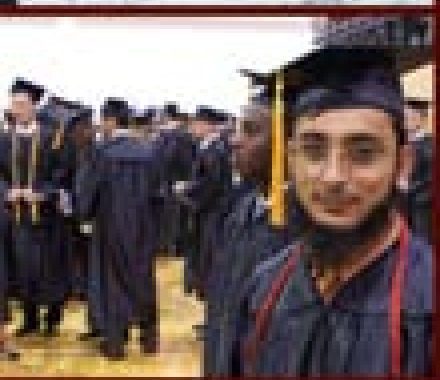
EMBRY-RIDDLE
Aeronautical University







2010-2012

Undergraduate/Graduate Catalog

Worldwide Campus

worldwide.erau.edu

EMBRY-RIDDLE
Aeronautical University
WORLDWIDE

WORLDWIDE CAMPUSES AND ONLINE

Embry-Riddle Aeronautical University
600 S. Clyde Morris Blvd.
Daytona Beach, FL 32114-3900

Admissions
(800) 359-3728
worldwide@erau.edu

Financial Aid
(866) 567-7202
wwfinaid@erau.edu

International Contact
Embry-Riddle Aeronautical University
CMR 429
APO, AE 09054
Telephone number from U.S.:
011.49.631.303.27811
europe.rdo@erau.edu

worldwide.erau.edu

Leading the World in Aviation and Aerospace Education

RESIDENTIAL LOCATIONS

DAYTONA BEACH, FLORIDA

Embry-Riddle Aeronautical University
600 S. Clyde Morris Blvd.
Daytona Beach, FL 32114-3900
(386) 226-6000

Admissions: (386) 226-6100 or (800) 862-2416
E-mail (admissions): dbadmit@erau.edu
Financial Aid: (800) 943-6279

PRESCOTT, ARIZONA

Embry-Riddle Aeronautical University
3700 Willow Creek Road
Prescott, AZ 86301-3720
(928) 777-3728

Admissions: (928) 777-6600 or (800) 888-3728
E-mail (admissions): pradmit@erau.edu
Financial Aid: (928) 777-3765

embryriddle.edu

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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 two-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 worldwide.erau.edu/degrees-programs/catalog. Supplements to the catalog are provided to reflect updated information that includes additions, corrections, and/or changes to the initial publication of the catalog.

This catalog becomes effective July 1, 2010.

QUICK FIND GUIDE Use the guide at the right to help you locate important sections of this catalog.

Military photos from: www.af.mil/photos, www.marines.mil, www.news.navy.mil, cgvi.uscg.mil, www.army.mil

AVIATION AND EMBRY-RIDDLE:
THE LIFELONG PARTNERSHIP

In 1903 Orville and Wilbur Wright made history with their sustained, controlled flight of a powered aircraft. Only a few short years later, the advent of regular passenger service and the start of World War I combined to produce a dynamic new industry to meet the demands of commercial and military aviation.

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.

The 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 Dec. 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.

Within three years, the school had become a subsidiary of AVCO, the parent of American Airlines. Embry-Riddle remained dormant during most of the 1930s, mirroring the casualties of the Great Depression, and the Lunken Airport operation was phased out. 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.

In South 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.

With Jack R. Hunt as president, in 1965 Embry-Riddle consolidated its flight, ground school, and technical training programs in one location by moving northward to Daytona Beach, Florida. 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 1968, Embry-Riddle was accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award degrees at the associate, bachelor, and master levels, and in 1970 changed its name from "Institute" to "University."

Also in 1970, the University established its Extended Campus (now called the Worldwide Campus), which began opening centers at U.S. military aviation bases to serve the educational needs of active-duty military personnel.

In 1978, 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 and expansive grounds, the Prescott Campus has been an outstanding companion to the University's eastern campus in Daytona Beach.

Continuing Hunt's legacy was Lt. Gen. Kenneth L. Tallman, 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 the 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 doctoral programs, a ranking the University has achieved every year since 2001. Embry-Riddle's program in aerospace engineering is the largest in the nation, as are its programs in aeronautical science and engineering physics.

Under the leadership of Dr. Ebbs, a new graduate degree program in safety science was introduced, as well as new undergraduate degree programs in computer science, global security and intelligence studies, mechanical engineering, software engineering, and space physics. In addition, major construction was initiated at the Daytona Beach and Prescott residential campuses.

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; trained Air Force, Air National Guard, and international flight safety officers at Kirtland Air Force Base in Albuquerque, N.M.; and trained Air Force pilots at the U.S. Air Force Academy in Colorado Springs.

Dr. John P. Johnson is the University's fifth president. He previously served as Embry-Riddle's interim president and as provost and chief academic officer. Under his leadership, the University has expanded its research activity; has launched its first doctoral degree programs in aviation and in engineering physics; and is developing a global strategy to take its aviation and aerospace expertise overseas. Before joining Embry-Riddle, Dr. Johnson was the provost and vice president for academic affairs at Texas A&M University, Texarkana, and served as dean at the Medical University of South Carolina and at Northern Kentucky University.

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, boasting a student body of 34,000 who come from all 50 states and 98 nations. More than 30 degree programs at the associate, bachelor, master, and doctoral levels are offered. Embry-Riddle provides flexible educational services to thousands of working adults through its Worldwide Campus, which has more than 170 centers in the United States, Europe, Canada, the Middle East and Asia, and also offers online learning.

A MESSAGE FROM DR. JOHNSON

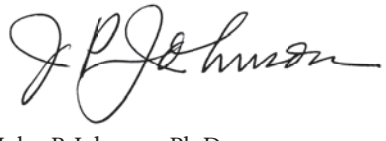
To our students:

Thank you for choosing Embry-Riddle Aeronautical University for one of the most important investments you will make in your future. With thousands of students enrolled in our programs today, and over 90,000 alumni, you are now a member of a worldwide family of leaders in the aviation and aerospace industry.

Our commitment is to provide you with quality programs and faculty, as well as responsive and caring student services. In reviewing this catalog, you will see a broad range of academic opportunities that prepare our graduates for fulfilling careers within our dynamic industry. Many courses include projects where you will work with others as a team to solve real-world challenges.

As you read the history of Embry-Riddle, it will be clear that our University is evolving. In 84 years we have grown from the world's finest aviation institute to an internationally respected comprehensive university, committed to teaching, research, and professional service to the aviation and space community. With 170 campuses and centers all over the world, we can truly say that the sun never sets on Embry-Riddle.

I welcome you to an exciting and global University, and to the Embry-Riddle experience.



John P. Johnson, Ph.D.
President

EMBRY-RIDDLE AERONAUTICAL UNIVERSITY
MISSION STATEMENT

At Embry-Riddle, our mission is to teach the science, practice and business of aviation and aerospace, preparing students for productive careers, and leadership roles in service around the world.

Our technologically enriched, student-centered environment emphasizes learning through collaboration and teamwork, concern for ethical and responsible behavior, the cultivation of analytical and management abilities, and a focus on the development of the professional skills needed for participation in a global community. We believe a vibrant future for aviation and aerospace rests in the success of our students. Toward this end, Embry-Riddle is committed to providing a climate that facilitates the highest standards of academic achievement and knowledge discovery, in an interpersonal environment that supports the unique needs of each individual.

Embry-Riddle Aeronautical University is the world's leader in aviation and aerospace education. The University is an independent, non-profit, culturally diverse institution providing quality education and research in aviation, aerospace, engineering and related fields leading to associate's, baccalaureate's, master's and doctoral degrees.

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, non-credit 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.

EMBRY-RIDDLE AERONAUTICAL UNIVERSITY

Embry-Riddle Aeronautical University is the world's oldest and largest fully accredited university specializing in aviation and aerospace. As a global institution, the University educates 34,000 students annually at Embry-Riddle Worldwide locations, through online learning, and at residential campuses in Daytona Beach, Fla., and Prescott, Ariz. Embry-Riddle Worldwide headquarters is located in Daytona Beach.

Embry-Riddle offers its students a wide array of undergraduate and graduate degree programs in aviation, aerospace, transportation, business, engineering, and related high-tech fields.

In 2010, the University launched its first doctoral degree programs: the Ph.D. in aviation and the Ph.D. in engineering physics. The aviation doctorate, the first of its kind in the nation, is designed for working professionals who want to enhance their contributions to the aviation and aerospace organizations that employ them. The engineering physics doctorate builds on the University's solid program of space research, which is funded by NASA, the National Science Foundation, the U.S. Air Force, and other agencies.

These new doctoral programs expand the applied research opportunities in which Embry-Riddle faculty and students assist the aviation/aerospace industry and governmental agencies, among others, in meeting real-world challenges.

Embry-Riddle Worldwide was established in 1970, when the University began opening centers at U.S. military aviation bases to serve the educational needs of active-duty military personnel. The first center was established at Fort Rucker, Ala.

Through a combination of online courses and a network of more than 170 locations around the world, Embry-Riddle Worldwide annually delivers instruction to 27,000 military and civilian students, with nearly 90,000 class enrollments. Thanks to flexible course delivery, classroom students can select online courses and deployed military students can shift from classroom to 100% online course delivery. With Worldwide's EagleVision technology, students at different

geographical locations can receive instruction at the same time. Since 1995, more than 25,000 military personnel have earned degrees from Embry-Riddle Worldwide.

In addition, Embry-Riddle Worldwide's Office of Professional Education provides nondegree courses and programs for adult workers in the aviation and aerospace industries through seminars, conferences, workshops, forums, and short courses, resulting in certificates of completion and/or CEUs. The department regularly delivers online courses leading to the Corporate Aviation Management Certificate through the National Business Aviation Association (NBAA).

