes to ensure 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. Prerequisites: PHYS 102, SFTY 311.

#### SFTY 435 Aircraft Crash Survival Analysis and Design (3,0)

3 Credits

The student will conduct an in-depth analysis of the accident environment, with particular emphasis on the protection of the occupants, in this course. The injury mechanisms and causes will be analyzed, as will the physics and kinematics of the impact sequence. The intent of the course is to familiarize the student with what can

be done to minimize the effects of an accident on the human occupants. Prerequisite: MATH 106.

#### SFTY 440 System Safety Management (3,0)

3 Credits

The development and implementation of the system safety discipline in technical industries, including aviation, is reviewed in this course. System safety entails specialized integration of skills and resources in all phases of the life cycle of a given system in furtherance of accident prevention. Its heritage is systems engineering and management theory, but amplified to include modern safety practices derived from numerous disciplines. Students will acquire an understanding of how accident prevention is designed into equipment, processes, and facilities under development, evaluated and enhanced during testing, and assured or otherwise controlled during operational use. Prerequisite: MATH 106.

## SFTY 450 Loss Control and Insurance (3,0)

3 Credits

The principles of loss control, insurance, and financial risk management, as they apply to the SHE professional, are studied in this course. The basic concepts of financial risk management, legal principles, property and liability insurance, life and health insurance, employee benefits, social insurance, and functional and financial operations of insurers will be examined. Primary emphasis is placed on consumer considerations, coverage of personal risk management, and financial planning. Prerequisite: SFTY 341.

#### SFTY 462

## Health, Safety, and Aviation Law (3,0)

3 Credits

This course introduces the student to the legal issues and concerns confronting the health and safety industry. Included is an overview of the historical legal precedence established for the aviation industry as well as a comprehensive examination of the laws, regulations, and legislation that governs the actions and authority of the health and safety professional. This course also provides an introduction to the governing bodies and associations tasked with setting the legal standards by which the industry must operate.

#### SFTY 470 Advanced Occupational Safety and Health Technology (3,0)

3 Credits

In the advanced occupational safety and health technology 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 in a practical framework, which will serve as professional guidance for the practicing occupational health and safety technologist.

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

#### SFTY 299, 399, 499 Special Topics in Safety

1-3 Credits

These courses consist of individual independent or directed studies of selected topics in safety.

Prerequisites: Consent of instructor, approval of department

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and program chairs, and 12 hours of SFTY courses.

#### SOCIAL SCIENCES

#### SOCI 210 Introduction to Sociology (3,0)

3 Credits

Students are provided an integrated survey of the fundamental concepts of culture, forms of collective behavior, community and social organization, social interaction and social change. The social effects of aviation and the impact of science on the social order living in an airage will also be investigated.

#### SOCI 300 Marriage and Family (3,0)

3 Credits

This course analyzes the sociological, physical, psychological, legal and economic aspects of the American family. Demographic trends and interpersonal behavior in family and marriage are discussed, including childbearing and divorce, theories of mate selection, preparation for marriage, marital interaction, sexuality, parenthood and marital adjustment. Contemporary controversial issues, such as the relationship of unmarried couples, alternative marriage forms, abortion, and violence are also addressed as they relate to the family.

#### SOCI 310 Personality Development (3,0)

3 Credits

Students will become acquainted with the environmental factors that affect personality development, emotional stability, and interpersonal relationships in our society. Through an understanding of these factors, individuals will discover new modes of adjustment, both in their own lives and in their family/occupational settings.

#### SOCI 299, 399, 499 Special Topics in the Social Sciences

1-6 Credits

These are individual independent or directed studies of selected topics in the areas of history, sociology, psychology, and human culture in general. Prerequisite: Consent of instructor and approval of the department chair.

#### COMMUNICATION THEORY AND SKILLS

#### SPCH 219 Speech (3,0)

3 Credits

This course is a continuation of the study of communication and communication theory. Emphasis is on overcoming communication apprehension, developing listening skills, mastering oral performance, and writing about communication. Individual sections may focus on public speaking, group discussion, oral interpretation, or interpersonal communication. Section emphasis varies by instructor: Please refer to the Schedule of Courses.

#### AIR FORCE AEROSPACE STUDIES

#### USAF 101 The Air Force Today (General Military Course) (1, 0)

1 Credit

A survey course designed to introduce students to the United States Air Force and Air Force Reserve Officer Training Corps. Featured topics include: mission and organization of the Air Force, officership and professionalism, military customs and courtesies, Air Force officer opportunities, group leadership problems, and an introduction to communication skills. Leadership Laboratory is

mandatory for Air Force ROTC cadets, and complements this course by providing cadets with follwership experiences.

#### **USAF 102**

The Air Force Today) (1, 0)
1 Credit

Continuation of USAF 101. A weekly Leadership Laboratory is mandatory.

#### USAF 101L/USAF 102L Leadership Laboratory (0,2)

0 Credit

Consists of Air Force customs, courtesies, health, physical fitness, field training orientation, drill and ceremonies. These courses are graded Pass/Fail.

#### USAF 201 The Air Force Way (General Military Course (1,0) 1 Credit

The USAF 201 course is designed to examine the general aspects of air and space power through a historical perspective. Utilizing this perspective, the course covers a time period from the first balloons and dirgibles to the spaceage global positioning systems of the Persian Gulf War. Historical examples are provided to extrapolate the development of Air Force capabilities (competencies), and missions (functions) to demonstrate the evolution of what has become today's USAF air and space power. Furthermore, the course examines several fundamental truths associated with war in the third dimension: e.g. Principles of War and Tenets of Air and Space Power. As a whole, this course provides the cadets with a knowledge level understanding for the general element and employment of air and space power, from an institutional, doctrinal and historical perspective. In addition, the students will continue to discuss the importance

of the Air Force Core Values, through the use of operational examples and historical Air Force leaders, and will continue to develop their communication skills. Leadership Laboratory is mandatory for AFROTC cadets and complements this course by providing cadets with follwership experiences.

#### **USAF 202**

# The Development of Air Power (General Military Course) (1, 0)

1 Credit

Continuation of USAF 201. A weekly Leadership Laboratory is mandatory.

#### USAF 201L/USAF 202L Leadership Laboratory (0,2) 0 Credit

Consists of Air Force customs, courtesies, Air Force environment, drill, ceremonies, and field training orientation. These courses are graded Pass/Fail.

#### **USAF 301**

#### Air Force Leadership and Management (Professional Officer Course) (3, 0)

3 Credits

A study of leadership, management fundamentals, professional knowledge, Air Force personnel evaluation systems, leadership ethics, and the communication skills required of an Air Force junior officer. Case studies are used to examine Air Force leadership and management situations as a means of demonstrating and exercising practical applications of the concepts being studied. A mandatory Leadership Laboratory complements this course by providing advanced leadership experience in officer-type activities, giving students the opportunity to apply the leadership and management principles of this course.

#### **USAF 302**

#### Air Force Leaderhip and Management (Professional Officer Course) (3, 0)

3 Credits

Continuation of USAF 301. A weekly Leadership Laboratory is mandatory.

#### USAF 301L/USAF 302L Leadership Laboratory (0,2)

0 Credit

Provides advanced leadership experience in officer-type activities, giving students the opportunity to apply leadership and management principles. These courses are graded Pass/Fail. Prerequisites: Completion of the General Military Course or Two-Year Program selection and/or approval of the Professor of Aerospace Studies.

#### **USAF 401**

#### Preparation for Active Duty (Professional Officer Course) (3, 0)

3 Credits

Examines the national security process, regional studies, advanced leadership ethics, and Air Force doctrine. Special topics of interest focus on the military as a profession, officership, military justice, civilian control of the military, preparation for active duty, and current issues affecting military professionalism. Within this structure, continued emphasis is given to the refinement of communication skills. An additional Leadership Laboratory complements this course by providing advanced leadership management principles.

#### **USAF 402**

#### Preparation for Active Duty (Professional Officer Course) (3, 0)

3 Credits

Continuation of USAF 401. A weekly Leadership Laboratory is mandatory.

#### USAF 401L/USAF 402L Leadership Laboratory (0,2) 0 Credit

Provides advanced leadership experiences in officer-type activities. These courses are graded Pass/Fail. Prerequisites: Completion of the General Military Course or Two-Year Program selection and/or approval of the Professor of Aerospace Studies.





The MSTM degree program has enhanced my job performance giving me the confidence to make better decisions at work. Each course provided beneficial knowledge in communications, writing and developing effective presentations, which I was able to apply in my everyday work assignments. I work for NASA (Kennedy Space Center, FL) as a Launch Site Integration Manager and for each assigned mission I have a customer to support. The MSTM program embedded in me the importance of "the customer".

Dianna Lampert

## AERONAUTICAL SCIENCE

#### ASCI 509 Advanced Aerodynamics

3 Credits

In this course, students will examine current flight applications and problems. Specifically, this includes transonic, supersonic, and hypersonic aerodynamics, principles of aircraft stability and control, and operational strength considerations. Emphasis is placed on the applications of the rapidly changing technological innovations in aerodynamics and the solutions to the problems created by these advances

#### ASCI 510 Advanced Aircraft Performance

3 Credits

In this course the student explores performance characteristics for transonic, supersonic, and near space air vehicles powered by jet or rocket engines. Problems related to high speed and high altitude flight such as aero elastic effects, compressibility drag, Reynolds Number effects, ram pressure rise, and aerodynamic-heating are explored. Discussions will center on current developments and problems associated with these advancements.

#### ASCI 511 Earth Observation and Remote Sensing

3 Credits

U.S. and international solar system exploration programs are reviewed and related to the current and proposed Earth-research projects. Examination of these research programs will be structured toward defining problems related to environmental changes and resource exploration. Formatted research data from Earth-resource satellites and EOS sources will be

used for demonstrating specific research techniques, exploration methods, and economic and social elements of exploration.

#### ASCI 512 Space Mission and Launch Operations

3 Credits

This course introduces the student to launch, mission operations, and facilities for manned and unmanned missions at U.S. and foreign sites. Satellite and spacecraft launch facility system discussion covers safety, meteorology, communications, and tracking, as well as navigation and control systems. Examples of mission control, operations, and systems include spacecraft project descriptions and control site operations. Computer-based simulation instruction provides mission and site specific operation detail.

#### ASCI 513 Space Habitation and Life Support Systems

3 Credits

This course addresses the problems related to space-flight induced

changes in the major body systems that need to be solved in this decade, to develop countermeasures for maintaining the health of crewmembers on long duration space operations. Physiological elements of zero gravity environment, radiation hazards, and protection measures are explored, along with physical and chemical closed-loop life support systems for long duration space missions. More elaborate life support systems for larger manned missions and colonies are outlined for further student development.

#### ASCI 514 Computer-Based Instruction

3 Credits

This course addresses the design, development, and evaluation of instructional software as it applies to the aviation/aerospace industry. Students are offered practice in the systematic design of computer-based instruction, with emphasis in tutorials, drill and practice, and simulation. CBI lessons are developed using available authoring systems.



#### ASCI 515 Aviation/Aerospace Simulation Systems

3 Credits

The course focus is on simulation in modern aviation/aerospace, including history, state-of-the-art, and current research and development. Discussions focus on the extent and impact of simulator application throughout the industry and the effects on training costs and safety. Topics range from the flight crew being checked out, updated, evaluated, or retrained in aircraft and systems simulators to the simulation models used in management, flight operations, scheduling, or air traffic control.

#### ASCI 516 Applications in Crew Resource Management

3 Credits

In this course, students examine 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, manner and style, accountability, and role management will be studied. Each student has the opportunity to become knowledgeable in a specific area of CRM by assisting in the development of a CRM research document as part of the course. Additionally, each student uses simulators and computer-based instruction to supplement academic instruction.

#### ASCI 517 Advanced Meteorology

3 Credits

Course topics include the derivation and application of the hydrostatic equation, atmospheric kinematics, derivation of the equation of continuity, development of thermal wind, fundamental weather analysis, high altitude and radar meteorology, air pollution, and solar impact on weather. The student practices current weather analysis and short range weather forecasting using much of the latest equipment available in aviation.

#### ASCI 518 Aviation/Aerospace Operations Research

3 Credits

This is a survey course in the use of the most common operational methodologies used in managerial decision-making. Emphasis will be on the use of these methods in aviation, and aviation-related industries. Topics include: Linear programming, probabilistic dynamic programming, game theory, forecasting, queuing theory, transportation, decision making under uncertainty, network models, and Markov Chains. The goal is to make students knowledgeable consumers of the methodologies and their results.

#### ASCI 521 Aviation/Aerospace Information Management

3 Credits

This course aims to develop knowledgeable and effective users of information technology in aviation/ aerospace management occupations. A combination of technical and managerial material is presented. The material presented is necessary to achieve an understanding of the operations and strategic uses of management information systems in the aviation/aerospace industry. Emphasis is placed on the use of computers as an information processor, decision tool, and as a means of linking management more closely to the

organization. Topics relating to the identification and management of information resources are presented.

#### ASCI 550 Aviation Education Foundations

3 Credits

This course assists in developing contexts and concepts in which educational problems and issues may be understood, particularly the role of aviation in education. Emphasis is placed on aviation education and its historical and philosophical foundations.

#### ASCI 560 Rotorcraft Operations

3 Credits

The course introduces the complexities of rotary wing flight systems and the advancements made to overcome them. The unique problems facing an organization involved in rotorcraft operations are studied, from the initial inception of a program to the government rules and regulations, environmental and noise considerations, special landing and take-off facilities, flight and maintenance ratings, and techniques of control. Special consideration is given to the unique problems and issues facing such rotorcraft operations as police, medical evacuation, forestry service, and corporate aviation.

#### ASCI 590 Graduate Seminar

1-3 Credits

This course consists of completing a study of the most current advancements in a particular field as determined by the instructor of the course. This course has a different topic each term depending on the varied interests of the student, the graduate faculty, or the research requirements of the Aeronautical Science department.

### ASCI 601

## Applications in Space: Commerce, Defense, and Exploration

3 Credits

The scientific, military, and commercial interests in international and domestic space programs are examined throughout the history of space flight. The needs of commercial space endeavors and methods of expanding space technology into manufacturing are contrasted to the importance of scientific exploration, and the requirements of military space operations. The justification, development, and costs of scientific exploration programs, defenserelated projects, and commercial endeavors are used to study the evolution of space missions and the development of future programs.

#### ASCI 602 The Air Transportation System

3 Credits

A study of air transportation as part of a global, multimodal transportation system, the course reviews the evolution of the technological, social, environmental, and political aspects of this system since its inception at the beginning of the previous century. The long-term and shortterm effects of U.S. economic deregulation, energy shortages, governmental restraints, national and international issues, and international terrorism are examined. Passenger and cargo transportation, as well as military and private aircraft modes, is studied in relation to ever-changing transportation requirements.

#### ASCI 603 Aircraft and Spacecraft Development

3 Credits

This course is an overview of aircraft and spacecraft development. Included

are vehicle mission, the requirements directed by economic, military, and defense considerations, and research and developmental processes needed to meet vehicle requirements. Aviation and aerospace manufacturing organizations and techniques are addressed, including planning, scheduling, production, procurement, supply, and distribution systems. Aviation and aerospace maintenance systems from the built-in test equipment to the latest product support activities are explored.

#### ASCI 604 Human Factors in the Aviation/Aerospace Industry

3 Credits

This course presents an overview of the importance of the human role in all aspects of the aviation and aerospace industries. Emphasis is on issues, problems, and solutions of unsafe acts, attitudes, errors, and deliberate actions attributed to human behavior and the roles supervisors and management personnel play in these actions. Students examine the human limitations in the light of human engineering, human reliability, stress, medical standards, drug abuse, and human physiology. Discussions include human behavior as it relates to the aviator's adaptation to the flight environment, as well as the entire aviation/aerospace industry's role in meeting the aviator's unique needs.

#### ASCI 606 Aviation/Aerospace Communications/Control Systems

3 Credits

A detailed analysis of current and future developments and trends in the control of air traffic is conducted. Topics addressed include the evolution of current national policies, plans, and objectives. The most recent planned improvements for each major component of ATC systems are examined individually and as part of the system as a whole.

#### ASCI 607 Advanced Aircraft/Spacecraft Systems

3 Credits

State-of-the-art aircraft/spacecraft systems and projections of research trends for future air vehicle requirements and applications are examined. Topics include the development, capabilities, and limitations of current aircraft/spacecraft propulsion, electrical, environmental, control, hydraulic systems, and sub-systems. The total aircraft design and the interdependence of aircraft system design constraints are emphasized, as well as current problems and solutions.

#### ASCI 609 Aircraft Maintenance Management

3 Credits

This course provides a detailed analysis of commercial air carrier and general aviation aircraft maintenance that includes regulation, organization and structure, capabilities and limitations, maintenance levels, inspection and reporting requirements, and prevention and correction inspections. Case studies of typical and unique maintenance scenarios are used. A major course objective is to heighten awareness of the critical interface of maintenance with flight, supply, and training activities.

#### ASCI 610 Instructional System Design Project

3 Credits

This course addresses the analysis,

design, development, implementation, and evaluation of instructional programs and materials in aviation/aerospace industry settings. The major components of instructional design models, along with their respective functions, will be presented. The course is an applications course, which provides both introductory information and practice in the application of skills and techniques necessary to produce sound instructional products.

#### ASCI 611 Aviation/Aerospace System Safety

3 Credits

This course emphasizes the specialized integration of safety skills and resources into all phases of a system's life cycle. Accident prevention, beginning with systems engineering together with sound management, are combined in this course to enable students to fully comprehend their vital roles in preventing accidents. The total program, from basic design concepts through testing, maintenance/systems management, and operational employment, is fully examined and evaluated.

#### ASCI 612 Aviation/Aerospace Industrial Safety Management

3 Credits

The course focus is on the modern work setting from an aviation and aerospace safety and health point of view. An analysis of the history of industrial safety leads the student to an understanding of why and how aviation/aerospace industrial safety management evolved into an advanced discipline. The roles of and interactions between government, corporation, safety management and the worker, in the

dynamic, economy-driven environments of aviation and aerospace, are central themes.

#### ASCI 614 Advanced Aviation/Aerospace Curriculum Development

3 Credits

This course investigates the traditional manner of curriculum development, with a concentration on preparing an instructional framework for a variety of aviation and aerospace instructional programs.

#### ASCI 615 Aviation/Aerospace Accident Investigation and Analysis

3 Credits

This course covers all aspects of the aircraft accident investigation process starting with preparation for investigation through report writing. Particular emphasis is placed on the study of human factors connected with flight and support crews activities in aviation operations. The course provides students with knowledge of the process of investigating accidents and incidents in an aviation organization. A critical analysis of selected aircraft accidents and an evaluation of casual factors are covered.

#### ASCI 616 Transportation Security

3 Credits

This course will focus on Transportation Security Administration regulations covering aviation, railroad, highway, marine, and pipeline transportation. Requirements for all modes of transportation will be covered, with emphasis on aviation security. Personnel and the technology needed to provide a safe and secure environment for airports and airlines will be discussed. Advanced security technology and its use to

significantly increase the level of security in transportation will be covered.

#### ASCI 617 Airport Safety and Certification

3 Credits

This course provides a review and analysis of all Federal regulations applicable to safe conduct of airport operations. The requirements for airport certification are covered as well as airport environmental protection and occupational safety compliance. Day-to-day safe operations are emphasized.

#### ASCI 618 Aviation/Aerospace Safety Program Management

3 Credits

This course covers the essential skills and methodology needed to plan and manage an effective aviation safety program. Emphasis is placed on understanding the principles of risk management, and the principles, tools, and techniques used in a Safety Management System. Methods to achieve enhanced safety, moving beyond mere compliance with regulatory requirements are studied.

#### ASCI 620 Air Carrier Operations

3 Credits

This course addresses air carrier flight operation systems from the viewpoints of the ground-based dispatcher, operation specialists, managers, and the cockpit flight crew. Topics include advanced flight planning, aircraft performance and loading considerations, impact of weather conditions, and routing priorities.

#### ASCI 622 Corporate Aviation Operations

3 Credits

The establishment and operations



of a corporate flight department are examined along with the procedures and techniques generally accepted as standards by professional corporate flight operations. Included is a practical view of the corporate aviation mission of management mobility and use of the resources available to accomplish it.

#### ASCI 634 Aviation/Aerospace Psychology

3 Credits

This course demonstrates the complexities of human factors research in aviation, ranging in areas such as human physiology, basic learning theory, aviation safety, and pilot training. A survey of the study of human behavior as it relates to the aviator's adaptation to the flight environment and attempts to design an occupant-friendly flight deck module is included.

#### ASCI 636 Advanced Aviation/Aerospace Planning Systems

3 Credits
Planning and decision-making

techniques and strategies used in the aviation industry are emphasized in this course. The types and sources of data needed for decisions about route development and expansion, fleet modernization, and new markets are examined. The methods of collecting, analyzing, and applying the data through computer applications, modeling, heuristic, value theory, and payoff tables are studied. Discussions include the limitations and problems associated with strategic planning.

#### ASCI 641 Production and Procurement Management in the Aviation/Aerospace Industry

3 Credits

The evolution of an air carrier aircraft from design concept to delivery is examined from the perspectives of the purchaser, manufacturer, component manufacturers, operators, and regulators. The process begins with demand analysis and continues through purchase contracting, manufacturing, marketing, certification, pre-

delivery activities, and introduction into service.

#### ASCI 642 International Aviation Policy

3 Credits

This course addresses international management and aviation policy through the examination of major trends and issues challenging the aviation manager. Cross-cultural situations are evaluated from the perspective of interpersonal relationships in a diverse domestic and foreign environment, and in the context of evolving global trends. Strategic planning and negotiation are examined by defining the major tasks involved in organizing for international aviation, such as designing the organization and staffing. Managing workforce diversity is examined from culture-based and comparative perspectives, along with the function of control through the examination of effective control systems for overseas operations that ensure environmental interdependence through social responsibility and ethical behavior

#### ASCI 643 Management of Research and Development for the Aviation/Aerospace Industry

3 Credite

The types and sources of aviation/aerospace research and development are analyzed, with a focus on the structure and interrelationship of the industry, educational institutions, and other organizations. Sources and methods of funding, specification determination, the relationship of research and development to procurement and production, and the regulatory factors affecting progress from the initial development to production of the

aircraft and components are examined. Concepts of motivation and management as applied to research scientists and engineers will be studied as well as procedures for promoting optimum creativity concurrently with efficient operations.

#### ASCI 644 Integrated Logistics in Aviation Management

3 Credits

This course centers on elements of a modern integrated logistics system. The organizational structure, inventory management, principles of warehousing, traffic management, international logistics, and quality management principles as they apply to logistics are key elements. The impact of just-in-time systems and quality management principles on physical distribution and their relationship with integrated package and cargo carriers, advancements in intermodal transportation, and the deregulation of the transportation industry are probed. The characteristics of system design to meet requirements of reliability, maintainability, and supportability are examined, as is the economic feasibility of a logistics system, including a Life-Cycle Cost Analysis. The explosion of computer technology and its effect on electronic data interchange capability as they influence logistics policies and practices are explored. Introduced is the use of computer software to solve logistics problems.

#### ASCI 645 Airport Operations and Management

3 Credits

This course focuses on management and operation of public use airports. Topics covered include traffic forecasting, sources of revenues and expenses, management of passenger and cargo terminal buildings, ground handling of passengers and baggage, ground access systems, and the U.S. Federal Aviation Administration Regulations dealing with airport operations. Current problems with environmental impact, land-use planning and control, airport capacity and delay, public relations, airport finance, airport privatization, liability, and economic impact are discussed.

#### ASCI 646 Airline Operations and Management

3 Credits

This course centers on airline operations and functions. Domestic and international regulation of air carriers and the industry's changing structure due to alliances and globalization are addressed. Airline economics, airline marketing and pricing, computer reservation and revenue management systems, fleet planning and scheduling, aircraft maintenance, aircraft finance, labor relations, organizational structure, and strategic planning are studied.

#### ASCI 652 Continuing Education's Role in Aviation

3 Credits

This course is designed to assess community needs relative to developing programs in continuing education for the adult learner. Topics include evaluation of existing programs and the processes used in developing curricula for an adult continuing education program related to aviation.

#### ASCI 654 Adult Teaching and Learning Techniques

3 Credits

The major instructional strategies

used in education with particular emphasis on higher education and adult learning are the core of this course. Multiple approaches as they relate to academic disciplines and grade levels are studied. The unique "cockpit classroom" environment will be discussed and evaluated.

#### ASCI 660 Sensation and Perception

3 Credits

This course examines how the human senses transform stimulus patterns of physical energy into the neural codes that become our perceptions of the world. Topics include vision, audition, smell, taste, touch, balance and phenomena common to all sensory modalities, such as feature enhancement, inhibition, adaptation, and stages of neural coding.

#### ASCI 661 Human-Computer Interaction

3 Credits

In this course, discussions of the importance of good interfaces and the relationship of user interface design to human-computer interaction (HCI) are emphasized. Topics include interface quality and methods of evaluation such as interface design examples, dimensions of interface variability, dialogue genre, dialogue tools and techniques, user-centered design and task analysis, prototyping and the iterative design cycle, user interface implementation, prototyping tools and environments, I/O devices, basic computer graphics, and color and sound.

#### ASCI 663 Memory and Cognition

3 Credits

In this course, students examine recent advances in memory and

cognition research to obtain an understanding of how these theoretical and empirical advances have been, or might be, applied to problems of human/machine interactions and system design. Topics include the total range of memory and cognitive processes and their potential application to systems design—sensation perception, pattern recognition, attention, language, memory, concept formation, thinking, decision making, problem solving, time sharing, reaction time, action, manual control, and the impact of automation.

#### ASCI 665 Applied Experimental Design

3 Credits

The design, conduct, statistical analysis, and interpretation of common behavioral science research designs are covered in the context of aviation science topics. Students learn to differentiate research designs along dimensions of experimental/non-experimental approaches, questions of group differences and questions of relationships between variables, adequacy of statistical power, "statistical significance," and practical importance. Student projects include conducting statistical analysis and writing research results sections based on standard American Psychological Association format.

#### ASCI 690 Graduate Capstone Project

3 Credits

This course provides the student with an opportunity to conduct an investigation into a problem related to an aviation/aerospace topic, thus demonstrating the student's expertise in problem definition, analysis, and solution processes and requires the student

to demonstrate expertise in the technical aspects of writing. This course is included in the MAS curriculum to provide the student with the opportunity to pursue a project of special interest. This is a required course for those students who choose not to write a thesis. Prerequisite: GCPP 605.

#### ASCI 696 Graduate Internship in Aeronautical Science

1-3 Credits

Temporary professional or industrial work appointments are made available to students enrolled in graduate programs at the University. An internship provides graduate students with an opportunity to extend their academic endeavors through the application of the theories and philosophies studied in the classroom to specific professional activities common to the work place. They are academic/professional activities coordinated by the University between offering organizations and a graduate student.

#### ASCI 699 Special Topics in Aeronautical Science

1-3 Credits

Students may elect to perform a special, directed analysis and/or independent study in an area of particular interest. A detailed proposal of the desired project must be developed and presented to the center director or department chair for faculty review and recommendation at least three weeks prior to the end of registration for a term.

#### ASCI 700 Thesis

6 Credits
A written document on an

aviation/aerospace topic, supervised throughout its preparation by the student's Thesis Committee, will be submitted. The document should demonstrate the student's mastery of the topic and be of satisfactory quality for publication. Prerequisite:

#### GRADUATE CAPSTONE PROJECT PREPARATION

#### **GCPP 605**

## Methods and Procedures for the Graduate Capstone Project

3 Credits

This course encompasses an explanation of the requirements for a graduate Capstone Project and the acceptable methods for carrying out the project. Included in the course is the study of current aviation and industry related research and problem solving methods, including techniques of problem identification, hypothesis formulation, design and use of data-gathering instruments, data collection, and methods of data analysis and presentation. Research and technical reports appearing in professional publications and archives are examined as exemplars of the use of statistical terminology, computations and reporting methods. A formal capstone project proposal, designed to address a problem in the student's area of study will be developed and presented by each student as a basic course requirement. Prerequisites: Demonstrated knowledge of college level mathematics including introductory statistics, and basic computer operations

and completion of at least 15 credit hours of the degree requirements.

#### **MANAGEMENT**

#### MGMT 503 Business Foundations (503A, 503B, 503C, 503D, 503E, 503F)

1 Credit Each

This course relates to in-depth practice of the major competencies, which have been identified as essential prerequisite knowledge for a graduate student enrolled in the MSM degree program to successfully complete the course work. The course is broken down into six stand-alone modules in the discipline areas of management/ quantitative methods, marketing/ accounting, and economics/finance. Each student will take only those modules that have been identified through advisement as being required. Emphasis is placed on understanding the core knowledge and skills in each of the disciplines. Credit for this course is not applicable to the requirements of any Embry-Riddle degree.

#### MGMT 514 Strategic Marketing Management in Aviation

3 Credits

The traditional role of marketing management is enlarged to include the development, implementation, and control of marketing strategies in the dynamic aviation/aerospace organization. Emphasis is on the application of the strategic marketing process in the turbulent global aviation business environment. Strategic marketing decisions, analysis, and issues are integrated with the goal of achieving customer satisfaction to gain a sustainable competitive advantage in the aviation industry.

#### MGMT 517 Accounting for Decision Making

3 Credits

This course demonstrates management's use of accounting information to make decisions related to planning, controlling, and evaluating the organization's operations. Using electronic spreadsheets, the budgeting function and use of performance reports is demonstrated. The behavior and management of costs, as well as techniques used to evaluate and control results of operations, are discussed. Topics include costvolume-profit analysis, activity-based costing in production and service companies, decentralized operations, and differential analysis techniques. Through the use of case studies, current readings, and course projects, emphasis is placed on aviation and aviation-related industries.

#### MGMT 518 Managerial Finance

3 Credits

This course focuses on the theoretical and practical approaches to effective financial management. Planning, analyzing, and controlling investment and short and long term financing are examined for decision making purposes. Emphasis is placed on the application of these methods in the aviation and aviation-related industries. Topics include capital budgeting, risk and diversification, asset liability management, airport financing, aircraft financing, financial derivatives and financial engineering, swaps, options, and financial future, and international finance.

#### MGMT 520 Organizational Behavior, Theory, and Applications in Aviation

3 Credits

This course focuses on current organizational issues that have a direct impact on management in the aviation industry. The emphasis is on human development and the development of effective work elements, as well as the personnel concerns that must be resolved for successful leadership. Topics provide insights into behavior, structure, authority, motivation, leadership, organizational development, and social responsibility.



#### MGMT 522 Business Research Methods

3 Credits

Students are introduced to the art and science of solving aviation business research problems and becoming better users of research. Topics include research design, the scientific method and other research methodologies, problem formulation, operational definition, measurement and its impact on error and design, classification and modeling. The application of statistics, sampling surveys, decision analysis, management science techniques, and the use of statistical/operations research computer software are studied. An introduction of a style manual for the preparation of a research proposal is covered. Weekly lab sessions are required. Prerequisites: Satisfactory completion of Business Foundation courses and/or permission of Graduate Program Chair.

#### MGMT 523 Advanced Aviation Economics

3 Credits

This course explores economic applications to the aviation and aerospace industry. Students will examine the evolution of market forces in the industry, with particular emphasis on airlines, airports, and manufacturing. Concepts of yield management, air passenger demand forecasting, price and cost study, airport economics, air and land space optimization strategies, government's role in aviation, international implications of competition and government regulation, economic analysis of safety, and other relevant industry issues are examined. Emphasis is placed on an increasingly international air transportation environment.

#### **MGMT 531**

#### Structure and Application of Analytical Decision Processes for Managers I

3 Credits

In this course the student has the opportunity to gain knowledge of the structure and application of management science processes used in management decision making. Processes included in this study are quantitative forecasting models, inventory models, models of transportation, product mix, and other applications using linear programming, decision making with uncertainty and risk, and queuing theory. Successful completion of college-level algebra and statistics is a prerequisite for this course.