The University's 185-acre residential campus in Daytona Beach offers state-of-the-art facilities, including a new academic hall for the College of Business that contains high-tech classrooms. The College of Aviation building has air traffic control simulation, research labs and a weather center, while the Lehman Engineering and Technology Center houses the technology for online learning, videoconferencing, decision support systems, and three-dimensional modeling. The Advanced Flight Simulation Center contains an FAA-certified Level-6 CRJ200 simulator

and Level-6 Frasca FTDs that provide a level of on-campus training unique to higher education. Under construction is a new complex that will house flight training operations, aircraft maintenance training, and fleet maintenance.

The University's 539-acre residential campus in Prescott, Ariz., features several new high-tech buildings and facilities, including the Aerospace Experimental and Fabrication Building, the Udvar-Hazy Library and Learning Center, and the Academic Complex. Also of note are the King Engineering and Technology Center; the Robertson Aviation Safety Center, which is dedicated to the study of human factors, aircraft accident investigation, and aviation safety; and the Robertson Flight Simulation Center, which contains Frasca and Airbus A320 flight-training devices. A supersonic wind tunnel and shock tube are among the advanced equipment available for student research projects.

Approximately 4,960 undergraduate and graduate students are enrolled at the Daytona Beach Campus and 1,670 at the Prescott Campus.

The students at the residential campuses hail from all 50 states and 98 nations. At the Daytona Beach Campus, the top five states of origin are Florida, New York, Pennsylvania, New Jersey, and Virginia. At the Prescott Campus, the top five states of origin in descending order are California, Arizona, Texas, Washington, and Colorado. International students make up 13 percent of the student body at Daytona Beach and 4 percent at Prescott, with India at the top, followed by Korea and Nigeria. Females constitute 17 percent of the student population at the Daytona Beach Campus and 19 percent at the Prescott Campus.

U.S. News & World Report's "Best Colleges" guide ranks Embry-Riddle's undergraduate aerospace engineering program No. 1 in the nation. The aerospace engineering program is also the largest in the nation. The University's engineering physics program is the largest of all ABET-accredited engineering physics programs and is considered one of the best in the nation.

Embry-Riddle's undergraduate aeronautical science (professional pilot) program is the largest in the world; it's as large as the other top 10 U.S. collegiate flight programs combined. The program is supported by 93 instructional aircraft and 32 simulators. Embry-Riddle's precision flight teams consistently rank among the top in the nation in the SAFECON competition sponsored by the National Intercollegiate Flying Association.

While pursuing their education, Embry-Riddle students gain valuable experience through participation in cooperative education and internship programs. Some 337 students were awarded co-op or intern positions during the 2008-2009 academic year. Students also accrue skills by assisting faculty members in conducting solution-oriented research and consulting projects for the aviation, aerospace, and other industries. In the 2009 fiscal year, 155 faculty members were involved in research and other activities with 186 sponsored projects. The total value of all active awards was more than $10 million.

A survey of the class of 2005 shows that 95 percent of these Embry-Riddle graduates are either employed or have continued their education within one year of graduation. The major airlines hire more alumni from Embry-Riddle than from any other collegiate aviation program, and Embry-Riddle is the nation's largest supplier of air traffic controllers with bachelor degrees to the FAA.

Over the decades, Embry-Riddle has educated and trained thousands of men and women of the U.S. armed forces. The two Air Force ROTC detachments at Embry-Riddle's residential campuses form the largest university-based Air Force commissioning source in the nation. The detach-ments also produce more commissioned officers and more pilots and other rated officers for the Air Force than any other institution in the nation except the Air Force Academy. The University also hosts Army and Navy ROTC units. Currently Embry-Riddle has a contract with the U.S. Department of Defense that maintains the University's long-time status as the sole provider of aviation-related degree programs to the U.S. military in Europe.

As aviation and aerospace continue to evolve, so does Embry-Riddle. The University is committed to the expansion of opportunities for students to work more closely with the aviation industry in the United States and in other nations. Guiding the process of evolution are dedicated teachers, administrators, alumni, trustees, and advisory board members who share our students' love of aviation and who strive to ensure Embry-Riddle's continued position as the world's premier aviation and aerospace university.

A MESSAGE FROM DR. JOHN R. WATRET

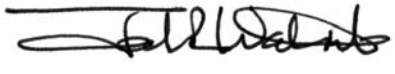
To our students,

Embry-Riddle Aeronautical University – Worldwide has a distinctive mission and history that set us apart from other universities. Worldwide has grown from humble beginnings at Fort Rucker in 1970, with 20 students and a single location, to over 170 locations in the United States, Canada, Europe, the Middle East and Asia, with more than 27,000 students and 90,000 annual registrations. Today we are at the threshold of further growth on a global basis.

I believe our strengths are many, but the following stand out:

- **Our commitment to student success.** Embry-Riddle Worldwide continues to be a place where anyone interested in aviation/aerospace — regardless of age, geography, family responsibilities or other circumstances — can attend and thrive at a first-class university.
- **Our commitment to academic quality.** Embry-Riddle Worldwide is always dedicated to academic quality, to providing an exemplary teaching and learning experience, and to preparing our students for professional careers in the aviation industry.
- **Our commitment to innovation.** As a leader in distance education, Embry-Riddle Worldwide continues to develop and deliver online courses, EagleVision courses, and online/classroom blended courses, making quality higher education available to anyone — anywhere.
- **Our commitment to student service.** The faculty and staff at Embry-Riddle Worldwide pride themselves in their careful support of our students.
- **Our commitment to the military community.** Embry-Riddle Worldwide has a long-standing commitment to our service men and women, both active-duty and veteran, and take pride in being able to offer them quality education that meets their specific requirements.

Thanks to the work and support of our faculty and staff, our alumni and students, and so many people in the communities we serve, Embry-Riddle Worldwide stands ready to help you achieve your educational and career goals. We welcome you to share in the great Embry-Riddle tradition and be part of our promising future. And whether you are a new student, a continuing student, or one of our many alumni, let me offer you a warm welcome to Embry-Riddle Worldwide.



John R. Watret, Ph.D.
Executive Vice President
and Chief Academic Officer
Worldwide Campus

WORLDWIDE CAMPUS MISSION STATEMENT

The mission of Embry-Riddle Aeronautical University – Worldwide is to provide the highest quality education, training, and student services to aviation and aerospace professionals worldwide.

WORLDWIDE CAMPUSES

Worldwide degree and nondegree programs are delivered through a network of more than 170 locations throughout the United States, Canada, Europe, the Middle East and Asia. Each campus 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 enroll in classes through Worldwide campuses or online.

FIVE WAYS TO LEARN

At Embry-Riddle Aeronautical University – Worldwide, our goal is to give you exactly the education you need, exactly the way you need it. That's why, in addition to offering the industry's most sought after degrees and programs, we offer you more ways to take courses and complete those programs. Each of our learning modalities, while distinct in its delivery and operation, provides the same high-quality information, instruction, and opportunities for interaction with faculty and fellow students. Simply pick the one that fits your learning and lifestyle best, and embark on the road to educational success.

1. Classroom Learning

With more than 170 locations across North America, Europe the Middle East and Asia, traditional classroom learning is available for students all over the world. If you prefer a structured academic setting and direct contact with instructors and fellow students on a regular basis, you will excel in the classroom environment.

Key attributes:

- Scheduled class times
- Classroom attendance
- Face-to face interaction
- Direct collaboration

2. EagleVision Classroom

EagleVision is a web video conferencing platform that connects geographically distributed classrooms together into one live, real-time virtual classroom. Through EagleVision, students attending class on opposite sides of the world can talk to one another, interact with the same instructor and collaborate on common problems and lessons.

Key attributes:

- Face-to face interaction with students/instructors in your classroom
- Real-time, virtual interaction with students/instructors in other classrooms
- Lesson archiving
- Collaborative technology:
  - audio/video conferencing
  - online chatting
  - polling
  - webcasting

3. EagleVision Home

Our newest learning modality, EagleVision Home, allows you to access the EagleVision virtual classroom from your own home computer or laptop. Enjoy the flexibility associated with home/online learning and benefit from real-time interaction with faculty and other students.

Key attributes:

- Scheduled classes
- Home/remote learning
- Real-time, virtual interaction with students and instructors in different locations
- Collaborative technology
  - audio/video conferencing
  - online chatting
  - polling
  - webcasting
- Lesson archiving

Minimum technical requirements apply. Visit the EagleVision web page via ERNIE (ernie.erau.edu) for details.

4. Online Learning

Online learning provides maximum convenience and flexibility for students with very busy schedules and/or living in very remote locations. Course material is available 24/7, so you may access it from anywhere in the world, at any time that works for you. While ideal for independent learners, this modality still provides opportunities for interaction with your instructor and fellow students via various online channels.

Key attributes:

- Self-paced at your own schedule
- Home/remote learning
- Independent learning
- Online interaction (non real-time) with students and instructors through:
  - e-mail
  - discussion boards
  - web-based activities
- Lesson archiving

5. Blended Program

Depending on the program you choose, you can combine modalities based on your needs. Whichever route you choose to achieve your educational goals, you can count on the support of the Embry-Riddle Worldwide team to help you reach your final destination.