#### MGMT 532 Philosophy, Principles, and Practices in Management of Quality

3 Credits

The content of this course incorporates multiple aspects of the management of quality and the integration of quality considerations into all other management decision processes. The primary thrust of the course is an in-depth analysis of quality management concepts, methods, and techniques from a systems perspective. Areas of emphasis are leadership, strategy development and deployment, quality management tools, customer focus, supplier performance, management communications, projects, and training and development. The course encompasses the body of knowledge required in the Certified Quality Manager<sup>©</sup> certification.

#### **MGMT 533**

#### Legal, Ethical, and Regulatory Bases of Management Practices

3 Credits

The emphasis in this course is on managerial decision-making and sound management practice based on knowledge of legal, ethical, and regulatory fundamentals. Liability, contract, and labor law constraints as well as cultural and ethical foundations of management practice are included in the topics addressed. Regulatory controls and constraints on managerial decision making in areas such as occupational and environmental safety and discrimination in the workplace are included, as are other safety and security issues of which the manager should have knowledge.

#### MGMT 534 Anatomy of Work Organizations

3 Credit

In this course the student has the opportunity to gain and expand knowledge concerning how organizations carry out work. Included in the course are elements of organizational theory, organizational structure, and organizational planning. Topics address advantages and disadvantages of structural types, locus of power and locus of authority issues, and formal and informal networks. Also included are issues such as conflict resolution, change management, formal and informal work relationships.

#### MGMT 535 Theory and Application of Managerial Communications

3 Credits

This course is designed to explore the role of communication in managing contemporary organizations and to provide a broad survey of the theoretical, organizational, behavioral, and

technical aspects of communications. An emphasis is placed on the application of theory to practice, which is intended to develop students' managerial and strategic communication skills so that they may grasp not only how, but also what, why, when, and by what means managers effectively communicate. Students will have the opportunity to gain an understanding of why good communication skills are important in business, how communication today is affected by technology, why effective communication can be difficult, how communication is used in teams, and what issues exist in overcoming intercultural communication barriers.

#### MGMT 590 Graduate Seminar

1-3 Credits

In this course students explore the most current advancements in a particular field of study as determined by the instructor. The course has a different topic each term depending on the varied interests of the students, the graduate faculty, or the research requirements of the Aviation Business Administration department.

#### MGMT 603 Aerospace Production and Operations Management

3 Credits

This course addresses production and operations management as it relates to the planning, coordinating, and executing all activities that create goods and services in a global aeronautic/aerospace environment. Special quantitative and qualitative emphasis is placed on the blending of the concepts of industrial engineering, cost accounting, reliability and availability, and general management in the context of core production and control decision activities, such as

capacity planning, product design, layout of facilities, selecting of locations for facilities, quality assurance, fleet planning, scheduling, inventory management, and project management. Special emphasis is placed on the examination of recent trends in global competition, increased reliance of quality for competitive technology transfer into production systems, and the increased value added by worker involvement in problem solving and decision making.

#### MGMT 607 Human Resource Development

3 Credit

This course emphasizes the integration of the individual into the organization by studying the current and fundamental issues in organization theory and organizational behavior as they relate to the individual. The effectiveness of the individual in the organization is examined in terms of personal traits such as communicative abilities, leadership style and potential, and beliefs about organizational ethics and social responsibility.

#### MGMT 625 Airline Marketing

3 Credits

This course addresses the functions and basic concepts of marketing air transportation services. Discussion includes passenger and cargo markets, determinants of travel demand, growth factors, seasonality, and cargo traffic categories characteristics. Product and service elements, roles of advertising and travel agents, marketing unit structure, pricing and cost environment, and schedule planning are also among the topics examined.

#### MGMT 631 Structure and Application of Analytical Decision Processes for Managers II

3 Credits

This course expands the knowledge of the previous course by adding probabilistic modeling and simulation, network models such as PERT and CPM, and will incorporate additional methodologies of decision analysis, including statistical methodologies. Prerequisite MGMT 531.

#### MGMT 632 Seminar in Aviation Labor Relations

3 Credits

Included in this course for discussion are topics such as union movement, labor legislation, representation elections, the collective bargaining process, contract administration, and conflict resolution. The focus of the course is on current issues in labor relations and the evolution of private and public sector bargaining practices in the aviation industry. The impact on human resource management is analyzed.

#### MGMT 633 Principles and Practices of Financial Accounting And Control of Managers

3 Credits

This course offers the student experience in a practical study that links accounting and financial control principles and practices in a systems approach to management of complex business operations. In this course the generation and effective use of accounting information to optimize the financial goals of a business in a competitive business environment requiring timely decisions about product development, production, marketing

and capital budgeting are emphasized. Course topics include standard accounting methods, financial reports and ratios, real-time financial control methods, cash flow, critical resource management, and the impact of variability on uncertainty and risk. Methods for financial control include cost accounting approaches, pricing, joborder and flow cost measurements, and the use of modern computer systems for accounting and production management. Presented in this course is a working understanding of the complex accounting methods and reports required for regulatory purposes. The student will also gain knowledge of the principles and practices employed in financial planning and control at the managerial level.

#### MGMT 635 Business Policy and Decision Making

3 Credits

This is a capstone course in the MBAA/MSM program that expands on the skills, knowledge, and abilities the students have achieved in their core courses. Students examine applications of long-term planning and management tools in aviation-related industries, and will be able to formulate the strategic vision and policies to achieve such a perspective. Concepts of strategic management, total quality management, continuous quality improvement, reengineering, customer-driven management, and other evolving management methodologies are explored. Applications of the concepts are applied to the domestic and international activities of airlines, airports, manufacturing, and government to sustain a long-term competitive advantage.

#### MGMT 641 Airport Management

3 Credits

In this course students have the opportunity to gain significant knowledge of the broad aspects of managing airports. Topics include air carrier relationships, governing body relationships, regulatory compliance, physical plant management, vendor relationships, zoning and land-use issues, and more.

#### MGMT 642 Air Carrier, Passenger, and Cargo Management

3 Credits

The course provides students with a broad perspective of passenger and cargo air carrier management. Topics include the role of air transportation in global economic development, alternative strategic approaches to route structure and product design, fleet selection, finance, and revenue management. Distribution systems including the role of travel agencies, freight forwarders, global distribution systems, and Internet portals are explored. The regulatory foundation of international aviation, the effects of liberalization and privatization, and emerging global alliances receive attention. The course concludes with a review of the evolving role of governments, airports, and air carriers in protecting the security of passengers and cargo.

#### MGMT 643 Labor Issues in Air Transportation

3 Credits

Current labor issues specific to air transportation and the historical and regulatory aspects of these issues are the theme of this course. Topics include the union movement in aviation, including public policy decisions, judicial rulings, early collective bargaining, and labor legislation. Additional topics emphasized are representation elections, the collective bargaining process, contract administration, and conflict resolution (grievance procedures). The primary focus of the course will be on current issues in labor relations and the effect private and public sector labor/management practices have, and have had, on the aviation industry. The impact of labor/management relations on human resource management will be analyzed.

#### MGMT 644 Graduate Capstone Project, Air Transportation Management

3 Credits

This course provides the student with an opportunity to conduct an investigation into a problem related to an air transportation management topic, thus demonstrating the student's expertise in problem definition and in analysis and solution processes. The course requires the student to demonstrate expertise in the technical aspects of writing. This course is included in the curriculum to provide the student with the opportunity to pursue a project of special interest and to demonstrate problem analysis, knowledge, and skills in their area of study. Prerequisite: GCPP 605 and successful completion of not less than two of the three courses in the Air Transportation Management specialization.

#### **MGMT 646**

#### Structure and Applications of Quantitative Decision Processes for the Technical Manager

3 credits

In this course the student will have opportunity to gain knowledge of

the structure and application of management science processes used in management decision-making. Processes included in this study are quantitative forecasting models, inventory models, models of transportation, product mix, and other applications utilizing linear programming, decision-making with uncertainty and risk, queuing theory, probabilistic modeling and simulation, network models such as PERT and CPM, and will incorporate additional methodologies of decision analysis, including statistical methodologies. Successful completion of college level algebra and statistics is a prerequisite for this course.

#### MGMT 651 Production & Procurement in Aviation Aerospace Industry

3 Credits

In this course the student explores the aspects of production/operations management and the procurement processes necessary to maximize efficiency and effectiveness. This includes an in-depth analysis of production/operations concepts, methods, and techniques from a systems perspective. Areas of emphasis are quality management, MRP II, scheduling, inventory management, purchasing, material management, JIT, and manufacturing strategy. Also discussed are issues such as layout, storage and warehousing decisions, produce-procure decision-making, application of learning curves, and maintenance and reliability issues.

#### MGMT 652 Concepts and Practices of Project Management

3 Credits

In this course the student has the opportunity to learn the techniques and principles related to project

management, following the national standards for project management. The content of this course includes and extends the body of knowledge elements required for completion of the Project Management Professional (PMP®) certification by the project Management Institute.

#### MGMT 653 Labor Issues in an Industrial Environment

3 Credits

In this course, the student conducts a comprehensive study of labor issues that are germane to both the industrial and the aviation environment. The course concentration includes the current issues affecting contemporary labor relations, the evolution of private and public sector bargaining practices, and the contract negotiation process. Specific areas analyzed include the historical evolution of the American union movement, union structure and government, congressional legislation and executive orders, the representative election process, contract administration, grievance procedures, mediation and arbitration, and conflict resolution. The strategic impact the labor movement has had on American industry is analyzed from both the employer and the employee perspective.

#### MGMT 654 Graduate Capstone Project, Aviation/Aerospace Industrial Management

3 Credits

This course provides the student with an opportunity to conduct an investigation into a problem related to an aviation/aerospace industrial management topic, thus demonstrating the student's expertise in problem definition, analysis, and solution processes, and

requires the student to demonstrate expertise in the technical aspects of writing. This course is included in the curriculum to provide the student with the opportunity to pursue a project of special interest and demonstrate problem analysis, knowledge, and skills in their area of study. Prerequisite: GCPP 605 and successful completion of not less than two of the three courses in the Aviation/Aerospace Industrial Management specialization.

#### MGMT 655 Aviation Law and Insurance

3 Credits

In this course, students examine the governmental regulatory functions affecting statutory and administrative law pertaining to aviation. The national and international impact of these laws on aviation policies and operations are studied. Legal aspects of business contracts, negotiable instruments, and commercial codes as they relate to aviation are analyzed. The course concludes with an overview of the principles of insurance and risk applied to aviation.

#### MGMT 661 Physical Security

3 Credits

This course encompasses a study of the physical security of aviation related physical assets and locations, including airports, staging/warehousing facilities, manufacturing facilities, command and control facilities, and related transmission sites.

#### MGMT 662 Information and Systems Security

3 Credits

In this course, students deal with issues related to security of information. Areas emphasized include command and control

networks, information and databases, and networks related to aviation, manufacturing, and transportation-related endeavors.

#### MGMT 663 Current Issues in Aviation/Aerospace Security

3 Credits

In this course, the student addresses the body of knowledge that includes intelligence sources and sharing; legal and ethical constraints; political constraints; profiling, inter- and intra-agency cooperation; control; integration with daily operations; and labor and personnel regulations. The emphasis is on current information, tools and techniques.

#### MGMT 664 Graduate Capstone Project, Aviation/Aerospace Security Management

3 credits

This course provides the student with an opportunity to conduct an investigation into a problem related to an aviation/aerospace industrial management topic, thus demonstrating the student's expertise in problem definition, analysis and solution processes, and requires the student to demonstrate expertise in the technical aspects of writing. This course is included in the curriculum to provide the student with the opportunity to pursue a project of special interest and demonstrate problem analysis, knowledge, and skills in their area of study. Prerequisite: GCPP 605 and successful completion of not less than two of the three courses in the Aviation/Aerospace Security Management specialization.

#### MGMT 671 Entrepreneurship and Leadership

3 Credits

In this course, students explore the

roles and interrelationships of leadership and entrepreneurship in successful enterprises in a global environment. The primary focus is on analyzing the leadership skills and entrepreneurship that enhance organizational success. Topics to be explored are the approaches and models of leadership, entrepreneurship, organization change, implementing an entrepreneurial strategy inside existing organizations, product innovation and technology, and developing new ventures. In addition, students gain insight to the important elements required for a supportive environment needed to sustain the corporate entrepreneurship process. Lastly, the entrepreneurship orientation of organizations for the future is discussed.

#### MGMT 672 Planning and Execution of Strategy

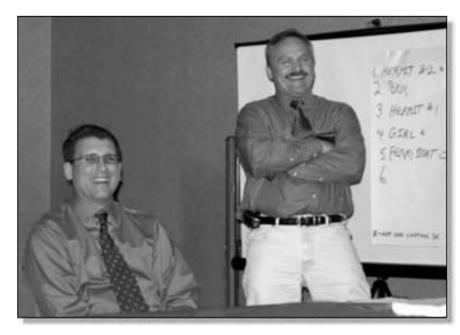
3 Credits

In this course, the student addresses the integration of all management aspects of business with the cultural, ethical, and regulatory environments to form comprehensive, workable strategies for success. Multinational and international factors and differences related to enterprise success are emphasized.

#### MGMT 673 Global Economic Analysis

3 Credits

In this course, students examine the application of economic theory to various contemporary international economic and aviation issues. The course begins with a brief review of basic concepts and progresses to an analytical understanding of the origins of demand and profit. The origins of profit are explored in the cost leadership and the differentiated product models, with the abuses shown in oligopoly and monopoly models. Included in the course is a study of money supply and monetary and fiscal policies. Finally, the course progresses to international trade theory and issues, such as comparative advantage, international airline deregulation, open-skies



programs, national protectionism, and international finance theory and problems, such as the forces behind foreign exchange markets and the U.S. trade deficit.

#### MGMT 674 Graduate Capstone Project, Aviation Enterprises in the Global Environment

3 Credits

This course provides the student with an opportunity to conduct an investigation into a problem related to an aviation enterprise in the global environment topic, thus demonstrating the student's expertise in problem definition, analysis and solution processes, and requires the student to demonstrate expertise in the technical aspects of writing. This course is included in the curriculum to provide the student with the opportunity to pursue a project of special interest and demonstrate problem analysis, knowledge, and skills in their area of study. Prerequisite: GCPP 605 and successful completion of not less than two of the three courses in the Aviation Enterprises in the Global Environment specialization.

#### MGMT 681 Principles & Applications of Logistical Science

3 Credits

This class stresses use of a total cost analysis in the minimization of total costs of logistics activities. Topics will concentrate on understanding the utilities provided by an effective logistics operation and demonstrate how to reduce or eliminate the consumption of resources that do not add to a business' bottom line. Preliminary, during, and posttransaction customer service activities are discussed. Public and private warehouse concepts and financial considerations including identification of specific functions

performed, size, number, internal layout, and location are presented. Inventory management and control procedures are detailed. Inventory topics include just-in-time principles and reasons to and not to build and hold inventories during varying conditions of certainty and uncertainty. Course stresses the differences between strictly domestic and international logistics operations. Functions of international logistics specialist companies are presented. The processes required to achieve procurement of top quality and cost effective materials are presented. The latest trends and traditional means of automating material handling are discussed along with the methodology for deciding when to and not to automate. Modes, companies, regulations, and decision strategies that impact transportation are explained in detail. This is a required course for all students seeking a Master of Science in Management degree with a Management of Integrated Logistics area of specialization.