OFFICE OF PROFESSIONAL EDUCATION

The Office of Professional Education (OPE) provides courses, seminars, and workshops designed for individuals and organizations in the aviation, aerospace and related industries. All OPE courses impart current knowledge and information, and present timely issues relevant to our industry on a wide variety of topics. To access existing training programs, individuals may contact a representative from OPE or any member of the Worldwide Campus organization. For customized corporate training needs please contact OPE directly. OPE training courses typically do not lead to a degree. However, certificates of completion and/or Continuing Education Units (CEUs) are awarded when appropriate. Courses are scheduled to accommodate the needs of working professionals. The training may be full time, part time, one time, on-site, through online learning, or a blend of any delivery methods.

ACCREDITATION

Regional Accreditation

Embry-Riddle Aeronautical University, including the Daytona Beach Campus, the Prescott Campus, and the Worldwide Campus, 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, master, and doctoral levels.

*Contact information for SACS Commission on Colleges is included in order to enable interested constituents (1) to learn about the accreditation status of the institution, (2) to file a third-party comment about the institution's decennial review of accreditation, (3) to file a complaint against the institution for alleged non-compliance with a standard or

requirement, or (4) to provide a note of exemplary service or quality standards related to the institution. **Normal inquiries about Embry-Riddle Aeronautical University, such as admissions requirements, financial aid, educational programs, etc., should be addressed directly to Embry-Riddle Worldwide at (800) 522-6787 or wwinfo@erau.edu.**

ASSOCIATIONS

Embry-Riddle Aeronautical University – Worldwide has developed creative, mutually beneficial partnerships and working relationships with numerous corporations, organizations, and government entities throughout the world. Relationship models include collaboration; sharing of vision, goals and resources; physical co-location arrangements; corporate training programs; research projects; and joint ventures, to name a few. Worldwide develops corporate and organization-specific relationships to meet the needs of aviation, aerospace, and related industries.

NBAA APPROVED PDP PROVIDER Embry-Riddle Aeronautical University is an approved Professional Development Provider (PDP).

Project Management Institute Registered Education Provider Embry-Riddle Aeronautical University – Worldwide is a Registered Education Provider (REP) recognized by the Project Management Institute (PMI). As a registered education provider, Embry-Riddle has agreed to abide by PMI established quality assurance criteria.

MINNESOTA OFFICE OF HIGHER EDUCATION REGISTRATION DISCLOSURE STATEMENT

Embry-Riddle Aeronautical University – Minneapolis Campus is registered as a private institution with the Minnesota Office of Higher Education pursuant to section 136A.61 to 136A.71. Registration is not an endorsement of the institution. Credits earned at the institution may not transfer to all other institutions.

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, 2011, and authorizes Embry-Riddle Aeronautical University to offer the following degrees: Associate in Science in Aviation Business Administration; Associate in Science in Aviation Maintenance; Associate in Science in Professional Aeronautics; Associate in Science in Technical Management; Bachelor of Science in Aviation Business Administration; Bachelor of Science in Aviation Maintenance; 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 Management to Master of Business Administration in Aviation; Master of Science in Project Management; Master of Science in Technical Management; Master of Science in Technical Management to Master of Business Administration in Aviation. 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.

OREGON STATE AUTHORIZATION

Embry-Riddle Aeronautical University is a nonprofit corporation authorized by the State of Oregon to offer and confer the academic degrees discussed herein, following a determination that state academic standards will be satisfied under OAR 583-030. Inquiries concerning the standards or school compliance may be directed to the Office of Degree Authorization, 1500 Valley River Drive, Suite 100, Eugene, OR 97401.

WORLDWIDE CAMPUS ADMISSIONS

To apply for admissions, go to worldwide.erau.edu/admissions.

UNDERGRADUATE ADMISSIONS

Embry-Riddle considers all aspects of a student's qualifications and offers admission to the most competitive applicants building a talented and diverse population of students motivated toward careers in aviation and aerospace. Applications for admission are valid for one year from date received. Admitted students must enroll and maintain enrollment beyond the add/drop period within one year of admission or must reapply.

HIGH SCHOOL GRADUATES UNDER THE AGE OF 20

The following documentation is required for consideration of admission for all applicants under the age of 20 that are not active members of the United States military and not a transfer student.

- Official High School transcript or equivalent (GED)
    1. Rigor of high school academic program and academic performance will be assessed
- SAT with a minimum score of 1000 **-OR-**
- ACT with a minimum score of 21
- 300-500 word essay
- Two letters of recommendation from a school counselor or teacher
- Official transcripts from all post-secondary accredited degree-granting institutions with less than 12 college credits earned, if applicable

The university expects all applicants, at a minimum, to have completed by high school graduation the following course work:

- Four years of English
- Three years of mathematics, including algebra I or applied math I & II, formal logic or geometry
- Two years of history or social science
- Two years of science in at least two different areas, with at least one lab experience

HIGH SCHOOL GRADUATES AGE 20 AND OVER

Applicants age 20 and over with less than 12 college credits earned from an accredited degree-granting institution, or training experience such as military credit recommended by the American Council on Education (ACE) must provide the following documentation:

- Official High School transcript or equivalent (GED)
- Official transcripts from all post-secondary accredited degree-granting institutions attended
- Resume

(For applicants with schooling outside the U.S., please see the International Student section of the catalog, p. 17.)

TRANSFER STUDENT APPLICANTS

Applicants who graduated from high school and subsequently completed a minimum of 12 semester hours of college level credit from an accredited degree granting institution are considered transfer students. Embry-Riddle considers each application for transfer admission individually, reviewing the student's academic record, grades received in all college-level courses, completion of fundamental studies in English and Mathematics, and the rigor of the student's academic program.

To be considered for admission a transfer applicant must have a minimum of a 2.0 cumulative grade point average (CGPA) on a 4.0 scale from an accredited degree granting institution. When an applicant has attended more than one institution, a cumulative average for all previous college work attempted will be calculated to determine the overall CGPA.

- Official transcripts from all post-secondary accredited degree-granting institutions attended
- Military documents, if applicable

FORMER EMBRY-RIDDLE STUDENTS

A degree-seeking student whose attendance at the University is interrupted will be required to reapply for admission in any of the following circumstances:

- Enrolls at another institution without advance written approval
- A matriculated student that fails to enroll within two years from the ending date of their last course
- A non-matriculated student that fails to enroll within one year of admission
- Academic suspension or dismissal

Any student dismissed must first satisfy the conditions for readmission as indicated in the letter of dismissal. The dismissing campus renders the decision for readmission. A written petition for readmission must accompany the application for admission and fees.

CONDITIONAL ADMISSION

UNDERGRADUATE

- Students who fail to satisfy the guidelines for full admission, but who are judged to have potential for success in an undergraduate program, may be granted conditional admission.
- Students on conditional status will remain on academic probation until twelve semester hours of course work is completed with a minimum of a 2.0 CGPA

NON-DEGREE SEEKING AND TRANSIENT STUDENTS

Embry-Riddle recognizes that working adults may be interested in furthering their education for professional and/or self-enhancement and not to pursue a degree with Embry-Riddle. We also recognize that transient students, those pursuing a degree with another institution, may wish to take a course(s) with Embry-Riddle. For these reasons Embry-Riddle allows students who meet admission requirements to take up to 24 semester hours as a non-degree seeking or transient student. Official or unofficial transcripts must be submitted to the University before the student is allowed to enroll in courses. Non-degree seeking and transient students must meet the same academic standards as degree-seeking students. For students that subsequently apply for entry into a degree program, additional documentation may be required.

STUDENTS SEEKING UNDERGRADUATE CERTIFICATES OF COMPLETION

Students who meet the general admission criteria may, based on an assessment of their preparedness to take courses, be admitted to an undergraduate certificate program. Undergraduate certificate program students may only enroll in those 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 ADMISSIONS

All graduate applicants must have earned a baccalaureate degree from an accredited degree granting institution with a cumulative grade point average (CGPA) of 2.5 or higher on a 4.0 scale. Graduate applicants who already possess a master's degree or have completed graduate coursework from an accredited degree granting institution must also have a 3.0 CGPA or higher at the graduate level.

Applicants with an undergraduate degree and no graduate course work are required to submit the following:

- Official transcript from the accredited degree conferring institution
- Official or unofficial transcripts from other institutions attended may be requested to verify prerequisite knowledge for certain academic programs

Applicants with undergraduate degree and graduate-level course work are required to submit the following:

- Official transcript from the accredited degree conferring institution
- Official transcripts from all accredited institutions showing graduate-level course work
- Official or unofficial transcripts from other institutions attended may be requested to verify prerequisite knowledge for certain academic programs

Applicants with a master's degree are required to submit the following:

- Official transcript from the accredited degree conferring institution
- Official or unofficial transcripts from the undergraduate degree conferring institution or other institutions attended may be requested to verify prerequisite knowledge for certain academic programs

**For both undergraduate and graduate applicants, additional documentation may be required for admission and consideration of credit from military, licensure, or other documented experiential learning.

(For applicants with schooling outside the U.S., please see the International Student section of the catalog, p. 17.)

FORMER EMBRY-RIDDLE GRADUATE STUDENTS

A new application will be required for students whose attendance at the University is interrupted for any of the following:

- Enrollment at another institution
- A matriculated student that fails to enroll within two years from the ending date of their last course
- A non-matriculated student that fails to enroll within one year of admission
- Academic dismissal from the University
- Student does not complete the degree requirements of a graduate program within seven years from the date of initial enrollment in the graduate program

Any student dismissed must first satisfy the conditions for readmission as indicated in the letter of dismissal. The dismissing campus renders the decision for readmission. 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.

CONDITIONAL ADMISSION

GRADUATE

- 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 will remain 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.