#### MGMT 682 Concepts of Integrated Logistics

3 Credits

This course details the importance of integrating logistics into all functions of a business from initial conceptualization of the enterprise through its ultimate demise. Students learn the best business practices needed to fully integrate logistics and understand the significant financial advantages that can result from effective integration efforts. Previous research is presented that explains why implementation of best business practices require the integration of each logistics activity, the integration of logistics into all other functions inside the business, and the integration of suppliers and ultimate

customers. The importance of performing a total cost analysis for effective integration is presented. Key principles of data integration are examined. Case studies are presented to enforce an understanding of correct integrated logistics practices. This is a required course for all students seeking a Master of Science in Logistics Management degree. Prerequisite: MGMT 681

#### MGMT 683 Supply Chain Management

3 Credits

This course covers the implementation of supply chain management practices into the modern business and explains the processes required to form an effective and efficient channel of distribution. This class explains how finished products and information should seamlessly move to, from, and between various businesses that have formally or informally agreed to be members of a supply chain. Students will learn best business practices to include the introduction of new members and elimination of nonperforming members. The need for establishment of a planned chain is presented and compared to the most common business practice of creating a channel as the need arises or environmental factors change. This is a required course for all students seeking a Master of Science in Management degree with an Area of Specialization in Management of Integrated Logistics. Prerequisite: MGMT 682.

#### MGMT 684 Graduate Capstone Project, Management of Integrated Logistics

3 Credits

This course provides the student with an opportunity to conduct an investigation into a problem related

to management of integrated logistics, thus demonstrating the student's expertise in problem definition and analysis and solution processes, and requires the student to demonstrate expertise in the technical aspects of writing. This course is included in the curriculum to provide the student with the opportunity to pursue a project of special interest and demonstrate problem analysis, knowledge, and skills in their area of study. Prerequisite: GCPP 605 and successful completion of not less than two of the three courses in the Management of Integrated Logistics specialization.

#### MGMT 690 Graduate Capstone Project

3 Credits

In this course, students are required to write a document on an aviation/aerospace topic that will expose the student to the technical aspects of writing. This course is included in the MBAA/MSM curriculum to provide the student with the opportunity to pursue a project of special interest, but not to the level of a thesis. This is an elective course for those students who may wish the opportunity to research in-depth a topic in consultation with a Project Advisor. Prerequisite: MGMT 522 or GCPP 605.

#### MGMT 696 Graduate Internship in Aviation Business Administration

1-3 Credits

Temporary professional or industrial work appointments are made available to students enrolled in graduate programs at the University. An internship provides graduate students with an opportunity to extend their academic endeavors through the application of the theories and philosophies studied in

the classroom to specific professional activities common to the workplace. They are academic/professional activities coordinated by the University between offering organizations and graduate student. Prior approval of the Graduate Program Coordinator is required.

#### MGMT 699 Special Topics in Business Administration

1-3 Credits

In this course, students elect to perform a special, directed analysis and/or independent study in an area of particular interest. Candidates selecting this elective must prepare a detailed proposal for the desired project and present the proposal to the graduate program chair or department chair for faculty review. Proposals must be submitted at least four weeks prior to the start of the term in which the elective is being taken.

#### MGMT 700 Thesis Research

6 Credits

A written document on an aviation/aerospace topic is supervised throughout its preparation by the student's Thesis Committee. If the document demonstrates the student's mastery of the topic and is of satisfactory quality for publication, it will be submitted.

#### PROJECT MANAGEMENT

#### PMGT 501 Fundamentals of Project Management

3 Credits

In this course provides the student with fundamental techniques and principles related to project management, following the national standards for project management. The content of this

course includes and extends the body of knowledge elements required for completion of the Project Management Professional (PMP®) certification by the project Management Institute. This course encompasses the study of project management, paying particular attention to the nine knowledge areas: Scope, Time, Cost, Risk, Quality, Procurement, Human Resources, Communication and Integration, as they relate to the process areas of Initiation, Planning, Execution, Control, and Closure of projects. Examples and student initiated projects and project simulations are utilized to emphasize the integrated relationships. Project management software is utilized throughout the course, particularly to demonstrate the usefulness of automated calculations, record keeping, and reporting as related to planning and controlling projects. Throughout, the merger of technical skills, general management skills, and project management skills for successful project completion is emphasized. Where applicable, the information delivered in this course is compliant with ISO 9,000, 10,000 series standards and the Project Management Institute generated Project Management Body of Knowledge. Prerequisite: MGMT 631.

#### PMGT 502 Effective Communications for Managing Projects

3 Credits

This course is designed to explore the role of communication in managing projects and to provide a broad survey of the theoretical, organizational, behavioral, and technical aspects of communications. An emphasis is placed on the application of theory to practice, which is intended to

develop students' managerial and strategic communication skills so that they may grasp not only how, but also what, why, when, and by what means managers effectively communicate. Students will have the opportunity to gain an understanding of why good communication skills are important in business, how communication today is affected by technology, why effective communication can be difficult, how communication is used in teams, and what issues exist in overcoming intercultural communication barriers. Special attention is devoted to development and use of project communications plans, Project Management Information Systems (PMIS), and appropriate archival of project information. Prerequisite: PMGT 501

#### PMGT 611 Anatomy of Project Organizations

3 Credits

In this course the student has the opportunity to gain and expand knowledge concerning how organizations carry out work. Included in the course are elements of organizational theory, organizational structure, and organizational planning as applicable to projects. Topics address advantages and disadvantages of organizational structure (functional, matrix, or projectized), locus of power and locus of authority issues. and formal and informal networks. Also included are issues such as conflict resolution, change management, formal and informal work relationships. Prerequisite: **PMGT 501** 

PMGT 612 Leading Projects Across Cultural, Corporate, and International Boundaries 3 Credits

Emerging and evolving economies,

world circumstances, and global competition require that project managers be able to lead and manage project in this challenging arena. Project Managers must operate within environments that contain diverse cultures and projects including multiple corporations crossing international boundaries. Additionally, topics include project portfolio management, Project Management Office, and software tool use involving multiple projects. Sensitive issues surrounding multinational and multicultural environments will be addressed and discussed. Prerequisite: PMGT 501

#### PMGT 613 Assessing and Managing Project Risk

3 Credits

More difficult economic conditions, increasing competition, and exponentially expanding technology greater uncertainty and risk in projects. With these complex challenges come complex opportunities. Uncertainty and associated risks and opportunities become more complex as project span organizational, national, and cultural bounds. In this course the student will investigate the sources or risk, the pervasiveness of risk, analysis of risk, and the planning and control of risk events. Prerequisite: PMGT 501

#### PMGT 614 Planning, Directing, and Controlling Projects

3 Credits

In this course the student will gain increased knowledge and experience in the art and science project management. Increased emphasis will be placed on planning, directing, and controlling projects. Practical exercises using project management software will be used to challenge the student to develop higher levels of project management ability. Exercises

will require critical thinking and problem solving techniques required in complex projects. Exercises that require critical thinking, problem solving, and techniques of using project management software. This course also includes the preparation for the Project Management Capstone, PMGT 690. Prerequisite: PMGT 613

#### PMGT 690 Project Management Capstone 3 Credits

This course is designed to provide the student the opportunity to apply knowledge gained throughout the degree program to a project management related problem. Demonstration of project scope planning, project scheduling, project cost planning, project quality planning, risk assessment planning, and project communications planning are among the skills and knowledge demonstrated. A capstone project may alternatively address a current problem in the student's work place. Prerequisite: PMGT 501, PMGT 502, PMGT 613, PMGT 614.

#### TECHNICAL MANAGEMENT

#### TMGT 501 Computer Skills for a Technical Environment

3 Credits

Graduate-level skills in computers are developed through application to current business-related problems. Computer techniques are used to solve problems and enhance technical communications. Computer techniques are practiced as an efficient method to achieve higher-level analytical and communicative skills. Emphasis is placed on supporting and enhancing technical communications with computer technology. Learning theory and psychology of color and

motion are combined with computer presentation graphics to develop and augment high impact presentations. Successful completion is necessary to proceed in the MSTM program.

#### TMGT 502 Communication Skills in a Technical Environment

3 Credits

Graduate-level skills in technical communications are learned by developing solutions applied to a series of interconnected management science problems. Emphasis is placed on communicating conclusions in concise and persuasive writing and speaking. Written assignments involve reports, business letters, memoranda, and resumes. Successful completion is necessary to proceed in the MSTM program.

#### TMGT 503 Quantitative Methods and Statistics

3 Credits

The integration of graduate-level skills in quantitative management methods is achieved through the development of solutions applied to a series of interconnected management science problems. Computer techniques are also used to solve problems and to communicate the results in a clear and understandable fashion. Emphasis is placed on understanding analytical methodologies, interpreting quantitative results, and communicating conclusions. Descriptive and inferential statistical applications will be explored. Successful completion is necessary to proceed in the MSTM program.

#### TMGT 605 Organizational Theory in a Technical Environment

3 Credits
In this course, students learn how

to effectively use an organization to build a technical management team. Topics emphasized include leadership versus management, conflict between functional management, matrix versus hierarchical organizations, organizational alternatives, and human response in the organization. Additionally, influence and authority in the technical setting, participation, sensitivity to cultural and minority differences, managing technical change and innovation in a large organization, communication in a technical organization, organization culture and tradition, government perspective, and industry perspective are reviewed.

#### TMGT 610 Managing Effective Technical Work Teams

3 Credits

In this course, students learn how to manage work teams in the technical environment. Specific topics include two-way communication and feedback, participative management techniques pertaining to motivation, small-group processes and group decision support systems, attraction and retention of quality personnel, skills in writing employee evaluations, responsibility, authority, accountability, conflict resolution, initiative, creativity, horizontal and vertical communication, personality/temperament, logic versus heuristic/detail versus holistic, management strategies, motivation, recognition, and reward.

#### TMGT 616 Production Operations Management

*3 Credits* In this course, students perform an

in-depth analysis of production/ operations concepts, methods, and techniques from a systems perspective.

#### TMGT 621 Regulations, Ethics, and the Legal System

3 Credits

This course emphasizes understanding the complex regulatory and legal setting surrounding management. The federal acquisition regulations and how they affect all projects, such as legal responsibility and accountability, ethical considerations within and external to the organization, the internal environment and how it may affect projects are discussed.

#### TMGT 625 Marketing in the Technical Environment

3 Credits

This course explores effective use of communication to describe and/or market projects, programs, or products to a hostile or friendly audience. Topics include understanding products and the marketplace, collecting data to accurately reflect the situation, the use of accurate, clear, and meaningful presentations, highlighting the positive, reporting the negative, internal versus external presentations, dealing with the media, video and computer techniques, analyzing your audience, communication level, and public relations. Students are required to develop a marketing plan and, working as a team, conduct a marketing research project based on the needs of their organization.

#### TMGT 630 Technical Management Information Systems

3 Credits

This course provides an "end-user"

orientation to Management Information Systems with both managerial and technical components. The course centers on developing managerial skills in using information systems to conduct daily operations, to plan business strategies, and to solve business problems. A systems approach to planning, scheduling, and controlling provides the student with effective decision making resources. In addition, the course provides hands-on experience with laptop computer exercises in computerized MIS to develop the information management proficiency required by the corporate environment. The emphasis of this course is on data resource management, electronic commerce, enterprise collaboration systems, telecommunications (internet, intranet, extranet and client/server systems), decision support systems, executive support systems, and security, control, and ethical issues.

#### TMGT 635 Financial and Managerial Accounting and Control for Technical Managers

3 Credits

This course focuses on financial control procedures for a systems approach to program management. Cost elements in manufacturing, research, and development and in logistic and support services are explored. Included is the introduction of fixed and variable costs, computing and using overhead, process and job order costing methods, preparation of income statements in the contribution format, ratio analysis, profit planning and its relationship to cost, using spreadsheets for budget and overhead analysis, pricing, capital budgeting and investment decisions.

#### TMGT 641 Project Management: Concepts and Practices

3 Credits

This course encompasses the study of project management, paying particular attention to the nine knowledge areas of scope, time, cost, risk, quality, procurement, human resources, communication, and integration as they relate to the process areas of initiation, planning, execution, control, and closure of projects. Examples and student-initiated projects and project simulations are used to emphasize the integrated relationships. Project management software is used throughout the course, particularly to demonstrate the usefulness of automated calculations, record keeping, and reporting as related to planning and controlling projects. Throughout, the merger of technical skills, general management skills, and project management skills for the successful project is emphasized. Where applicable, the information delivered in this course is compliant with ISO 9,000, 10,000 series standards and the Project Management Institute's Project Management Body of Knowledge.

#### TMGT 651 Quality Management and Quality Control

3 Credits

This course centers on instilling quality concepts in a project. Topics include continuous improvement, quality management, designing for and cost of quality, organizing for QM, alternative approaches to quality, understanding the corporate culture, developing the quality plan, implementing QM, introducing the concept, work meetings and project teams, informing, motivating, recording, using technology, key

approaches and when to use them, reward and recognition, follow-up, evaluation, and feedback.

#### TMGT 660 Project Development Techniques

2 Credits

A study of current scientific research methods that includes techniques of problem identification, hypothesis formulation, literature search strategies of libraries and online databases, design and use of datagathering instruments, formulation of a research model and plan, and appropriate statistical data analysis. The GCP/TMCP Guidelines format and American Psychological Association style will be introduced and followed. A formal Technical Management Capstone Project proposal will be developed and presented by each student as a basic course requirement. Prerequisite: MGMT 646.

#### TMGT 660L Technical Management Capstone Project

1 Credit

This course produces a written document on a technical management topic that exposes the graduate student to the technical aspects of writing. This course is included in the MSTM curriculum to provide the graduate student with the opportunity to pursue a project of special interest, but not to the level of a thesis. Prerequisite: TMGT 660.

#### **TESTIMONIAL**



am a proud graduate of Embry-Riddle's Bachelor of Science in Professional Aeronautics program. I started my degree through distance learning and then completed it with a combination of on-line classes and attending classes on campus. Embry-Riddle is the premier aviation school in the world and offers a top-notch education. The curriculum was very challenging and provided a well-rounded degree plan. The instructors were very knowledgeable in their field and provided plenty of support and a quality education. The staff offered superb service with registration, class requirements, and VA benefits. Finally, you cannot beat the education you will receive from Embry-Riddle. There are many private and public universities that do not offer the quality that Embry-Riddle does; especially for the price.

Tammy L. van der Leest Bachelor of Science Professional Aeronautics

## TUITION, FEES, & FINANCIAL INFORMATION

#### TUITION AND FEES

Payment in full is required at time of registration.

#### UNDERGRADUATE TUITION

\$184 - \$955/credit hour

#### **GRADUATE TUITION**

\$307 - \$955/credit hour

#### **USER FEES**

Application fee (nonrefundable)	\$ 50
International student application fee	\$ 50
Late registration fee	\$ 25
Transcript fee (per transcript)	\$ 5
Commencement fee (nonrefundable)	\$ 40
Duplicate diploma	\$ 15
Previously earned diploma	\$ 40
MSTM transfer credit fee (per semester hour)	\$ 50
Extended Campus Co-op (per 3 credits)	\$184

# UNIVERSITY WITHDRAWAL/REFUND SCHEDULE

First week	100%
After first week	0%

<sup>\*</sup>Unless specified by M.O.U., contract, or state regulations.

Students who withdraw from a course are responsible for the tuition. Request for refunds due to circumstances clearly beyond the student's control, such as illness, required military service, etc., must be in writing and accompanied by appropriate documentation such as a physician's statement, military orders, etc.

#### Nonmilitary students enrolled in Georgia, Indiana, Kentucky, Mississippi and North Dakota

Refund tables available at the local centers.

#### California and Oregon Students Refund Policy

A full-pay student has the right to a full refund of all charges if he/she cancels this agreement prior to or on the first day of instruction. In addition, the student may withdraw from a course after instruction has started and receive a prorated refund for the unused portion of the tuition and other refundable charges if the student has completed 60% or less of the instruction. A student using Military Tuition Assistance is entitled to a full refund during the drop/add period only.

Days Used	Refund Percentage
7 days	100%
14 days	80%
21 days	60%
28 days	40%
35 days	20%
36 days +	No Refund

## Department of Education Withdrawal/Refunds Policy

Students receiving financial aid who withdraw will be subject to the return-of-funds policies specified by the U.S. Department of Education. Refunds of federal aid for students who officially withdraw on or before the 60% point of the enrollment period will be determined by calculating the amounts due under the Federal Return of Title IV Funds policy.

#### FINANCIAL ASSISTANCE

Embry-Riddle participates in a number of federal, state, and University-administered programs that help students and their families meet educational costs.

Embry-Riddle believes the primary responsibility for financing education lies with the student and the student's family. Therefore, the student should apply for financial aid early, save money, look for ways to reduce costs, and become aware of specific program requirements by reading all financial aid publications. Financial aid awards are meant to supplement what the student and family can contribute toward costs and rarely cover all educational expenses. All financial assistance will be limited to the student's individual remaining need or Embry-Riddle's established cost of attendance.

A complete description of financial aid assistance programs and optional financing programs available to students and their parents is published annually by the Financial Aid Office. Students should consult this publication for information about eligibility criteria, application procedures, and deadline dates. Published information is available on the web under the Financial Aid section (www.embryriddle.edu). Students who expect to need help in meeting their financial obligations are encouraged to seek such assistance through one or more of the programs available for this purpose.

#### **TUITION, FEES, & FINANCIAL INFORMATION**

#### **ELGIBILITY REQUIREMENTS**

To be considered eligible to apply for most financial programs students must:

- 1. Be U.S. citizens or eligible noncitizens.
- 2. Be enrolled or accepted for enrollment as at least a half-time student in a degree program.
- Be making satisfactory academic progress toward a degree.
- 4. Be registered with Selective Service, if required to do so.
- 5. Establish financial need.
- Not be in default on a loan or owe a repayment on a previous financial aid award received at any institution.

#### THE APPLICATION PROCESS

After applying for admission to the University, students may complete the Free Application for Federal Student Aid (FAFSA) on the web at www.fafsa.ed.gov. The FAFSA must be completed each year. Students are mailed a federal PIN by the Department of Education to renew their aid application each year through the Internet at www.fafsa.ed.gov. Returning students may also request application materials from the Financial Aid Office. Students attending the Extended Campus may request their financial aid material through the Center, the Financial Aid Office, or through the Internet at www.fafsa.ed.gov.

#### EXTENDED PAYMENTS

Students who use financial assistance to pay their University charges may have the payment date extended for the amount of their award if their funds are not ready to be disbursed by the date payment is due. This is called a payment extension. Any difference between the total charges and the amount of the extension granted must be paid according to the University's payment procedure. To qualify for a payment extension, students must have applied for financial assistance and must have received final approval of their award.

#### **Deferred Tuition Payments**

Those students using Veteran's Education Benefits who wish to defer payment on a portion of their tuition may request to pay only one-third at the time of registration. The remaining balance of two-thirds is due by the end of the term. A deferred loan agreement must be signed by the student. This procedure assures the student that the University will await payment until the student receives the DVA benefit or the end of the term, whichever comes first. Payment for the cost of books, course materials, and shipping fees may *not* be deferred. Students are encouraged to contact the Center or Distance Learning Enrollment Office for details regarding costs and payments.

#### Credit Cards

MasterCard, Visa, Discover, or American Express may be used to pay for tuition, fees, and books.

#### Programs Available

The major categories of financial assistance programs include grants, scholarships, and loans. Loans from state and federal government sources or from private lenders must be repaid; the interest rate, however, is usually low and the repayment period is extended. Grants and scholarships do not have to be repaid. Most of these programs are based on the student's financial need.



# TUITION, FEES, & FINANCIAL INFORMATION

#### Grants

Federal

■ Federal Pell Grant

State and Institutional

- Arizona Leveraging Educational Assistance Partnership (LEAP)
- Arizona Private Postsecondary Financial Assistance Program (PFAP)
- Florida Student Assistance Grant
- Florida Resident Access Grant
- Florida Bright Futures Scholarship Program
- Grants from other states

#### Loans

- Federal Stafford Loan
- Federal Parent Loan for Undergraduate Students
- Other private sector educational loans
- Other elective educational loans

#### **Scholarships**

■ Leon E. Flancher Endowed Scholarship
Extended Campus students are eligible to
apply for the Leon E. Flancher Endowed
Scholarship. The Leon E. Flancher Endowed
Scholarship Fund provides a limited number
of scholarships for Extended Campus
students. These are awarded primarily on the
basis of economic need.

# OTHER FINANCIAL ASSISTANCE PROGRAMS

#### Veterans' Education Benefits

Embry-Riddle degree programs are approved by the appropriate State Department of Veterans' Affairs (State Approving Agency) for enrollment of persons eligible to receive education benefits from the Department of Veterans' Affairs (DVA).

Students must be pursuing a degree in a specific program to be eligible to receive benefits. Admission procedures for veterans and other eligible persons are the same as those for other students. Students who do not satisfy all requirements for full admission may be certified for two terms; however, they may be required to repay the DVA for some or all benefits received if they do not achieve full admission status during that time.

Title 38, United States Code, sections 3474 and 3524, requires that education assistance to veterans and other

eligible persons be discontinued when the student ceases to make satisfactory progress toward completion of the training objective. Accordingly, benefits will be interrupted for undergraduate students who remain on academic probation beyond two consecutive periods of 12 credit hours and for graduate students who are on academic warning and fail to earn a 3.00 CGPA within the next 12 hours of graduate work or are otherwise subject to dismissal. The DVA will be appropriately notified of the unsatisfactory progress. The student must submit a written request to reinstate education benefits. The request must include proof of academic counseling and the conditions for continued enrollment or reentrance. The DVA will determine eligibility for reinstatement of benefits, based in part on the school's recommendations.

Veterans' progress will be measured according to University standards as published in the catalog, and the rules and regulations of the DVA apply. The criteria used to evaluate progress are subject to change. Application and interpretation of the criteria are solely at the discretion of Embry-Riddle. Students are responsible for notifying the Veterans' Certifying Official of any change in their enrollment or change in personal information affecting their eligibility. Students also must remain in compliance with University and Department of Veterans' Affairs requirements. Students may receive education benefits only for courses that are required for their designated degree program. Students who receive DVA benefits are subject to strict academic regulations and should be aware of how auditing courses, repeating a course, changing degree programs or enrollment status, and other actions may affect their eligibility to receive benefits.

For further information concerning approved programs and the application process, eligible persons should contact the Veterans' Certifying Official at the Extended Campus center they plan to attend. Students enrolled through the Department of Distance Learning should contact the University Veterans' Affairs Office in Daytona Beach, Florida.

For additional information concerning Veterans Education Benefits administered by the Department of Veterans Affairs contact:

> University Veterans Affairs Office Embry-Riddle Aeronautical University 600 S. Clyde Morris Blvd. Daytona Beach, FL 32114-3900 Telephone: (386) 226-6350

# CLASSROOM REGULATIONS & PROCEDURES

#### CLASS SCHEDULES

Term dates vary at each Extended Campus location. The start date of the term is used in accordance with the following schedule for entry on the official transcript. Consult the Center Director of Operations for the class schedules at your center, or the Distance Learning Enrollment Office, or the office of Student Services. The University reserves the right to make necessary and appropriate adjustments to the published schedule to include cancellation or rescheduling of any class. You may also view term dates for your center online at www.ec.erau.edu/cce/faculty/04-05term.pdf.

- (S1) January-Spring 1
- (S2) February-Spring 2
- (S3) March-Spring 3
- (U1) April-Summer 1
- (U2) May-Summer 2
- (U3) June-Summer 3
- (F1) July-Fall 1
- (F2) August-Fall 2
- (F3) September-Fall 3
- (W1) October-Winter 1
- (W2) November-Winter 2
- (W3) December-Winter 3

#### CLASSROOM FACILITIES

Classes are held in a variety of locations on and near the installations hosting Embry-Riddle centers. You may find that classes meet in the education center, on the flight line, in squadron meeting rooms, in chapels, at local airports, in business offices, etc. Be sure to ask your Center Director of Operations where your class meets. The classroom location will also be on your class syllabus, which you should receive at the time of registration.

#### CLASS ATTENDANCE

Because regular attendance and punctuality are expected in all courses, attendance may be included in the grading criteria of an individual class.

# FLEXIBLE CLASSROOM INSTRUCTION

Class times vary according to local students' needs. At many teaching locations, classes meet once a week in the evenings; however, other scheduling arrangements, such as meeting weekends or twice a week, are not uncommon. Check your course registration form for class meeting times.

To enhance learning in the regular classroom, some courses are offered through a blend of classroom and online course delivery. While the majority of the instruction occurs in the classroom, a portion of the course takes place online through activities such as guided discussion, group projects, and online assignments and more. Students have expressed high praise for the flexibility, reflection, and interaction that blended instruction affords. Blended courses will be indicated as such on the center course schedule.

#### **CLASSROOM RULES**

For classes held on a military installation and at most corporate locations, the general rules are no eating, drinking, or tobacco use in the classroom. Please abide by posted rules in the classroom facilities.

#### **CLASSROOM SECURITY**

Classroom security is an important issue. Because classroom security conditions vary from location to location, students should be aware of their surroundings at all times. Please check with your local Center Director of Operations, who will be able to inform you of any known security issues in the area. All security or safety issues and/or incidents should be reported to your Center Director of Operations. Your security and education are very important to Embry-Riddle.

#### TEXTBOOK PURCHASE

At many centers, textbooks are purchased at the time of registration. Several centers use a telephone-ordering system with a national book service. Please consult your Center Director of Operations or Distance Learning Enrollment Office advisor for details.

Students may sell their used books to other students who will be taking the same class if it uses the same text. The center does not participate in this resale; it is a student-to-student transaction. There is also a web site for used texts at www.ec.erau.edu/apps/booksales/index.cfm.

#### **IDENTIFICATION CARDS**

Student identification cards are available through the website at www.erau.edu/db/eaglecard/index.html. These identification cards may be required to use the library facilities of other universities and may be used for student discounts wherever a student identification card is honored.

# **ACADEMIC REGULATIONS & PROCEDURES**

#### ACADEMIC ADVISEMENT

The Center Director of Operations is the official Academic Advisor for students attending a center. Applicants attending through the Distance Learning Enrollment office are assigned an advisor at the time of application.

The Academic Advisor is responsible for orientation, which includes advising students of the University regulations and procedures. These regulations and procedures include:

- -Choosing an academic program that meets students' educational goals
- -Credit transfer arrangements for incoming students
- -Prior learning assessment
- -Course prerequisite requirements
- -Enrollment, textbooks, financial assistance, and payment requirements
- -Class attendance
- -General student support and services

Students are informed in their letters of acceptance that it is their responsibility to know the rules and regulations by reading the Extended Campus catalog, which is available in hard copy form or electronically.

While the Center Director of Operations bears primary responsibility for academic advisement at Extended Campus centers, the Center Faculty Chair is also available during scheduled office hours to assist with students' academic needs. The Distance Learning Enrollment Office assigns advisors for students pursuing their degree online. Servicemembers Opportunity Colleges (SOC) students no longer located at a center should contact the Office of Student Services at 1.866.393.9046.

#### STUDENT RESPONSIBILITIES

All Embry-Riddle Aeronautical University students are responsible for knowing all academic regulations and procedures required for continued attendance at the University. Academic regulations and procedures are presented in University publications. A student who requires clarification of any policy or regulation should seek help from his/her academic advisor or the office of Student Services. University regulations will not be waived because a student pleads ignorance of established

policies and procedures. The University reserves the right to change curricula and academic regulations and procedures without notice or obligation.

ERAU Student Email Accounts: ERAU issues an email account to each student of the Extended Campus. Please check your ERAU email frequently, as the University will use this account as a means of sending official notification on University matters. Although the software used to send some of these communications automatically includes an "unsubscribe" link at the bottom of each message, do not unsubscribe since this will hinder the process of the University providing you with important information. Upon registration for courses, students receive a letter informing them of their email address and password. Your ERAU email account will remain active up to 2 years after your last ERAU course. For your convenience, you may set up your account to forward messages to another email address you already use. For instructions on setting up your email account, see http://it.erau.edu/Help/webaccess.htm.

#### REGISTRATION

Students are required to register for each term of enrollment. At all center locations, students are also allowed to register online if the student meets the required criteria. Registration must be completed and payment of all tuition deposits and fees must be made according to instructions published by the office of Student Services. Students are not officially enrolled until they complete all phases of registration, including financial requirements. The Center Director of Operations or Student Services may restrict the enrollment of students who have outstanding incomplete or history of incompletes. ERAU undergraduate students who are within two courses of completing their bachelor's degree may enroll in graduate courses.

# UNDERGRADUATE ENROLLMENT IN GRADUATE COURSES

During their senior year, Embry-Riddle undergraduate students may elect to take selected Embry-Riddle graduate courses, normally 500 level, for credit toward their graduate degree. Extended Campus students must be within two courses of completing the requirements for the bachelor's degree.

#### **ACADEMIC REGULATIONS & PROCEDURES**

#### UNIT OF CREDIT

Semester credits are used throughout the University system. Transferred quarter hours will be converted to semester credit hours on the following basis: A quarter hour equals two-thirds of a semester hour.

#### **COURSE LOAD**

Students enrolled in Extended Campus courses are given either part-time or full-time status term by term.

A part-time student is defined as any student taking less than 6 credit hours per term. A full-time student is defined as any student taking at least 6 credit hours per term.

Students are allowed to take no more than 12 credit hours in any term. Overlapping terms are included in the 12 credit hour rule.

A student who's cumulative GPA is 3.00 or higher may enroll for an overload of 3 credit hours with advance approval from the Center Faculty Chair. Requests for overloads in excess of 3 credits must be approved by the Dean of Academics, College of Career Education.

A student's enrollment may be restricted when deemed in the best interest of the student.

#### **CLASSIFICATION OF STUDENTS**

Students are classified at the end of each term based on the number of credit hours earned in accordance with the following schedule:

Freshman fewer than 28 hours

Sophomore 28-57 hours Junior 58-87 hours Senior 88 hours or more

#### REPEATING A COURSE

#### Undergraduate

A student may repeat any University course. The grade for each attempt will appear on the student's academic transcript. In determining the student's CGPA, the grade for subsequent attempts at a course replaces the previous grade a maximum of two times.

#### Graduate

Students may petition to repeat one course in which a grade of less than a B was earned for the purpose of improving their grade point average. Both grades earned appear on the transcript, but only the replacement grade is included in the calculation of the grade point average.

#### DROPPING A COURSE

Students may drop a course, with no notation of course enrollment on their transcripts, during the drop period only. Due to the compressed term schedules at the Extended Campus, the drop period extends through the first week of each term.

#### WITHDRAWAL FROM A COURSE (W)

The authorized withdrawal period extends to the middle of the term, unless otherwise established by any contract or memorandum of understanding/agreement currently in effect. Students may withdraw and receive a "W" grade up to the middle of the term. Students attempting to withdraw from a course after the middle of the term must provide a written petition along with third-party documentation explaining their extenuating circumstances, such as military assignment, medical emergency, etc. If a student fails to complete the formal withdrawal process during the allowed withdrawal period, a grade of "F" will be assigned for the course. Students are not permitted to drop or withdraw from a course while a charge of academic dishonesty is pending.

## AUDITING A COURSE (AU)

Because students audit a course solely to enhance their knowledge, academic credit is not granted toward degree requirements for audited courses. Students may change their registration from audit to credit during the add period only. They may change from credit to audit until the last day of the withdrawal period. When a student auditing a course fails to maintain satisfactory attendance, as determined by the instructor, a grade of "W" will be assigned.

# **ACADEMIC REGULATIONS & PROCEDURES**

#### INCOMPLETE GRADES (I)

Students who are unable to complete course requirements due to extenuating circumstances beyond their control may complete and submit a written request for an incomplete grade. An incomplete grade must be made up no later than three months after the end of the term in which the course was taken. The instructor may require a student to complete the course requirements earlier than three months following the end of the term. If the student fails to complete the course and government tuition assistance (TA) funding was used, the government will determine if the funds expended must be repaid by the student. If Department of Veterans' Affairs (DVA) funds were used, similar restitution of Veterans Educational Benefits may have to be made to the Department of Veterans' Affairs (DVA) if a course is not completed. Students not completing their courses within the prescribed time limit will receive a failing grade (F) in the course. Remember, it is the student's responsibility to request an incomplete grade.