NON-DEGREE SEEKING AND TRANSIENT GRADUATE STUDENTS

Embry-Riddle recognizes that working adults may be interested in furthering their education for professional and/or self-enhancement and not to pursue a degree with Embry-Riddle. We also recognize that transient students, those pursuing a degree with another institution, may wish to take a course(s) with Embry-Riddle. For these reasons Embry-Riddle allows students who meet admission requirements to take up to 12 semester hours as a non-degree seeking or transient student. Official or unofficial transcripts must be submitted to the University before the student is allowed to enroll in courses. Non-degree seeking and transient students must meet the same academic standards as degree-seeking students. For students that subsequently apply for entry into a degree program, additional documentation may be required.

STUDENTS SEEKING 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. 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.

INTERNATIONAL STUDENTS

UNDERGRADUATE AND GRADUATE

An international student is defined as any non-United States citizen intending to study at campuses located outside the United States, students who live outside of the United States enrolled through the Online Division of our Worldwide Campus, as well as non-residents, non-immigrants planning to study in the United States.

International applicants must submit the application for admission 90 days prior to the term start date. The following items are also required:

1. Foreign Credential Evaluation

All international undergraduate and graduate applicants who have any educational experience outside the United States are required to provide an official course-by-course evaluation in English, to include the cumulative grade point average. The evaluation must be certified by one of the Foreign Credential Evaluation Services (FCE) approved by Embry-Riddle. A fee is charged for the translation service and must be paid by the applicant directly to the FCE.

If a student has graduate level work (either transfer or advanced standing) that is indicated on the foreign credential evaluation as meeting the requirements for an undergraduate degree, it will not be reviewed for applicability toward an ERAU graduate degree.

Educational systems differ country by country. The following services are well versed in providing a comparison of a country's education system to that of the United States system. This comparison includes education levels, credits and grades.

The report is considered official only if mailed from the agency directly to ERAU. The approved agencies are:

World Education Services, Inc.
Bowling Green Station
P.O. Box 5087
New York, NY 10274-5087
Phone: (212) 966-6311
Fax: (212) 739-6100
www.wes.org

Educational Credential Evaluators (ECE)
P.O. Box 514070
Milwaukee, WI 53203-3470
Phone: (414) 289-3400
www.ece.org

International Education Research Foundation, Inc.
P.O. Box 3665
Culver City, CA 90231
Phone: (310) 258-9451
Fax: (310) 342-7086
www.ierf.org

Josef Silny & Associates, Inc.
International Education Consultants
7101 SW 102 Avenue
Miami, FL 33173
Phone: (305) 273-1616
Fax: (305) 273-1338
Translations: (305) 273-1984
www.jsilny.com

American Association of Collegiate Registrars and Admissions Officers (AACRAO)
One DuPont Circle NW, Suite 520
Washington, DC 20036
Phone: (202) 293-9161
Fax: (202) 872-8857
www.aacrao.org/international/foreignEdCred.cfm

2. English Language Requirements

a.) Applicants for whom English is not the primary language must:

1. 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) **-OR-**
2. Attain a minimum score on the International English Language Testing System (IELTS) of 6.0 **-OR-**
3. Earn transferable credit for a course that is the equivalent of ENGL 123 English Composition at an accredited postsecondary institution **-OR-**
4. Evidence of attendance and graduation from a secondary school in which the language of instruction was English

b.) TOEFL and IELTS scores must be sent directly to Embry-Riddle by the testing agency. For testing dates and locations, please use the contact information on the following page.

TOEFL Services
Education Testing Service
P.O. Box 6151
Princeton, NJ 08541-6151
Phone: (609) 771-7100
Toll Free: (877) 863-3546
Fax: (610) 290-8972
www.ets.org

IELTS: www.ielts.org

3. The following campuses are authorized by the Department of Homeland Security/Student Exchange Visitor Program to enroll students who have obtained the F-1 student visa:
Everett, WA
Fort Lauderdale, FL
Houston, TX
Miami, FL
Oakland, CA
Oklahoma City, OK
Orlando, FL
Phoenix-Chandler, AZ
Seattle, WA
Sky Harbor, AZ

4. For international students intending to study in the U.S. on F-1 student visas, an official bank letter, loan or scholarship letter must be provided with an affidavit of financial support.
Upon acceptance for admission and upon receipt of financial documentation, the Worldwide PDSO (Principal Designated School Official) will issue the Certificate of Eligibility (I-20) form allowing the student to apply for the F-1 visa. After obtaining the F-1 visa, an advance deposit covering the first two terms is required.

A DSO (Designated School Official) is located at each approved location assisting the F-1 student to maintain immigration status.

The PDSO serves as point of contact for all 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 an International Student Counselor in the Admissions, Advising and Student Affairs Office, via e-mail at wwintstc@erau.edu or call toll free (800) 359-3728, option 5 or (386) 226-6912.

International students interested in attending any European Worldwide campuses may contact:

Embry-Riddle Aeronautical University
International 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
-OR-
International students interested in attending our Berlin Campus may contact:
Embry-Riddle Aeronautical University
International Regional Office
Europaallee 6
D-67657 Kaiserslautern
Germany

MATRICULATION

Students are eligible for an Embry-Riddle transcript showing credit awarded from other sources toward their degree, after they have matriculated. Matriculation occurs when an applicant has been officially accepted for admission, has enrolled in an Embry-Riddle course within one year of the date of admission, and has maintained that enrollment beyond the drop period. If an applicant fails to maintain enrollment beyond the drop period, he/she will need to reapply for admission.

CONTINUING STUDENT STATUS

Continuing student status is maintained through enrollment beyond the drop period in at least one course within a two-year period. If a student fails to maintain enrollment beyond the drop period, he/she will forfeit active student status, need to reapply for admission, and the matriculation process will begin again. Courses previously taken with ERAU will not immediately matriculate a returning student.

COMPUTER USE

Student access to a computer is required for all Worldwide students. Computer skills are a necessary component of today's aviation and aerospace professional toolkit. A majority of courses use the Blackboard™ learning platform and many programs and courses also utilize common use software such as word processing, presentation software, and

computational software. Access to the ERAU intranet and the online library databases are also important benefits in exploring course subject matter.

ERAU STUDENT E-MAIL ACCOUNT

ERAU issues both an e-mail and Embry-Riddle Network for Information Exchange (ERNIE) account to provide access to online services when an application for admission has been submitted. These accounts are made available to students via ERNIE at (ernie.erau.edu). 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. If you have not registered for a course, your system access will be terminated one year from your date of admission or one year from your application date if you have not yet been admitted.

DISCLOSURE OF CRIMINAL CONVICTIONS

Embry-Riddle Aeronautical University reserves the right to consider a student's or applicant's character, academic and behavioral record, criminal record, or other pertinent information in granting or denying admission; making related assignments or schedules, or; imposing reasonable, appropriately-tailored requirements to protect the campus environment. Unless specifically exempted from disclosure by law or order of court, students and applicants have an affirmative duty to immediately disclose any criminal convictions or charges against them for violent offenses, offenses against minors, and/or offenses that are punishable as a felony.

ASSESSMENT EXAMINATIONS

The purpose of the English and Mathematics assessments is to help ensure that students are initially placed in English and Mathematics courses in which they can be successful, and which will prepare them for subsequent courses. ERAU Worldwide English and Mathematics placement policies are as follows:

English

1. All undergraduate students enrolling in ERAU for the first time must take the English assessment examination.

2. Students who do not possess transfer credit equivalent to ENGL 106 or above, and who score less than 70% on the assessment examination must take ENGL 106 and pass it with a grade of "C" or better.

3. The assessment exam may indicate that a student with college credit in a course equivalent to ENGL 106 or above, is highly unlikely to be successful in ENGL 123, ENGL 221 or ENGL 222. Because of the high probability of failure in these courses, students who possess transfer credit equivalent to ENGL 106 or above and who score less than 70% on the placement examination are strongly encouraged but not required to take ENGL 106.

4. The assessment examination may be taken one time only; there will be no opportunity to re-take the assessment after the first time it is completed and scored.

Mathematics

1. All undergraduate students enrolling in ERAU for the first time must take the Mathematics assessment examination.

2. Students who do not possess transfer credit equivalent to MATH 106 or above, and who score less than 70% on the assessment examination must take MATH 106 and pass it with a grade of "C" or better.

3. The assessment examination may indicate that a student with college credit in a course equivalent to MATH 106 or above is highly unlikely to be successful in MATH 111 or MATH 140. Because of the high probability of failure in these courses, students who possess transfer credit equivalent to MATH 106 or above, and who score less than 70% on the placement examination, are strongly encouraged, but not required to, take MATH 106.

4. The assessment examination may be taken one time only; there will be no opportunity to re-take the assessment after the first time it is completed and scored.

The professors all understand that you're a working professional and you have other priorities. For example, I am still active in the Army Reserve, so there were times that I had to miss the first week or last week of class. I made arrangements with my professors and they made it work for me. At another school, I would have had to drop the class for missing that much.

Jenny Iglesias-Hamann
Alumni, Class of 2010
United States Army Reserve
Airspace Analyst
Greater Orlando Aviation Authority

I chose ERAU because of their reputation among all sectors of the aviation industry. In the 2 1/2 years I attended the university, the school continually exceeded all of my expectations in regard to aviation education. The class curriculum and professors I had the privilege being taught by prepared me for the rigors of management in the flight training industry.

Oliver Kroos
Current Student
Director of Flight Training
Phoenix East Aviation

DEGREES

Associate/Bachelor of Science in Aviation Business Administration

Associate/Bachelor of Science in Aviation Maintenance

Associate/Bachelor of Science in Professional Aeronautics

Associate/Bachelor of Science in Technical Management

Bachelor of Science in Technical Management – Engineering Sciences

Bachelor of Science in Technical Management – Logistics

Bachelor of Science in Technical Management – Management of Information Systems

Bachelor of Science in Technical Management – Occupational Safety & Health

Bachelor of Science in Transportation

MINOR COURSES OF STUDY

Airport Management
Aviation Safety
Engineering Sciences
Helicopter Operations and Safety
International Relations
Logistics
Management
Occupational Safety and Health
Security and Intelligence

UNDERGRADUATE CERTIFICATES OF COMPLETION

Airport Management
Aviation Maintenance Technology Part 65
Aviation Safety
Helicopter Operations and Safety
Logistics
Management
Occupational Safety and Health
Pre-Engineering Studies
Security and Intelligence
Space Studies
Supply Chain Management

FIND IT ONLINE View degrees and certificate information online at: worldwide.erau.edu/degrees-programs

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.

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 **with a research component.**

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. Three hours may be satisfied by placement, examination, or course completion. The other three hours must be completed by taking a course that has 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 and Economics,**
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, government, 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.

WORLDWIDE GENERAL EDUCATION CORE COMPETENCIES

Critical Thinking

The student will apply knowledge at the synthesis level to define and solve problems within professional and personal environments.

Quantitative Reasoning

The student will demonstrate the use of digitally-enabled technology and analysis techniques to interpret data for the purpose of drawing valid conclusions and solving associated problems.

Information Literacy

The student will conduct meaningful research, including gathering information from primary and secondary sources and incorporating and documenting source material in their writing.

Communication

The student will communicate concepts in written, digital and oral forms to present technical and non-technical information.

Scientific Literacy

The student will be able to analyze scientific evidence as it relates to the physical world and its interrelationship with human values and interests.

Lifelong Personal Growth

The student will be able to demonstrate the skills needed to enrich the quality of life through activities which enhance and promote lifetime learning.

STATE OF NEVADA COURSE REQUIREMENT

All students who obtain their degree from an Embry-Riddle Worldwide Campus in the State of Nevada must complete a course that covers the United States and State Constitution. Students may satisfy this requirement by completing GOVT 320 American National Government, or through transfer credit of an equivalent course from another institution. This requirement does not apply to students taking courses through Worldwide Online outside of the State of Nevada.

AVIATION BUSINESS ADMINISTRATION

Bachelor of Science or Associate in Science

The Aviation Business Administration program is designed for students seeking to lead and manage in the world of aviation. Balancing key aviation concepts with advanced business strategy, the curriculum provides students a solid foundation of industry expertise while developing the sharp business acumen demanded at the highest levels of an organization. The program explores all facets of business administration, including economics, aeronautical science, accounting, marketing, management and global business strategies. Upon graduation, students will be eligible and qualified candidates for desirable staff, operational, and executive positions within the civilian and military sectors, as well as within the business community.

This degree is designed to accommodate the transfer student who has either completed an appropriate associate degree at an accredited college or university (generally 60 credit hours) or a minimum of 60 hours in coursework from the general education categories of Communication Theory and Skills, Mathematics, Physical Sciences, Computers, Humanities and Social Sciences. Prerequisites not previously met may be taken from open elective courses.

Associate Degree Credit*		Students seeking Embry-Riddle Associate Degree or transfer without an Associate Degree	
-OR-			
Minimum of 60 Credit Hours in Coursework**:	60	General Education:	36
Business Core:	36	Program Support:	15
Aviation Management:	15	Business Core:	36
Open Electives:	9	Aviation Management:	15
		Open Electives:	18
Total Requirements:	**120**		**120**

* Assumes University general education requirements have been met and no further credit hours are required in this area.
** Minimum of 60 credit hours in coursework that must be composed of courses from the following areas: Communication Theory and Skills, Mathematics, Physical Sciences, Computers, Business, Economics, Management, Humanities, and/or Social Sciences.

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 prerequisites are met. Courses from other institutions are acceptable if they fall into these broad categories and are at the level specified. Students seeking an associate degree may complete or transfer the following general education courses.

DEGREE REQUIREMENTS	A.S.	B.S.
Communication Theory and Skills:		
ENGL 123 English Composition	3	3
Speech/English	6	6
Humanities/Social Sciences*:		
Humanities lower or upper-level elective	3	3
Social Science lower or upper-level elective History/Government/ Social Science/Psychology	3	3
* (For B.S. – one course must be an upper-level Humanities or Social Science elective)		
Physical and Life Science lower-level elective:		
Physics/Biology/Meteorology	6	6
Mathematics:		
MATH 111 & MATH 112, **-OR-** MATH 140 & MATH 142, MATH 320*	3	6
* MATH 320 may be substituted as the second course in the series.		
Computer Science:		
CSCI 109 Introduction to Computers and Applications	3	3
Economics:		
ECON 210 Microeconomics	3	3
ECON 211 Macroeconomics	3	3
Total Credits	**33**	**36**

PROGRAM SUPPORT:

Course	Title	Credits	
AMGT 202	Aeronautical Science for Management	3	3
MATH 211	Statistics with Aviation Applications		
	-OR-		
MATH 222	Business Statistics	3	3
MGMT 201	Principles of Management	3	3
MGMT 210	Financial Accounting	3	3
MGMT 221	Introduction to Management Information Systems	3	3
Total Credits		**15**	**15**

BUSINESS CORE:

BSAB 311	Marketing	0	3
BSAB 312	Managerial Accounting	0	3
BSAB 314	Human Resource Management	0	3
BSAB 317	Organizational Behavior	0	3
BSAB 320	Business Information Systems	0	3
BSAB 325	Social Responsibility and Ethics in Management	0	3
BSAB 332	Corporate Finance I	0	3
BSAB 335	International Business	0	3
BSAB 371	Leadership	0	3
BSAB 390	Business Law	0	3
BSAB 420	Management of Production and Operations	0	3
BSAB 436	Strategic Management	0	3
Total Credits		**0**	**36**

AVIATION MANAGEMENT:	**0**	**15**
300-400 upper-level Management courses.		
OPEN ELECTIVES	**12**	**9/18***
*Students possessing an associate degree will complete 9 hours of open electives. Students seeking the associate degree with Embry-Riddle will complete 18 hours of open electives.		
TOTAL DEGREE REQUIREMENTS	**60**	**120**

AVIATION MAINTENANCE

Bachelor of Science or Associate in Science

The Associate in Science in Aviation Maintenance degree 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 and Powerplant Certificate are awarded 24 credit hours toward their degree. Others may earn maintenance credit as part of the overall curriculum. Students may also apply credit toward a Bachelors of Science in Aviation Maintenance degree.

In this degree program, the experienced aviation maintenance technician will gain a comprehensive business foundation that complements their maintenance background. Students who enter the degree program holding an FAA Airframe & Powerplant Certificate are awarded 30 credit hours toward their degree. As with the Associate in Science in Aviation Maintenance program, students may also earn maintenance credit as part of the overall curriculum. In addition to gaining critical skills needed to succeed in an aviation maintenance career, students will specialize in one of two maintenance functions; Management or Safety.

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 120 credit hours.

ASSOCIATE DEGREE REQUIREMENTS

CORE COURSES:

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

AVIATION MAINTENANCE
(Continued)

Electives: Aviation Maintenance, Aeronautical Science, Avionics Technology, Management, Computer Science, Electrical Engineering Technology.		6
Total Credits		**24**

-AND-

36 designated credits as follows:
Embry-Riddle courses in the general education categories of Communication Theory and Skills, and Humanities and Social Sciences may be chosen from as listed, 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

Communication Theory and Skills	6
ENGL 123 English Composition	3
Lower-level Humanities	3
Lower-level Social Sciences	6

Course	Title	Credits
AMGT 202	Aeronautical Science for Management	3
MATH 111	College Mathematics for Aviation I	
	-OR-	
MATH 140	College Algebra	3
MATH 112	College Mathematics for Aviation II	
	-OR-	
MATH 142	Trigonometry	
	-OR-	
MATH 211	Statistics with Aviation Applications	
	-OR-	
MATH 222	Business Statistics	3
MGMT 120	Introduction to Computer-Based Systems	
	-OR-	
CSCI 109	Introduction to Computers and Applications	3
MGMT 201	Principles of Management	3
PHYS 102	Explorations in Physics	3
Total Credits:		**36**

TOTAL DEGREE REQUIREMENTS	**60**

BACHELOR DEGREE REQUIREMENTS

MAINTENANCE CORE COURSES:

Course	Title	Credits
FAA Airframe & Powerplant Maintenance Certificate		30
	- OR -	
Aviation Maintenance Technology Course Work		
AMNT 240	General Aeronautics and Applications	3
AMNT 260	Aircraft Electrical Systems Theory	3
AMNT 270	Airframe Structures and Applications	3
AMNT 271	Airframe Systems and Applications	3
AMNT 280	Powerplant Theory and Applications	3
AMNT 281	Aircraft Propulsion Systems and Applications	3
ELECTIVES: Aviation Maintenance, Aeronautical Science, Avionics Technology, Management, Computer Science, Electrical Engineering Technology.		12
Total Credits		**30**

Communication Theory and Skills	6
ENGL 123 English Composition	3
Mathematics:	
MATH 111 & MATH 112, **-OR-** MATH 140 & MATH 142	6
CSCI 109 Introduction to Computers and Applications	3
Physical and Life Sciences elective	3
Humanities Lower-level elective	3
Social Sciences Lower-level elective	3
Humanities/Social Sciences Upper-level elective	3
ECON 210 Microeconomics	3
ECON 211 Macroeconomics	3
Total Credits	**36**

PROGRAM SUPPORT:

MATH 211	Statistics with Aviation Applications	
	-OR-	
MATH 222	Business Statistics	3
PHYS 102	Explorations in Physics	3
Total Credits		**6**

PROGRAM CORE:

AMGT 202	Aeronautical Science for Management	3
ASCI 419	Aviation Maintenance Management	3
ASCI 490	Aeronautical Science Capstone Course	3
MGMT 201	Principles of Management	3
MGMT 210	Financial Accounting	3
MGMT 221	Introduction to Management Information Systems	3
MGMT 311	Marketing	
	-OR-	
MGMT 325	Social Responsibility and Ethics in Management	3
MGMT 314	Human Resource Management	
	-OR-	
MGMT 317	Organizational Behavior	3
MGMT 324	Aviation Labor Relations	3
MGMT 406	Strategic Management of Technical Operations	3
Total Credits		**30**

PROGRAM SPECIALIZATIONS:

MANAGEMENT

In aviation maintenance, there is a continual need for the comprehensive management of maintenance programs. The Management specialization provides students of Aviation Maintenance an integrated understanding of the theories, concepts, and practical applications of logistics, procurement, production, life cycle analysis, and project management.