# GRADE POINT AVERAGES (GPA, CGPA)

#### Undergraduate

A term grade point average (GPA) and cumulative grade point average (CGPA) are computed for each student after every term. The GPA is calculated by dividing the number of grade points earned during the term by the number of hours attempted in that period. The CGPA is determined by dividing the total number of grade points by the total number of hours attempted at the University. Grade points and hours attempted are accrued in courses graded A, B, C, D, and F only for undergraduate students.

#### Graduate

A term grade point average (GPA) and cumulative grade point average (CGPA) are computed for each student after every term. The GPA is calculated by dividing the number of grade points earned during the term by the number of hours attempted in that period. The CGPA is determined by dividing the total number of grade points by the total number of hours attempted at the University. Grade points and hours attempted are accrued in courses graded A, B, C, F, and WF only.

For graduate students, the following grades are issued by the graduate faculty: A, B, C, F, and Incomplete. The GPA is computed each semester on the 4 point scale: A = 4.0, B=3.0, etc. The Graduate Capstone Project (GCP), is graded on a pass/fail basis and is not calculated into the GPA, unless the student receives a failing grade for the course. A graduate student must maintain a 3.0 GPA to graduate. See current catalog for full details.

#### COURSE EQUIVALENCY CHALLENGE EXAMS

Students who believe they possess sufficient knowledge of an Embry-Riddle course and who have not previously failed, taken, or are currently enrolled in the particular course may apply to take the course equivalency examination for a maximum of 15 semester credit hours. Students may request to take a course equivalency challenge exam at anytime during their Embry-Riddle career. Only undergraduate students who have matriculated are eligible for challenge examinations.

A nonrefundable fee is charged for administering each equivalency exam. Because students may take a course equivalency exam only once for each course, those failing a course equivalency examination must enroll in and complete the course to receive credit.

#### DEAN'S LIST AND HONOR ROLL

Students who demonstrate academic excellence are recognized by being named to the Dean's List or Honor Roll and are notified in writing by the office of Student Services. Students who earn an overall cumulative GPA of 3.50-4.0 after a minimum of 12 consecutive credit hours of coursework will be named to the Dean's List. Students who earn a cumulative GPA of 3.20-3.49 after a minimum of 12 consecutive credit hours of coursework will be named to the Honor Roll. Grades for courses attempted during terms involved in defining each 12 consecutive credit-hour block are used in calculating the cumulative GPA. A student receiving a D or F grade in the 12 credithour period will not be eligible for the Dean's List or Honor Roll regardless of the cumulative GPA. Once on the Dean's List or Honor Roll, students must complete a minimum additional block of 12 Embry-Riddle credit hours before they are again eligible for recognition.

# ACADEMIC WARNING, PROBATION, SUSPENSION, AND DISMISSAL

Undergraduate

An Extended Campus student whose cumulative GPA falls below 2.0 for 12 consecutive credit hours of coursework will be placed on academic warning. If the cumulative GPA remains below 2.0 after an additional 12 credit hours of academic work, the student will be placed on academic probation. A student whose cumulative GPA remains below 2.0 for a third consecutive period of 12 credit hours, or whose cumulative GPA falls below 1.0 for any consecutive 12 credit hours of coursework, will be suspended from the University unless the student maintains a term GPA greater than 2.0.

When a change of grade or the conversion of the grade "I" changes a student's academic status, the previous academic status of warning, probation, or suspension is removed and does not become part of the student's permanent record.

For students who have been academically suspended or dismissed from the University, a written petition for readmission must accompany the application for admission and fees. Suspended students are eligible to reapply for admission after 12 calendar months, following the suspension, or after completing a minimum of 15 semester hours of academic credit with a CGPA of 2.50 on a 4.0 scale or higher from an accredited institution. The dismissing campus renders the decision for readmission.

#### ACADEMIC WARNING AND DISMISSAL

Graduate

Warning – Students on full-status whose cumulative grade point average (CGPA) falls below 3.0 are placed on academic warning. Students on academic warning must raise their cumulative grade point average (CGPA) to 3.0 within the next 12 hours of graduate work.

**Dismissal** – Students will be dismissed from their graduate program whenever any of the following conditions occur: 1) Student is on conditional status and fails to satisfy the conditions of his/her admission; 2) Student earns less than a B in three graduate courses; 3) Student earns an F in any two graduate courses; 4) Student is on academic warning and fails to earn a 3.0 CGPA within the next 12 hours of graduate work; 5) Student earns less than a 2.5 cumulative grade point average.

Students may appeal their first academic dismissal from the University by submitting a petition in writing detailing the existence of any exceptional mitigating circumstances to the office of Student Services within 30 days of the receipt of the dismissal notice.

Students whose academic dismissal is final will not be readmitted to the University for two years. A written petition for readmission must accompany the application for admission and fees. The dismissing campus renders the decision for readmission. Unless readmitted to the University, such students will not be permitted to take any further graduate courses with the University.

#### SUSPENSION AND DISMISSAL FOR CAUSE

The University reserves the right to suspend or dismiss a student at any time and without further reason, if the student exhibits the following undesirable conduct:

- 1. Actions that pose a risk to the health, safety, or property of members of the University community, including, but not limited to, other students, faculty, staff, administrative officers, or the student himself/herself.
- 2. Conduct that disrupts the educational process of the University.
- 3. Any other just cause.

#### CHANGE OF DEGREE PROGRAM

Students may apply to change their degree program if they meet academic qualifications. When a student elects to change degree program, area of concentration, or major within a degree program, the requirements of the catalog in effect at the time the request was initiated apply. Students considering such changes should contact their Center Director of Operations, the Distance Learning Enrollment Office, or the office of Student Services to determine how they will be affected.

# TRANSFER BETWEEN GRADUATE DEGREE PROGRAMS

Credit may be received for certain graduate courses taken as nondegree graduate work or as part of another (complete or noncompleted) Embry-Riddle graduate program. When transferring from one Embry-Riddle graduate program to another, this credit may include prior work on a GCP or thesis.

# ADEMIC REGULATIONS

# **ACADEMIC REGULATIONS & PROCEDURES**

In order to satisfy a graduate degree program requirement, the academic work for which such credit is sought must be determined to be specifically relevant to the applicant's graduate degree program at Embry-Riddle. The content of the applicable course or other program should be used to determine the nature of the credit to be applied to the student's degree requirement.

#### TWO DEGREES OF THE SAME RANK

To earn a second baccalaureate degree, students must complete a minimum of 30 credit hours of coursework over and above that required for the declared primary degree. At least 60 credit hours must be completed in residence at the University and at least 20 of the 30 additional credit hours must be 300-400 level courses. To earn a second associate degree, students must complete at least 15 credit hours of coursework over and above that required for the primary degree. At least 30 credit hours must be completed in residence.

#### ADDITIONAL GRADUATE DEGREES

A graduate student is allowed to apply up to 12 applicable credit hours from one graduate degree program to meet the requirements of another graduate degree program. In order to be awarded a second graduate degree, the student must satisfy all the requirements of the degree sought.

#### CONTINUOUS ENROLLMENT

Students remain in continuous student status unless they:

- 1. Enroll at another institution without advance written approval. Once admitted to the University as degree candidates, students are expected to complete all work to be applied toward their degree with the University unless advance written authorization is granted.
- 2. Fail to enroll in at least one course at Embry-Riddle in any two-calendar-year period.
- 3. Have been suspended or dismissed from the University.

Students failing to maintain continuous enrollment for any reason are required to reapply for admission under the catalog in effect at that time.

#### CATALOG APPLICABILITY

The catalog in effect at the time of a student's initial matriculation remains applicable as long as the student remains in the original degree program, major, or area of concentration.

Students enrolled through an active-duty military degree completion program or Service Members Opportunity College are under the catalog upon which the applicant's evaluation and letter of acceptance were based.

If a student does not maintain continuous enrollment at the University, the student must apply for readmission. The provisions of the catalog in effect at the time of readmission then become applicable to the student. Curricular requirements stated in the applicable catalog will not be affected by subsequently published addenda to that catalog or by later catalogs unless the student elects to graduate under the provisions of a later catalog or addendum. Students electing to graduate under the provisions of a later catalog or addendum must meet all requirements (admission, transfer, graduation, and so on) contained in that catalog or addendum.

#### TRANSCRIPT REQUESTS

To order an official transcript online, you will need your Colleague ID and PIN once you enter the ERAU Online site. If you have not attended ERAU since 1998, you may not have this information and may access information at <a href="http://www.erau.edu/ec/wwc/ec-forms.html">http://www.erau.edu/ec/wwc/ec-forms.html</a> on how to obtain an official transcript by other means. Transcripts will be released as long as students have met their financial obligations to the University. A signed request for an academic transcript accompanied by a fee may be submitted by the student to:

ERAU, Extended Campus Office of Student Services 600 S. Clyde Morris Blvd. Daytona Beach, FL 32114

Active students may request transcripts online through the ERAU Online Student Services Portal at http://erau.blackboard.com. To access portal services, you will need a username and password. Inactive students who do not currently have this information may follow the procedures at this site to acquire that information.

#### PRIVACY OF STUDENT RECORDS

The University respects the rights and privacy of students in accordance with the Family Educational Rights and Privacy Act (FERPA). The University may disclose certain items of directory information without the consent of the student, unless the student submits a written nondisclosure request. Students are required to file requests for nondisclosure on an annual basis. Directory information consists of student name, address, email address, telephone number, date and place of birth, major fields of study, dates of attendance, degrees and awards received, most recent previous school attended, and photograph.

The University shall obtain written consent from students before disclosing any personally identifiable information from their education records with the exception of the directory information. The receipt of a written request to release an education record via FAX satisfies this requirement. Such written consent must specify:

- a. The records to be released.
- b. The purpose of the disclosure.
- c. Identify the party or class of parties to whom disclosure may be made and their address.
- d. When transcripts are to be sent by fax, the written request must contain the telephone fax number where the transcript is to be sent. Generally, transcripts should be faxed only if urgency exists. A faxed transcript may be considered official by the recipient, subject to their policies, security measures, and validation procedures. In addition to the faxed transcript, an official validated transcript will be mailed directly to the recipient.
- e. Must be signed and dated by the student or former student.

The law authorizes students and former students the right to inspect and review information contained in their education records. The student must submit a written request to the Student Services office. The Student Services office must make the records available for inspection and review within 45 days from the request. FERPA allows disclosure of educational records or components thereof under certain conditions. Students desiring additional information regarding FERPA may contact the office of Student Services.

#### **GRADING SYSTEM**

#### Undergraduate

The following indicators, used on grade reports and transcripts, signify the quality of a student's academic performance.

Letter	Student	<b>Grade Points</b>
Grade	Performance	Credit Hour
A	Superior	4
В	Above Average	3
C	Average	2
D	Below Average	1
F	Failure	0
WF	Withdrawal from the University	ity-Failing 0
W	Withdrawal from a course	N/A
AU	Audit	N/A
I	Passing but incomplete	N/A
P	Passing grade (credit)	N/A
S	Satisfactory (noncredit)	N/A
T	Transfer credit	N/A
N	No grade submitted by instru	ictor N/A
X	Credit by means other than c	ourse-
	equivalency exam	N/A
XP	Credit by course-equivalency	exam N/A

#### Graduate

The following indicators are used on grade reports and transcripts.

Letter	Student	Grade Points
Grade	Performance	Credit Hour
A	Excellent	4
В	Satisfactory	3
C	Passing	2
F	Failure	0
WF	Withdrawal from the University	ity-Failing 0
W	Withdrawal from a course	N/A
AU	Audit	N/A
I	Passing but incomplete	N/A
N	No grade submitted by instru	ctor N/A
P	Passing grade (credit)	N/A
IP	In Progress	N/A
S	Satisfactory (noncredit)	N/A
T	Transfer credit	N/A

# GRADUATE CAPSTONE PROJECT GRADING

A final grade of P or F is awarded upon completion of the Graduate Capstone Project. If a student is making

## **GRADUATION**

progress, a grade of IP is awarded at the end of each term. If the student has not made progress, a grade of F will be issued and will result in a change of IP to F for the original three hours, and from IP to N for all remaining credits. Students who do not complete their Graduate Capstone Project within the number of credit hours required by their degree program are normally required to register for one credit hour for every subsequent term.

#### **GRADE REPORTS**

Final grades are issued at the end of each term. Students have the capability of accessing their grades immediately after they are posted, via ERAU Online Services.

The University is prohibited from releasing grade information without the express written authorization of the student. Such authorization must be granted each term because blanket authorizations are prohibited by law.

#### **GRADUATION REQUIREMENTS**

For undergraduate degree completion, at least 25 percent of semester credit hours must be earned through ERAU instruction.

Graduate students are required to complete all graduate course work with ERAU with a maximum of 12 credit hours of transfer work.

Students pursuing any undergraduate degree must earn a minimum cumulative grade point average (CGPA) of 2.00 for all work completed within the degree program at the University. Students pursuing any graduate degree must earn a minimum cumulative grade point average (CGPA) of 3.00 for all work completed within the degree program at the University.

Students must complete the general graduation requirements as prescribed by the University, as well as all degree requirements specified in the degree being pursued. Students must initiate an application for graduation through the center or Distance Learning Enrollment Office or the office of Student Services.

#### **GRADUATION HONORS**

Undergraduate

Graduation honors are awarded only to students completing a baccalaureate program and recognize excellent performance throughout the student's academic career. The level of graduation honors will be based on the cumulative grade point average for all courses taken at

Embry-Riddle and those courses transferred from other institutions that are directly applicable to the student's degree program. The honors level will appear on the student's academic transcript with the degree information.

Graduation honors (baccalaureate only) will be awarded in accordance with the following criteria:

Honors Level	CGPA
Summa Cum Laude	3.90-4.00
Magna Cum Laude	3.70-3.89
Cum Laude	3.50-3.69

#### Graduate

Students who have completed a graduate degree program and who have excelled academically throughout their graduate careers are recognized through the publication of graduation honors. To be eligible, graduate students must have completed their degree program with a cumulative grade point average of 4.0 based on grades received in all courses that apply to specific degree requirements.

#### **DIPLOMAS**

Diplomas are issued upon successful completion of all academic and financial requirements. Diplomas will be mailed to the student at the address specified on the graduation application. Diplomas will not be forwarded if the address is incorrect but will be returned to the office of Student Services.

#### GRADUATION CEREMONY

Many Extended Campus centers conduct a local graduation ceremony. Extended Campus and College officials are often guests at local graduation festivities. Ask your Center Director of Operations about the graduation custom at your center.

Any eligible student may participate in graduation ceremonies at one of the residential campuses: Daytona Beach, Florida, or Prescott, Arizona. If a student wishes to participate in the graduation ceremony at one of the residential campuses, this information must be indicated on the application for graduation. A nonrefundable graduation fee, which includes the cost of regalia, must be paid during the submission of your application for graduation. Residential Campus graduation ceremony deadline dates are listed below.

Ceremony	Location	Deadline
Spring	Daytona Beach	February 1
Spring	Prescott	February 1

# EMBRY-RIDDLE LANGUAGE INSTITUTE (ERLI)

The Embry-Riddle Language Institute (ERLI) was established to help non-English speaking aviation professionals and prospective students become more proficient in listening, speaking, reading, and writing skills.

This program is offered to those who have a TOEFL level of less than 550 (paper based), 213 (computer based), or 79-80 (internet based), or other demonstrated English-language deficiencies. The purpose of the program is to prepare students for whom English is

not the first language to move into aviation-related programs, employment, or academic institutions. Specific aviation tracks have been developed for aircraft maintenance, avionics, aviation management, air traffic control, and flight. More information is available by contacting the ERLI Office at either (386) 226-6192 or (928) 777-3928.

#### DISABILITY SUPPORT SERVICES

The University is committed to ensuring access and providing reasonable accommodation for students with documented disabilities who request assistance. For information you may contact Disability Support Services at (386) 226-7916; Fax (386) 226-6071; or e-mail: lloydv@erau.edu.