Course	Title	Credits
MGMT 411	Logistics	3
MGMT 420	Management of Production and Operations	3
MGMT 422	Life Cycle Analysis and Systems and Programs in Aviation	3
MGMT 424	Project Management	3
Upper-Level Management Electives		6
Total Credits		**18**

-OR-

SAFETY

In aviation maintenance, there is a recognized need for safety professionals. The Safety specialization provides students of Aviation Maintenance an opportunity to complement their practical experience with a study of aviation safety, focusing on the theories and concepts of human factors, mechanical and structural factors, system safety, and maintenance related safety practices.

Course	Title	Credits
SFTY 320	Human Factors in Aviation Safety	3
SFTY 335	Mechanical and Structural Factors in Aviation Safety	3
SFTY 409	Aviation Safety	3
SFTY 440	System Safety Management	3
Upper-Level Safety Electives		6
Total Credits		**18**

TOTAL DEGREE REQUIREMENTS **120**

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, Security and Intelligence, or Occupational Safety and Health. At the end of the bachelor's degree, a comprehensive capstone project ties the entire learning experience together, meeting program outcomes, and providing a positive foundation for career advancement.

For those just entering the workforce, or those who may be looking for career progression, the Professional Aeronautics 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	9 semester hours
Maximum	15 semester hours

Bachelor Degree:

Minimum	18 semester hours
Maximum	30 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, Security, Aviation History, Transportation, and Engineering.

Sources of prior learning credit include the following:

1. Transfer credit earned at accredited degree granting 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. Validated Advanced Placement (VAP) process.

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.

DEGREE REQUIREMENTS

AVIATION AREA OF CONCENTRATION	A.S. 9-15	B.S. 18-30

Make up shortages with HIST 130 History of Aviation in America, TRAN 321 Air Transportation Systems, and non-duplicating courses from the following disciplines: Aeronautical Science, Aviation Maintenance, Air Traffic Control, Safety, Security, and Engineering.

Communication Theory and Skills:		
ENGL 123 English Composition	3	3
Speech/English	6	6
Humanities/Social Sciences*:		
Humanities lower or upper-level elective	3	3
Social Science lower or upper-level elective History/Government/ Social Science/Psychology	3	3
* (For B.S. – one course must be an upper-level Humanities or Social Science elective)		
Physical and Life Science lower-level elective:		
PHYS 102 Explorations of Physics	3	3
WEAX 201 Meteorology I	0	3
Mathematics:		
MATH 111 & MATH 112, **-OR-** MATH 140 & MATH 142	3	6
Computer Science:		
CSCI 109 Introduction to Computers and Applications	3	3
Economics: (AS - ECON 210 or 211)		
ECON 210 Microeconomics	3	3
ECON 211 Macroeconomics	0	3
Total Credits	**27**	**36**

PROGRAM SUPPORT:

Course	Title	A.S. Credits	B.S. Credits
AMGT 202	Aeronautical Science for Management	3	3
ASCI 254	Aviation Legislation	3	3
ASCI 405	Aviation Law	0	3
MATH 211	Statistics with Aviation Applications **-OR-**		
MATH 222	Business Statistics	3	3
MGMT 201	Principles of Management	3	3
MGMT 210	Financial Accounting	0	3
MGMT 221	Introduction to Management Information Systems	0	3
Total Credits		**12**	**21**

PROFESSIONAL DEVELOPMENT CORE

ASCI 309	Basic Aerodynamics **-OR-**		
ASCI 310	Basic Aircraft Performance	0	3
ASCI 490	Aeronautical Science Capstone Course	0	3
MGMT 406	Strategic Management of Technical Operations	0	3
SFTY 409	Aviation Safety	0	3
Total Credits		**0**	**12**

PROFESSIONAL DEVELOPMENT ELECTIVES (UPPER-LEVEL)	0	21

Select from courses in Aeronautical Science, Air Traffic Control, Management, Economics, Safety, Security, Transportation and Engineering.

OPEN ELECTIVES (UPPER OR LOWER-LEVEL)	6-12	0-12
TOTAL DEGREE REQUIREMENTS	**60**	**120**

TECHNICAL MANAGEMENT

Bachelor of Science or Associate in Science

The Technical Mangement degree is designed to prepare students for a variety of managerial/supervisory positions in today's electronic business environment. The program will teach students how to think critically, employ applied research and problem-solving skills to evaluate, manage and improve business processes.

Many working adults with 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 in Science in Technical Management programs could be the key to gaining the experience and knowledge to make the transition to management.

The Technical Management degree combines business, information systems, and management courses into one degree. The business coursework covers such disciplines as accounting, economics, finance, and business concepts. The management courses help students develop their management, leadership, marketing and organizational behavior skills. Additionally, the business information system courses teach students how to approach, understand, and resolve problems inherent with the implementation and control of a variety of such systems.

The Technical Management degree links technical expertise with business and management skills to form a well-rounded education. This degree opens career opportunities in a number of fields. Regardless of background, Technical Management students gain valuable skills, learning how to organize, plan, staff, and coordinate resources of any organization toward its goals and objectives.

One exciting benefit of this program is that students can receive credits toward their Technical Specialty (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.

This degree is designed to accommodate the transfer student who has either completed an appropriate associate degree at an accredited college or university (generally 60 credit hours) or a minimum of 60 hours in coursework from the general education categories of Communication Theory and Skills, Mathematics, Physical Sciences, Computers, Humanities and Social Sciences. Prerequisites not previously met may be taken from open elective courses. Within the Bachelor of Science program, students may also choose an area of specialization in Engineering Sciences, Logistics, Management of Information Systems, or Occupational Safety and Health. Depending on the specialization, graduates often go on to careers in fields such as military logistics, public or private transportation, or managers in many diverse fields.

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, 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 English Composition	3	3
Speech/English	6	6
Humanities/Social Sciences*:		
Humanities lower or upper-level elective	3	3
Social Science lower or upper-level elective		
History/Government/ Social Science/Psychology	3	3
* (For B.S. – one course must be an upper-level Humanities or Social Science elective)		
Physical and Life Science lower-level elective:		
Physics/Biology/Meteorology	6	6
Mathematics:		
MATH 111 & MATH 112, **-OR-** MATH 140 & MATH 142, MATH 320*	3	6
* MATH 320 may be substituted as the second course in the series.		

Computer Science:			
CSCI 109 Introduction to Computers and Applications		3	3
Economics:			
ECON 210 Microeconomics		3	3
ECON 211 Macroeconomics		3	3
Total Credits		**33**	**36**

PROGRAM SUPPORT:

Course	Title	Credits	
AMGT 202	Aeronautical Science for Management	3	3
MATH 211	Statistics with Aviation Applications		
	-OR-		
MATH 222	Business Statistics	3	3
MGMT 201	Principles of Management	3	3
MGMT 210	Financial Accounting	3	3
MGMT 221	Introduction to Management Information Systems	3	3
Total Credits		**15**	**15**

BUSINESS CORE:

Course	Title	Credits	
MGMT 311	Marketing	0	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 Ethics in Management	0	3
MGMT 335	International Business	0	3
MGMT 371	Leadership	0	3
MGMT 390	Business Law	0	3
MGMT 436	Strategic Management	0	3
Total Credits		**0**	**30**

MANAGEMENT ELECTIVES:	**0**	**9**
300-400 upper-level Management courses.		
OPEN ELECTIVES:	**3**	**15**
TOTAL DEGREE REQUIREMENTS	**60**	**120**

TECHNICAL MANAGEMENT
ENGINEERING SCIENCES SPECIALTY
Bachelor of Science

The Engineering Sciences Specialty is designed to help students develop a conceptual understanding of what engineering, the engineering design process, technology and technology-relatd concepts are. This specialty is designed to give students a foundation for supervising or managing with an understanding of engineering tools and concepts.

To earn the Technical Management degree, with an Engineering Sciences Specialty, a degree-seeking student must complete the Program Support, Business Core, and Engineering Support courses without substitution, and the Management Electives. The Engineering Sciences Specialty requirements must be satisfied by completing courses from the following list as noted. Successful completion of this program of study will also result in award of the Pre-Engineering Studies Certificate of Completion.