Students' needs are addressed on an individual basis with regard to their specific disabilities, academic and career goals, learning styles, and objectives for personal development. Campus-specific services might include academic advisement or assistance with planning academic schedules, registration assistance and advance registration, academic intervention programs, time management training, study skills assistance, arrangements for peer tutoring, testing modifications, advocacy, and facilitation of physical access. The University does not provide diagnostic testing but will make referrals for evaluation by area specialists. Costs associated with testing referrals are the responsibility of the individual student. Prospective students considering a program of study are encouraged to contact the Disability Support Services Director or for information regarding eligibility concerns or campus-specific services.

#### COOPERATIVE EDUCATION

Cooperative education offers qualified undergraduate students an opportunity to gain valuable experience, explore career options, develop contacts in the industry, and earn college credit. Requirements and benefits vary by degree program and by employer. Students should discuss their co-op or internship plans with their Academic Advisor or contact the Office of Student Services toll-free at 877-362-7970. Additional information including current openings and requirements is available from the Career Services Office and on the Career Services website at www.erau.edu/career.

#### CAREER SERVICES

The Career Services Office provides career development assistance to all students and alumni of Embry-Riddle Aeronautical University. The Career Services website offers students and alumni a virtual library of job search aids, including interview tips, sample resumes and cover letters, links to company websites, co-op/internship opportunities and current job listings though our webbased resume referral system.

Industry/Career Expos are held in the fall at both the Daytona Beach, Florida and Prescott, Arizona campuses. More than 100 companies visit these campuses to recruit students from both full-time and cooperative education/internship positions, and to provide information on industry.

The Career Services Office employs a staff of Program Managers to provide one-on-one career advisement, mock interviews, and resume/cover letter critiquing. Students are encouraged to contact the Career Services Office early in their education to explore career options and develop a successful job search strategy.

For more information contact:

Career Services
Embry-Riddle Aeronautical University
600 S. Clyde Morris Blvd.
Daytona Beach, FL 32114-3900
Telephone: (386) 226-7991
eccareer@erau.edu

Or visit our web site at www.erau.edu/career/

#### ARMY GREEN TO GOLD

If you are currently on active duty; will have two years of active duty before school starts; and are accepted by

Embry-Riddle as either a freshman, sophomore, or junior, you can compete for an Active Duty Green to Gold four, three, or two-year scholarship by transferring to one of the two residential campuses. You must have a GT score of 110 or higher and a cumulative grade point average of 2.5 on a 4.0 grading system to be eligible for the three or two-year scholarship. A GT score is not required for individuals applying to a four-year scholarship. Four-year applicants must have a cumulative grade point average of 2.0 on a

4.0 grading scale. All applicants must meet other eligibility requirements. An SAT score totaling 920 or an ACT composite score of 19 is required for three and four-year Green to Gold scholarships.

For more information contact:

If you are seeking attendance at the Daytona Beach Campus

Army ROTC Enrollment and Schoarship Office Embry-Riddle Aeronautical University 600 S. Clyde Morris Blyd.

Daytona Beach, FL 32114-3900

Tel: (386) 226-6437 FAX: (386) 226-7615 Toll free: 888-437-2161

www.erau.edu/omni/db/academicorgs/

dbarotc

If you are seeking attendance at the Prescott Campus

3700 Willow Creek Road Prescott, AZ 86301 Tel: (928) 777-3870 FAX: (928) 777-3772 artoc@erau.edu

## AIR FORCE (AFROTC)

Embry-Riddle Aeronautical University, in cooperation with the Air Force Reserve Officer Training Corps (AFROTC), provides academic instruction and training experiences leading to commissioned service in the United States Air Force. AFROTC is an educational program designed to train men and women as Air Force officers while they complete a Bachelor's degree. The AFROTC program is designed to prepare them to assume positions of increasing responsibility and importance in the modern Air Force. AFROTC offers several routes to an Air Force commission. Optimally, the program lasts four years, but it can be completed in as little as two years. Depending on the program chosen, attendance at either a 4-week or 6-week summer field-training course is required.

Through cross-town agreements, Embry-Riddle Aeronautical University Extended Campus locations are often affiliated with AFROTC detachments at nearby host institutions. Students may be eligible to complete degree requirements through the Extended Campus, while concurrently completing AFROTC requirements at the host institution detachment.

For more information contact:

If you are seeking AFROTC attendance through a cross-town institution: www.afrotc.com/colleges

If you are seeking attendance at the Daytona Beach Campus:

Air Force ROTC Detachment 157 Embry-Riddle Aeronautical University 600 S. Clyde Morris Blvd. Daytona Beach, FL 32114-3900

Tel: (386) 226-6880 FAX: (386) 226-6887 E-mail: afrotcdb@erau.edu

If you are seeking attendance at the Prescott Campus:
Air Force ROTC Detachment 028
Embry-Riddle Aeronautical University
3700 Willow Creek Road
Prescott, AZ 86301-3721

Tel: (928) 777-3868 FAX: (928) 777-3865 E-mail: prafrotc@erau.edu

#### **ENROLLMENT**

There is no military obligation to sign up for AFROTC. To take classes students must be U.S. citizens or resident aliens, and must be U.S. citizens to receive a commission. It is possible to begin AFROTC as a resident alien and earn a commission once citizenship is obtained. AFROTC cadets must also pass the Air Force Officer Qualifying Test, a physical fitness test including a 1.5 mile timed run, push-ups and sit-ups and pass a Department of Defense physical exam in order to be eligible for scholarships and ultimately commissioning.

#### **SCHOLARSHIPS**

A variety of AFROTC scholarships for 1, 2, 3 and 4 years are available on a competitive basis and include a \$600 textbook allowance per semester plus a non-taxable \$250-\$400 stipend each month during the school year. Some scholarships provide full college tuition while others being at \$15,000 per year. In selected academic areas, scholarships may be extended to meet a 5-year degree program recognized by the college. The 1-year program is for students preparing for occupations for which the Air Force has a special need.

The majority of 2 to 4-year scholarships are for students pursuing degrees in certain fields of engineering, science, and math, with a limited number going to other academic degrees. A number of scholarships are also available to students enrolled in certain non-technical degree programs such as: business administration, accounting, economics and management. Scholarships for careers in the medical field are also offered.

#### **BENEFIT**

All AFROTC cadets receive uniforms, books and equipment for ROTC classes at no cost. Upon being commissioned a 2nd Lieutenant in the Air Force, you will receive a starting salary and allowances worth more than \$35,000 per year. Free medical and dental care, 30 days paid annual vacation and added educational benefits are also part of the compensation package.

#### STUDENT GRIEVANCE PROCEDURES

It is the policy of Embry-Riddle Aeronautical University to administer its educational programs both on and off-campus in a manner that is fair, equitable, academically sound, and in accordance with the appropriate regulations and criteria of its governing board, accrediting association, and federal and state laws and regulations. To this end, Extended Campus students are provided an opportunity to express any complaints, grievances, or disputes that upon investigation may be redressed through the CCE support system.

- A. Any sexual harassment, unfair treatment, or discrimination issue may be handled in accordance with the following procedures in EC Academic Administrative Procedure EC-A-03.
  - 1. A student having a complaint, grievance, or dispute should make every effort to resolve the matter through informal discussion with the Center Director of Operations or the Distance Learning Enrollment Office or office of Student Services. Central to the effectiveness of the process is the student's forthright and timely communication of the problem. The issue should be brought to the attention of the appropriate Director within five days of the occurrence or cause of such matter. The Director will respond within five working days of the knowledge of the issue.
  - 2. If the issue is not resolved to the student's satisfaction through the informal process, the

student may file a written complaint, grievance, or dispute outlining the nature of the issue and the relief sought to the appropriate Regional Director. If the Regional Director is unable to resolve the issue to the student's satisfaction, the student may appeal in writing to the Dean of Academics, CCE who will further investigate the issue and make a recommendation to the Chancellor for a final decision. Students are expected to exhaust the remedies available to them in the grievance procedure before instituting proceedings in any state, regional, or federal agency. If, however, the issue is not resolved after exhausting the institution's grievance procedure, the student may file a complaint with the appropriate state, regional, or federal board or agency that has jurisdiction over the student's resident center. The student must contact that board or agency to determine that agency's procedure and willingness to accept jurisdiction for handling complaints, grievances, and disputes.

#### B. Grade Appeals.

- 1. Students who wish to appeal the final course grade must first meet with the instructor to discuss and attempt to resolve the issue. The meeting must be arranged as soon as possible after the final course grades have been issued. The grounds for appeal may include suspected mathematical errors in computing the final grade or interpretation of the weighing of course performance elements. Except for the most unusual circumstances, appeals challenging the academic judgment of the faculty are not acceptable.
- 2. If the dispute cannot be resolved between the student and instructor, the student has eight weeks after the final grades have been issued to initiate a written appeal to the Center Faculty Chair. The Center Faculty Chair will then follow procedures outlined in EC Academic Administrative Procedure EC-A-12.

# SERVICES AND OPPORTUNITIES AVAILABLE TO ALUMNI

Alumni Chapters, Clubs and Affinity Groups: Chapters, Clubs and Groups form the grass roots level of support for Embry-Riddle, promoting the welfare and interests of the University and its alumni

in local communities across the nation and around the globe. They encourage alumni in their area to become informed about the University, to develop an interest in a University activity, and to become involved in their alma mater through community and professional activities. Their involvement may include career networking opportunities, mentoring students and other alumni, and enjoying social events, all in the name of Embry-Riddle.

Career Networking: Although students once looked to their alma maters for help only in finding their first post-graduation jobs, it has recently become customary for graduates to turn to their universities for job assistance throughout their careers. At Embry-Riddle, graduates may use the Office of Career Services for assistance with resume development, job searches, establishing a job file, and career networking. The Office of Alumni Relations works closely with Career Services to support initiatives and to share information and resources to meet alumni requests.

Communications: The eaglesNEST, the online community for Embry-Riddle alumni, is the primary tool for keeping in touch with the University and other alumni. The Alumni Network Newsletter provides alumni with an up-to-date calendar of University events, athletic team scores and schedules, alumni class notes, and University happenings. LIFT, the alumni magazine, is a biannual magazine that features in-depth stories on alumni, the industry and the University. Communication with the University is also available at Embry-Riddle's Web site: www.erau.edu.

The excellence of any educational institution depends heavily on the quality, interest and participation of its alumni. Embry-Riddle's alumni participate as guest speakers, serve on advisory councils, supply media experts, and are active in many other activities. They provide role models for current students to emulate, thus continually elevating the status of the University.

For more information, please contact the Office of Alumni Relations at (800) 727-3728.

#### ACADEMIC INTEGRITY/CONDUCT

Embry-Riddle is committed to maintaining and upholding intellectual integrity. All students, faculty, and staff have obligations to prevent violations of academic integrity and take corrective action when they occur. The adjudication process will include the sanction imposed on students who commit the following academic violations, which may include a failing grade on the assignment, a failing grade for the course, suspension, or dismissal from the University:

- 1. Plagiarism: Presenting as one's own the ideas, words, or products of another. Plagiarism includes use of any source to complete academic assignments without proper acknowledgement of the source.
- 2. Cheating is a broad term that includes the following:
  - a. Giving or receiving help from unauthorized persons or materials during examinations.
  - b. The unauthorized communication of examination questions prior to, during, or following administration of the examination.
  - c. Collaboration on examinations or assignments expected to be individual work.
  - d. Fraud and deceit, that include knowingly furnishing false or misleading information or failing to furnish appropriate information when requested, such as when applying for admission to the University.

Students exhibiting the following undesirable acts of conduct may be suspended or dismissed from the University. Criminal acts must be reported to the appropriate law enforcement and University authorities.

1. Unauthorized alteration or misuse of one's own or another's academic records or transcripts.

- 2. Forging, altering, falsifying, destroying, or unauthorized use of a University document, record, or identification. This includes using the logo, stationery, or business cards of the University or otherwise identifying oneself as an agent of the University for personal, non-University business.
- 3. Misuse of computing facilities and/or security violations, including attempted violations of computing facilities.
- 4. Conduct that disrupts the educational process of the University.

#### **SURVEYS**

Student surveys provide essential information in assessing the effectiveness of Embry-Riddle academic programs and services. Two basic types of student surveys are used: an end-of-course survey and an Alumni Survey. The end-of-course survey is completed at or near the end of each course and the alumni survey is sent on a sampling basis approximately one year after graduation. The survey information you provide is essential for continuous quality improvement and increased institutional effectiveness.



## TESTIMONIAL



... I had not come across a staff that was more willing to explain the programs and assist with all of my needs as a working adult. Now, one year into my degree, I am about to graduate with a degree in a competitive field which adds to my almost 15 years of experience in aeronautics. I am confident that I can utilize these tools to improve my career and benefit myself for many years to come and I have Embry-Riddle to thank for that."

Joshua Dempster

Master of Aeronautical Science – Education Technology

## RESEARCH/LIBRARY SUPPORT

#### LIBRARY GUIDES AND BROCHURES

The Guide to Library Resources is available from the local Center; this guide provides descriptions of the resources and services available through the Hunt Library and from selected local libraries. It also maintains a directory of other libraries and educational institutions in the immediate area. The Library Guide includes information and instruction on the many databases and periodical indexes available from the Hunt Library, along with information on locally available resources. The Library Guide also includes a selection of Hunt Library informational and instructional brochures. Ask your Center Director of Operations for a copy of the library guide, or for the individual library brochures.

#### CURRENT PERIODICALS

A number of current periodical titles are available at local Extended Campus Centers, including a subscription to Aviation Tradescan, a monthly index to articles in aviation, transportation, and aerospace. Check for these subscriptions at your resident center office or local library.

## AVIATION TRADESCAN ARTICLE SERVICE

Any articles indexed in Aviation Tradescan that are not available using local resources may be easily ordered from the Hunt Library in Daytona Beach. Email eclib@erau.edu with your request, or contact your center staff for more information.

# RIDDLE AVIATION COLLECTION (RAC)

A Riddle Aviation Collection is a collection of aviation/aerospace reference materials available for student and faculty research. The RAC contains many of the same reference titles as the Hunt Library's collection in Daytona Beach. The Riddle Aviation Collections may be located at the local center or at a local library. Contact center staff to find out where the RAC is located.

#### VIDEOTAPES

A large collection of videotapes and DVD's are available as course support material through the Hunt Library.

Ask your Center Director of Operations for the How to Find Videos Using Voyager brochure or with assistance accessing the online catalog (Voyager) located at http://voyager.db.erau.edu/.

#### REFERENCE ASSISTANCE

If you need reference assistance, you may call the Hunt Library at 800-678-9428 or 386-226-7656. A Reference Librarian will be available to help you from 8:00 AM – 5:00 PM (Eastern) with voicemail after normal hours, or 24/7 access via email through eclib@erau.edu. Reference librarians can provide detailed advice on research strategies, referrals to relevant reference sources, or assistance with literature searches.

#### INTERNET ACCESS

The Hunt Library is located at amelia.db.erau.edu/; choose the Extended Campus – Centers/Distance Learning link. From here you may explore the rest of the Library's web pages, including the Hunt Library's online catalog, Voyager. The Library's web pages include access instructions for all of the (online) databases and periodical indexes (which include many full-text resources), and instructions on how to access the library using ERAU Online/Blackboard. The Hunt Library also maintains a large collection of digitized (full-text) books, documents and reports, as well as maintaining a collection of aviation/aerospace related Internet resources. Online request/order forms are available, or simply email a request to eclib@erau.edu requesting library materials.