ENGINEERING SCIENCE COURSES:

Course	Title	Credits
PHYS 150	Physics I for Engineers	3
PHYS 160	Physics II for Engineers	3
PHYS 250	Physics III for Engineers	3
Take three of the following courses:		
CESC 220	Digital Circuit Design	3
CSCI 210	Scientific Programming	3
ESCI 201	Statics	3
ESCI 202	Solid Mechanics	3
ESCI 204	Dynamics	3
ESCI 206	Fluid Mechanics	3
ENGINEERING SCIENCES SPECIALTY		**18**

TECHNICAL MANAGEMENT
ENGINEERING SCIENCES SPECIALTY
(Continued)

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. Because of the mathematics concentration required for this Specialty, MATH 142 (or equivalents) may be needed to satisfy prerequisite requirements; they are not part of the degree requirements for the Engineering Sciences Specialty.

Communication Theory and Skills:	
ENGL 123 English Composition	3
Speech/English	6
Humanities/Social Sciences*:	
Humanities lower or upper-level elective	3
Social Science lower or upper-level elective	
History/Government/Social Science/Psychology	3
* (For B.S. – one course must be an upper-level Humanities or Social Science elective)	
Physical and Life Science lower-level elective:	
Physics/Biology/Meteorology	6
Mathematics:	
MATH 111 & MATH 112, **-OR-**	
MATH 140 & MATH 142, MATH 320*	6
* MATH 320 may be substituted as the second course in the series.	
Computer Science:	
CSCI 109 Introduction to Computers and Applications	3
Economics:	
ECON 210 Microeconomics	3
ECON 211 Macroeconomics	3
Total Credits	**36**

PROGRAM SUPPORT:

AMGT 202	Aeronautical Science for Management	3
MATH 211	Statistics with Aviation Applications	
	-OR-	
MATH 222	Business Statistics	3
MGMT 201	Principles of Management	3
MGMT 210	Financial Accounting	3
MGMT 221	Introduction to Management Information Systems	3
Total Credits		**15**

BUSINESS CORE:

MGMT 311	Marketing	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 371	Leadership	3
MGMT 390	Business Law	3
MGMT 436	Stategic Management	3
Total Credits		**30**

ENGINEERING SUPPORT:

ENGR 120	Graphical Communications	2
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
Total Credits		**18**

OPEN ELECTIVES:	**3**
300-400 level courses	
TOTAL DEGREE REQUIREMENTS	**120**

TECHNICAL MANAGEMENT
LOGISTICS SPECIALTY
Bachelor of Science

The Technical Management degree is designed to prepare students for a variety of managerial/supervisory positions in today's electronic business environment. The program will teach students how to think critically, employ applied research and problem-solving skills to evaluate, manage, and improve business processes.

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 444	Principles of Supply Chain Management	3
MGMT 449	Strategic Marketing Management	3

LOGISTICS TECHNICAL SPECIALTY **15**
(Take 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.

Communication Theory and Skills:	
ENGL 123 English Composition	3
Speech/English	6
Humanities/Social Sciences*:	
Humanities lower or upper-level elective	3
Social Science lower or upper-level elective History/Government/Social Science/Psychology	3
* (For B.S. – one course must be an upper-level Humanities or Social Science elective)	
Physical and Life Science lower-level elective:	
Physics/Biology/Meteorology	6
Mathematics:	
MATH 111 & MATH 112, **-OR-** MATH 140 & MATH 142, MATH 320*	6
*MATH 320 may be substituted as the second course in the series.	
Computer Science:	
CSCI 109 Introduction to Computers and Applications	3
Economics:	
ECON 210 Microeconomics	3
ECON 211 Macroeconomics	3
Total Credits	**36**

PROGRAM SUPPORT:		
AMGT 202	Aeronautical Science for Management	3
MATH 211	Statistics with Aviation Applications	
	-OR-	
MATH 222	Business Statistics	3
MGMT 201	Principles of Management	3
MGMT 210	Financial Accounting	3
MGMT 221	Introduction to Management Information Systems	3
Total Credits		**15**

BUSINESS CORE:		
MGMT 311	Marketing	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 371	Leadership	3
MGMT 390	Business Law	3
MGMT 436	Strategic Management	3
Total Credits		**30**

MANAGEMENT ELECTIVES: **9**
300-400 Upper-level courses

OPEN ELECTIVES (Lower-level): **15**

TOTAL DEGREE REQUIREMENTS **120**

TECHNICAL MANAGEMENT
MANAGEMENT OF INFORMATION SYSTEMS SPECIALTY
Bachelor of Science

The Technical Management degree is designed to prepare students for a variety of managerial/supervisory positions in today's electronic business environment. The program will teach students how to think critically, employ applied research and problem-solving skills to evaluate, manage, and improve business processes.

As information systems become more advanced and increasingly global, the need for Information Systems specialists increases as well. The Management of Information Systems (MIS) Specialty focuses on the business processes of organizations and the information technology utilized in those organizations. The program prepares MIS students to learn to design, implement, and maintain effective information systems in organizations. The MIS specialty is designed to develop the skills and knowledge necessary for information systems development and support positions. MIS jobs such as business analyst and chief technology officer are reported among the most recession-proof jobs. In conjunction with the Technical Management degree curriculum, this program gives students a foundation for supervising or managing different components of the organization's information systems. To earn the Technical Management degree with the MIS Specialization, degree-seeking students must complete the management electives as listed in the catalog, and satisfy the MIS Technical Specialty and upper-level open elective requirements as listed below. Graduates of this program may find new opportunities in aviation or non-aviation related fields.

MANAGEMENT INFORMATION SYSTEMS COURSES:

Course	Title	Credits
MGMT 321	Aviation/Aerospace Systems Analysis Methods	3
MGMT 394	Information Security Management	3
MGMT 422	Life Cycle Analysis for Systems and Programs in Aviation/Aerospace	3
MGMT 492	Information Systems Project Management	3
MGMT 494	Aviation Information Systems	3

MANAGEMENT OF INFORMATION SYSTEMS TECHNICAL 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	3
Speech/English	6
Humanities/Social Sciences*:	
Humanities lower or upper-level elective	3
Social Science lower or upper-level elective History/Government/Social Science/Psychology	3
* (For B.S. – one course must be an upper-level Humanities or Social Science elective)	
Physical and Life Science lower-level elective:	
Physics/Biology/Meteorology	6
Mathematics:	
MATH 111 & MATH 112, **-OR-** MATH 140 & MATH 142, MATH 320*	6
*MATH 320 may be substituted as the second course in the series.	
Computer Science:	
CSCI 109 Introduction to Computers and Applications	3
Economics:	
ECON 210 Microeconomics	3
ECON 211 Macroeconomics	3
Total Credits	**36**

PROGRAM SUPPORT:

AMGT 202	Aeronautical Science for Management	3
MATH 211	Statistics with Aviation Applications	
	-OR-	
MATH 222	Business Statistics	3
MGMT 201	Principles of Management	3
MGMT 210	Financial Accounting	3
MGMT 221	Introduction to Management Information Systems	3
Total Credits		**15**

BUSINESS CORE:

MGMT 311	Marketing	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 371	Leadership	3
MGMT 390	Business Law	3
MGMT 436	Strategic Management	3
Total Credits		**30**

MANAGEMENT ELECTIVES: **9**
300-400 upper-level courses

OPEN ELECTIVES (LOWER-LEVEL): **15**

TOTAL DEGREE REQUIREMENTS **120**

TECHNICAL MANAGEMENT
OCCUPATIONAL SAFETY AND HEALTH SPECIALTY
Bachelor of Science

The Technical Management degree is designed to prepare students for a variety of managerial/supervisory positions in today's electronic business environment. The program will teach students how to think critically, employ applied research and problem-solving skills to evaluate, manage, and improve business processes.

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 Specialty, degree seeking students must complete the electives, as listed in the catalog, and satisfy the Occupational Safety and Health Specialty requirements as listed below.

SAFETY COURSES:

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 and Toxicology	3
SFTY 360	Construction Safety	3
SFTY 365	Fire Protection	3
SFTY 410	Design of Engineering Hazard Controls	
	-OR-	
SFTY 420	Systems Design for Fire and Life Safety	3

OCCUPATIONAL SAFETY AND HEALTH SPECIALTY **21**

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	3
Speech/English	6
Humanities/Social Sciences*:	
Humanities lower or upper-level elective	3
Social Science lower or upper-level elective History/Government/Social Science/Psychology	3
* (For B.S. – one course must be an upper-level Humanities or Social Science elective)	
Physical and Life Science lower-level elective:	
Physics/Biology/Meteorology	6
Mathematics: MATH 111 & MATH 112, **-OR-** MATH 140 & MATH 142, MATH 320*	6
*MATH 320 may be substituted as the second course in the series.	
Computer Science:	
CSCI 109 Introduction to Computers and Applications	3
Economics:	
ECON 210 Microeconomics	3
ECON 211 Macroeconomics	3
Total Credits	**36**

PROGRAM SUPPORT:

AMGT 202	Aeronautical Science for Management	3
MATH 211	Statistics with Aviation Applications	
	-OR-	
MATH 222	Business Statistics	3
MGMT 201	Principles of Management	3
MGMT 210	Financial Accounting	3
MGMT 221	Introduction to Management Information Systems	3
Total Credits		**15**

TECHNICAL MANAGEMENT
OCCUPATIONAL SAFETY AND HEALTH SPECIALTY
Bachelor of Science (Continued)

BUSINESS CORE:

MGMT 311	Marketing	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 371	Leadership	3
MGMT 390	Business Law	3
MGMT 436	Strategic Management	3
Total Credits		**30**

OCCUPATIONAL SAFETY AND HEALTH SUPPORT:

SFTY 341	Occupational Safety and Health Program Management	3
SFTY 440	System Safety Management	3
SFTY 450	Loss Control and Insurance	3
SFTY 470	Advanced Occupational Safety and Health Technology	3
Total Credits		**12**
OPEN ELECTIVES:		**6**
TOTAL DEGREE REQUIREMENTS		**120**

TRANSPORTATION
Bachelor of Science

The Bachelor of Science in Transportation degree is designed for adults who work or would like to work in the field of transportation. The program incorporates a systematic approach to developing concepts and constructs of the transportation industry as the critical element in the physical distribution function of our market economy. Students will be introduced to both the science and practical applications of five primary modes of transportation and their importance to political, social and economic forces. The elements of this program when integrated and sequenced as designed provide a dynamic and rigorous learning experience. The multiple modes of transportation are major components in the growth and expansion in world trade as well as a catalyst for globalization. The program is focused on the physical and economic aspects of transportation with a bias towards the aviation and aerospace industries. Graduates will be able to provide safe, effective and efficient use of air, highway, rail, water and pipelines assuring the continued success of their organizations. The program has been designed to meet the rigors of a career in transportation and provide the necessary knowledge required of a professional in transportation and related fields.