## HOW TO CONTACT THE HUNT LIBRARY'S EXTENDED CAMPUS LIBRARY SERVICES

Reference Phone: 800-678-9428 or 386-226-7656

Fax: 386-226-7040 E-mail: eclib@erau.edu

Internet: http://amelia.db.erau.edu/ec/ EC Librarian: Edward Murphy - 386-226-6947

## EXTENDED CAMPUS

General Information Telephone: (386) 226-6910

or (800) 522-6787 E-mail:ecinfo@erau.edu

## STUDENT SERVICES

#### OFFICE OF STUDENT SERVICES

#### **Extended Campus**

Embry-Riddle Aeronautical University 600 S. Clyde Morris Blvd.
Daytona Beach, FL 32114-3900

Admissions: (866) 509-0743 E-mail: ecssc@erau.edu

Registrar: (866) 393-9046 E-mail: ecregist@erau.edu

Portfolio Assessment: (877) 362-7970

Fax: (386) 226-6984

#### **Disability Support Services**

Embry-Riddle Aeronautical University 600 S. Clyde Morris Blvd. Daytona Beach, FL 32114-3900 Telephone: (386) 226-7917

Fax: (386)-226-6082

#### Career Services

Embry-Riddle Aeronautical University 600 S. Clyde Morris Blvd.
Daytona Beach, FL 32114-3900
Telephone: (386) 226-6054
Email: eccareer@erau.edu

#### CENTER FOR PROFESSIONAL EDUCATION

Extended Campus Embry-Riddle Aeronautical University 600 S. Clyde Morris Blvd. Daytona Beach, FL 32114-3900

Telephone: (386) 323-8669 Fax: (386) 323-8692 Toll free: 1-866-574-9125

#### FINANCIAL SERVICES

#### Financial Aid Office

Embry-Riddle Aeronautical University 600 S. Clyde Morris Blvd.
Daytona Beach, FL 32114-3900
Telephone: (386) 226-6300
-or - (800) 943-6279

Veterans Education Benefits: **University Veterans' Affairs Office** Embry-Riddle Aeronautical University 600 S. Clyde Morris Blvd. Daytona Beach, FL 32114-3900 Telephone: (386) 226-6350

#### **Student Financial Services**

Embry-Riddle Aeronautical University 600 S. Clyde Morris Blvd. Daytona Beach, FL 32114-3900 Telephone: (386) 226-6280

#### DISTANCE LEARNING ENROLLMENT OFFICE

Extended Campus
Embry-Riddle Aeronautical University
600 S. Clyde Morris Blvd.
Daytona Beach, FL 32114-3900
Telephone: 800-359-3728
Worldwide: (386) 226-6397

Fax: (386) 226-7627

# CONTACT/INFORMATION SOURCES

## EXTENDED CAMPUS CENTERS

/ I I N	11/11/11/11	STATES):	
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STATE	LOCATION	CENTER	TELEPHONE
Alabama	Enterprise	Fort Rucker	(334) 598-6232
Midvailla	*Mobile, AL	Out of Pensacola	(251) 441-6737
	Huntsville	Huntsville	(256) 876-9763
Alaska	Anchorage	Anchorage	(907) 753-9367
Haska	*	Fort Richardson	(907) 333-3307
	Fairbanks	Fairbanks	(907) 356-7773
Arizona	Glendale	Luke	(623) 935-4000
Alizona	Mesa	Williams Gateway Center	(480) 279-1150
	Phoenix	Sky Harbor	(602) 275-5533
	Tucson	Tucson	(520) 747-5540
Arkansas	N. Little Rock	Little Rock	(501) 983-9300
California	Fairfield	Travis	(707) 437-5464
Camorina	Fort Irwin	Fort Irwin	(760) 386-7997
	Lemoore	Lemoore	(559) 998-6026
	Long Beach	Los Angeles (Metro Center)	(562) 627-5870
	Marysville	Beale	(530) 788-0900
	Pt. Mugu	Ventura	(805) 271-9691
	Oakland	Oakland	(510) 636-2424
	Oceanside	Camp Pendleton	(760) 385-4423
	Riverside	Inland Empire	(951) 653-4074
	Palmdale	Palmdale	(661) 947-4025
	Rosamond	Edwards	(661) 258-1264
	Ridgecrest	China Lake	(760) 939-4557
	San Diego	San Diego	(858) 576-4375
	San Diego	North Island	(619) 435-6673
	Lompoc	Vandenberg	(805) 734-4076
Colorado	Fort Carson	Colorado Springs	(719) 526-3387
Florida	Cocoa Beach	Space Coast	(321) 783-5020
Tiorian	Fort Walton Beach	Fort Walton Beach	(850) 678-3137
	Hurlburt Field	Hurlburt Field	(850) 581-2106
	Jacksonville	Jacksonville	(904) 779-0246
	*	NS Mayport	(904) 249-6700
	Miami	Miami	(305) 871-3855
	Orlando	Orlando (Metro Center)	(407) 352-7575
	Panama City	Tyndall	(850) 283-4557
	*	Tallahassee	(850) 201-8330
	Pensacola	Pensacola	(850) 458-1098
	*	NAS Whiting Field	(850) 623-7787
	*	US Coast Guard ATC	( ) = = / = = = / /
	*	Mobile, AL	(251) 441-6737
	Pompano Beach	Ft. Lauderdale	(954) 497-3774
	Tampa	Tampa	(813) 828-3772
	*	St. Petersburg College	(727) 394-6218
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# **CONTACT/INFORMATION SOURCES**

OF A FF	T 0.0 (1770)	OF MEET D	WELL EDITORIE
STATE	LOCATION	CENTER	TELEPHONE
Georgia	Marietta *	Atlanta (Metro Center)	(770) 426-9990
		Delta Air Lines	(404) 714-3248
	Savannah	Savannah	(912) 355-0644
	Valdosta	Moody	(229) 244-9400
	Warner Robins	Robins	(478) 926-1727
		Columbus	(706) 685-0105
Hawaii	Island of Oahu	Hawaii	(000) 400 0007
	*Honolulu	Honolulu	(808) 422-0835
	*Honolulu Airport	Honolulu	(808) 838-1435
	*Kailua	Kaneohe	(808) 254-2106
	*Mililani	Schofield Barracks	(808) 624-2334
Idaho	Mountain Home	Mountain Home	(208) 832-2222
Indiana 	Indianapolis	Indianapolis	(317) 487-6281
Kansas	Wichita	McConnell	(316) 687-3006
Kentucky	Clarksville	Fort Campbell	(270) 798-2775
	Louisville	Louisville	(502) 964-9204
Louisiana	Shreveport	Barksdale	(318) 747-4508
Maine	Brunswick	Brunswick	(207) 721-0664
Maryland	Andrews AFB	Andrews	(301) 735-6340
	Lexington Park	Patuxent River	(301) 863-8776
Minnesota	Eagan	Minneapolis	(651) 905-9595
Mississippi	Biloxi	Keesler	$(228)\ 432-5312$
Montana	Great Falls	Great Falls	(406) 727-9901
Nebraska	Omaha	Offutt	(402) 292-6655
Nevada	Fallon	Fallon	(775) 423-4018
	Las Vegas	Las Vegas	(702) 643-0762
New Jersey	Trenton	McGuire	(609) 723-1337
New Mexico	Alamagordo	Holloman	(505) 479-6892
	Albuquerque	Albuquerque	(505) 846-8946
	Clovis	Cannon	(505) 784-8763
N. Carolina	Elizabeth City	Elizabeth City	(252) 331-2225
	Fayetteville	Fayetteville	(910) 436-5005
	*Greensboro	Greensboro	(336) 605-3030
	Pope AFB	Pope	(910) 436-3188
	Goldsboro	Seymour Johnson	(919) 734-9211
N. Dakota	Grand Forks	Grand Forks	(701) 594-5324
	Minot	Minot	(701) 727-9007
Ohio	Cincinnati	Cincinnati	(513) 733-3728
	*	Cincinnati-Kentucky Airport	
	Fairborn	Dayton Area	(937) 878-3728
	*	Wright-Patterson	(937) 254-3728
Oklahoma	Altus	Altus	(580) 481-5991
	Enid	Vance	(580) 213-7320
	Oklahoma City	Oklahoma City	(405) 739-0397
Oregon	Portland	Portland	(503) 288-8690
S. Carolina	Charleston	Charleston	(843) 767-8912
	MCAS Beaufort	MCAS Beaufort	(843) 228-7585
	Sumter	Shaw	(803) 666-7401
	*	McEntire ANGB	
Tennessee	Memphis Airport	Memphis	(901) 507-9969

STATE	LOCATION	CENTER	TELEPHONE
Texas	Abilene	Dyess	(325) 692-2007
	Corpus Christi	Corpus Christi	(361) 937-4951
	Dallas/Ft. Worth	Fort Worth	(817) 737-8180
	Houston	Houston	(281) 461-3728
	Randolph AFB	San Antonio	(210) 659-0801
	Sheppard AFB	Sheppard	(940) 851-6458
Utah	Ogden	Northern Utah	(801) 777-0952
Virginia	Hampton	Langley	(757) 764-2662
	Newport News	Fort Eustis	(757) 887-0980
	Norfolk	Norfolk	(757) 440-5078
	*	Oceana	(757) 437-8061
Washington	Oak Harbor	Whidbey Island	(360) 279-0959
	Seattle	Seattle	(425) 226-2484
	Spokane	Spokane	(509) 244-3832
	Tacoma	Tacoma	(253) 589-1728
	Everett	Everett	(425) 514-0220
Wyoming	Cheyenne	Cheyenne	(307) 634-9693

#### **EUROPE**

Embry-Riddle Aeronautical University

European Regional Office

CMR 429

APO AE 09054-0429

DSN: 483-7811

Civilian: 011-49-631-303-27811 FAX: 011-49-631-303-27810 E-Mail:europe.rdo@erau.edu Web Site: www.erau.edu/eu/ Embry-Riddle Aeronautical University **European Regional Office** 

Europaallee 6

D-67657 Kaiserslautern

Germany



# EXTENDED CAMPUS WORLDWIDE CENTERS (EUROPE-CIVILIAN):

COUNTRY United Arab Emirates	<b>LOCATION</b> Abu Dhabi	<b>CENTER</b> Abu Dhabi	TELEPHONE 011-971-24451514
United Arab Emirates	Dubai	Dubai	011-971-43260333
Luxembourg	Luxembourg City	Luxembourg	011-352-42-59-91314

# EXTENDED CAMPUS WORLDWIDE CENTERS (EUROPE-US MILITARY):

COUNTRY	LOCATION	CENTER	TELEPHONE
England	Lakenheath	Lakenheath/Mildenhall	011-44-1638-522464
Germany	Giebelstadt	Giebelstadt	011-49-9334-87-7578
	Hanau	Hanau	011-49-6181-9540337
	Katterbach	Katterbach	011-49-9802-832379
	Ramstein	Ramstein	011-49-6371-47-5755
	Spangdahlem	Spangdahlem	011-49-6565-7297
	*	Geilenkirchen	011-49-2451-63-2246
Italy	Aviano	Aviano	011-39-0434-66-0631
•	*	Vicenza	011-39-0444-717570
	Sigonella	Sigonella	011-39-095-56-4550
	*	Naples	011-39-081-568-4364
Spain	Rota	Rota	011-34-956-822984
-	*Portugal	Lajes Field	011-351-295-57-3375
Turkey	Turkey	Incirlik	011-90-322-316-1098

<sup>\*</sup> Teaching site

## **DEPLOYED CLASSROOM LOCATIONS:**

COUNTRY	LOCATION	CENTER	TELEPHONE
Kuwait	Camp Arifjan	Giebelstadt	011-49-9334-87-7578
Kuwait	Camp Buehring	Giebelstadt	011-49-9334-87-7578
Kosovo	Camp Bondsteel	Giebelstadt	011-49-9334-87-7578
Afghanistan	Bagram Airfield	Incirlik	011-90-322-316-1098
Afghanistan	Khandahar	Incirlik	011-90-322-316-1098
Middle East	Bahrain	Rota	011-34-956-822984

## **FACULTY & ADMINISTRATION**

#### OFFICIALS OF THE UNIVERSITY

#### Johnson, John P.

Interim President; Provost and Chief Academic Officer; Professor, College of Arts and Sciences. B.A. and M.S., Florida State University; Ph.D., Kent State University.

#### Frederick-Recascino, Christina

Associate Provost for Research and Graduate Programs. Associate Professor of Human Factors and Systems B.A., State University of New York; M.S. and Ph.D., University of Rochester.

#### Jost, Robert A.

Vice President and Chief Business Officer. B.B.A. and M.B.A., Stetson University.

#### Metzner, John

Vice President of External Relations.
B.A. and M.A., Midwestern State University.

#### Ramsey, Pat

Vice President of Development. B.S., University of Tennessee.

#### Roach, Richard D.

Assistant Provost for Institutional Effectiveness. B.A., University of Houston; M.Div. and D. Min., Southwestern Baptist Theological Seminary.

#### Stackpoole, Kenneth

Vice President for Government Relation. B.S. and M.A.S., Embry-Riddle Aeronautical University; Ph.D., University of Central Florida; ATP, CFI-AI-ME.

#### Watret, John Robert

Associate Provost;

Associate Professor of Mathematics, College of Arts and Sciences; Associate Chancellor for Academic Affairs. B.Sc., Heriot-Watt University; M.S. and Ph.D., Texas A&M University; P-ASEL.

#### Weekes, Eric B.

Vice President and Chief Financial Officer. B.S., New York Institute of Technology; M.B.A., New York University.

#### **CHANCELLORS**

#### Carrell, Daniel L.

Chancellor, Prescott Campus.
B.A., Northwestern State University; M.A.S., Embry-Riddle Aeronautical University; C-H.

#### Connolly, Thomas J.

Chancellor, Daytona Beach Campus. Endowed Chair in Aviation; Professor of Aeronautical Science; Associate Dean, College of Aviation. Ed.D., Nova University; ATP-MEL; CE-500; C-SELS; CFI-ASMEL & IA; AGI; IGI.

#### Smith, Martin A.

Chancellor, Extended Campus. B.B.A., University of Massachusetts; M.B.A., Western New England College.

#### **ADMINISTRATION**

#### Bogart, Frank

European Regional Director of Operations. B.S., University of Maryland College; M.A., Webster College.

#### Cordial, Bernard D., Jr.

Northeast Regional Director of Operations. B.S., Embry-Riddle Aeronautical University; J.D., John Marshall Law School.

#### Dove, Joan M.

Director, Enterprise Services.
B.A., Duke University;
M.G.A., University of Maryland, University College.

#### Goodrich, Alice A.

Central Regional Director of Operations. B.A., Trenton State College; M.B.A., Embry-Riddle Aeronautical University.

#### Hollis, Martha

Director, Department of Distance Learning.
B.A., William and Mary College; M.S., Capella University; M.B.A., George Washington University; Ph.D., Arizona State University.

#### Mullaney, Patrick C.

Western Regional Director of Operations. B.S., San Jose State University; M.S., University of Arkansas.

#### **FACULTY AND ADMINISTRATION**

#### Popp, Gregory A.

Associate Dean for Legal Affairs, Worldwide Center Operations; Interim Director, Center for Professional Education.

B.A., Florida Atlantic University; J.D., University of Miami.

#### Rodgers, Laurette

Associate Dean for Administration and Military Affairs, WorldWide Center Operations.

B.S., Univ. of Maryland, University College;

M.S., Austin Peay State University.

#### Shehi, Karen B.

Dean, WorldWide Centers Operations. B.S., Kansas State University; M.S.A., Central Michigan University; Ed.D., Nova Southeastern University.

#### Stockton, Wendell R.

Southwest Regional Director of Operations. B.A., Park College.

#### Wiggins, Debbie C.

Southeast Regional Director of Operations. B.A., Old Dominion University; M.S. Ed. Leadership, Troy State University.

#### Wright, Ann

Northwest Regional Director of Operations. B.A., San Francisco State University; M.S., Chapman University.

#### ACADEMIC ADMINISTRATION

#### Sieland, Thomas E.

Dean, College of Career Education; Dean of Academics; Chair, Physical Science; Associate Professor, Aeronautics. B.S., Florida State University; M.S., University of Michigan; Ph.D., Texas A&M University.

#### Brown, James M.

Associate Dean for Accreditation and Faculty Credentials.

B.S., California State University; M.S., Troy State University; P-ASEL.

#### Hanrahan, Patricia L.

Associate Dean of Academics; Assistant Professor, Leadership, Management and Technology. B.A., Bob Jones University; M.A., Goddard College; M.A.S., Embry-Riddle Aeronautical University; Ed.D., University of Central Florida.

#### Henkel, Thomas

Southeast Regional Associate Dean; Assistant Professor, Leadership, Management and Technology.

B.S., University of Maryland College; M.S., Troy State University; M.A.S., Embry-Riddle Aeronautical University; Ed.D., Auburn University.

#### Jenkins, Larry

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