TRANSPORTATION AREA OF CONCENTRATION

The Transportation Area of Concentration (TAOC) is the degree area where credit for prior transportation learning and experience is placed. Maximum credit that can be awarded in the TAOC for the Bachelor Degree is 15 semester hours. Many students bring in all or part of this credit based on prior transportation training or experience. However, shortages in the credit required can be made up by taking courses from a list of specified electives.

Sources of prior learning credit include the following:

1. Transfer credit in transportation earned at accredited degree granting 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 Transportation Licenses and ratings as they relate to this degree.
4. Validated Advanced Placement (VAP) process.

DUPLICATE CREDIT

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

DEGREE REQUIREMENTS

TRANSPORTATION AREA OF CONCENTRATION: 15
Make up any shortages in this area from specified electives.

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	3
Speech/English	6
Mathematics	
MATH 111 & 112 **-OR-** MATH 140 & MATH 142	6
Physical and Life Sciences	
PHYS 102, PHYS 142	6
Humanities and Social Science Electives	
(HU/SS one must be upper-level)	6
Total Credits	**27**

PROGRAM SUPPORT:

Course	Title	Credits
CSCI 109	Introduction to Computers and Applications	3
ECON 210	Microeconomics	3
ECON 211	Macroeconomics	3
MATH 222	Business Statistics	3
MGMT 201	Principles of Management	3
Total Credits		**15**

TRANSPORTATION TOPICS:

Course	Title	Credits
TRAN 274	Transportation Science	3
TRAN 301	Transportation Legislation	3
TRAN 321	Air Transportation Systems	3
TRAN 331	Road and Highway Transportation	3
TRAN 341	Railroad Operations	3
TRAN 351	Urban Transportation and City Planning	3
TRAN 361	Marine Transportation	3
TRAN 371	Pipelines, Land Use, and the Environment	3
TRAN 401	Transportation and the Environment	3
TRAN 411	Strategic Intermodal Alliances	3
TRAN 421	Transportation Safety and Security	3
Total Credits		**33**

TRANSPORTATION SUPPORT TOPICS:

Course	Title	Credits
MGMT 210	Financial Accounting	3
MGMT 221	Introduction to Management Information Systems	3
MGMT 314	Human Resources Management	3
MGMT 390	Business Law	3
Total Credits		**12**

SPECIFIED ELECTIVES: 15

Transportation Specified Electives

ASCI 210	Space Transportation Systems	3
ASCI 254	Aviation Legislation	3
ASCI 317	Rotorcraft	3
ASCI 320	Commuter Aviation	3
ASCI 401	Aircraft Development and Operations	3
ASCI 405	Aviation Law	3
ASCI 412	Corporate and Business Aviation	3
ECON 420	Economics of Air Transportation	3
MGMT 415	Airline Management	3
SCTY 400	Airport Security	3
SCTY 485	Corporate Security	3
SFTY 311	Fundamentals of Occupation Safety and Health	3
SFTY 315	Environmental Compliance and Safety	3
SFTY 321	Ergonomics	3
SFTY 341	Occupational Safety and Health Program Management	3
SFTY 355	Industrial Hygiene and Toxicology	3
SFTY 365	Fire Protection	3
SFTY 410	Design of Engineering Hazard Control	3
SFTY 420	Systems Design for Fire and Life Safety	3
SFTY 440	System Safety Management	3
SFTY 450	Loss Control and Insurance	3
WEAX 201	Meteorology	3

Transportation related academic credit
Technical academic courses from regionally accredited colleges/universities, professional and/or military experience/training related to transportation military training must be recognized by the American Council on Education [ACE]), and specific professional training including technical credit recommended from transportation related occupations.

TRANSPORTATION CAPSTONE COURSE:

Course	Title	Credits
TRAN 490	Transportation Science Capstone Course	3

TOTAL DEGREE REQUIREMENTS 120

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 AIRPORT MANAGEMENT

Course	Title	Credits
ASCI 254	Aviation Legislation	3
MGMT 408	Airport Management	3
MGMT 412	Airport Planning and Design	3
Take two of the following courses: (ASCI 320, SFTY 345, SFTY 350, SFTY 409, ASCI 401, ASCI 405, ASCI 412, MGMT 324, MGMT 331, MGMT 406, MGMT 410, MGMT 418, MGMT 425, MGMT 426, MGMT 499, SCTY 400, SCTY 488)		**6**
Total Credits		**15**

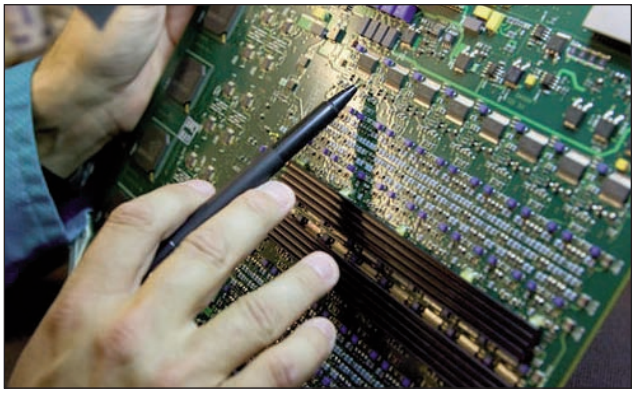
MINOR IN AVIATION SAFETY

Course	Title	Credits
SFTY 320	Human Factors in Aviation Safety	3
SFTY 330	Aircraft Accident Investigation	3
SFTY 409	Aviation Safety	3
Take three of the following courses: (SFTY 335, SFTY 345, SFTY 350, SFTY 355, SFTY 365, SFTY 375, SFTY 435, SFTY 440, SFTY 462)		**9**
Total Credits		**18**

MINOR IN ENGINEERING SCIENCES

Not open to BSTM – Engineering Sciences students

Course	Title	Credits
ESCI 105	Fundamentals of Engineering	3
MATH 250	Calculus and Analytic Geometry	3
MATH 251	Calculus and Analytic Geometry II	3
PHYS 150	Physics I for Engineers	3
Take three of the following courses: (ESCI 201, ESCI 202, ESCI 206, CESC 220, CSCI 210)		**9**
Total Credits		**21**



MINOR IN HELICOPTER OPERATIONS AND SAFETY

Course	Title	Credits
ASCI 317	Rotorcraft	3
ASCI 378	Helicopter Flight Environments	3
ASCI 388	Helicopter Flight Planning	3
ASCI 428	Advanced Helicopter Systems and Functions	3
ASCI 438	Advanced Helicopter Operations	3
SFTY 345	Aviation Safety Program Management	3
SFTY 409	Aviation Safety	3
Total Credits		**21**

MINOR IN INTERNATIONAL RELATIONS

Course	Title	Credits
GOVT 331	Current Issues In America	3
Take one of the following courses: (ECON 211, HIST 130)		**3**
Take three of the following courses: (GOVT 325, GOVT 340, GOVT 363, MGMT 335)		**9**
Total Credits		**15**

MINOR IN LOGISTICS

Not open to BSTM – Logistics students

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
Take two of the following courses: (MGMT 321, ASCI 419, MGMT 420, or MGMT 444)		**6**
Total Credits		**18**

MINOR IN MANAGEMENT

Not open to BSTM, BSAM or BSABA students

Course	Title	Credits
ECON 210	Microeconomics	3
MGMT 201	Principles of Management	3
MGMT 210	Financial Accounting	3
MGMT 311	Marketing	3
Specified Electives in Management Choose any two upper-level MGMT courses.		**6**
Total Credits		**18**

MINOR IN OCCUPATIONAL SAFETY AND HEALTH

Not open to BSTM – Occupational Safety and Health students

Course	Title	Credits
SFTY 311	Fundamentals of Occupational Safety and Health	3
SFTY 321	Ergonomics	3
SFTY 355	Industrial Hygiene & Toxicology	3
Take three of the following courses: (SFTY 315, SFTY 341, SFTY 365, SFTY 360, SFTY 410, SFTY 420, SFTY 440, SFTY 450, SFTY 470)		**9**
Total Credits		**18**

MINOR IN SECURITY AND INTELLIGENCE

Course	Title	Credits
SCTY 315	Studies in Intelligence I	3
SCTY 385	Intelligence Analysis-Writing and Briefing	3
SCTY 488	National Security Issues and Terrorism	3
Take three of the following courses: (SCTY 312, SCTY 323, SCTY 324, SCTY 400, SCTY 415, SCTY 485)		**9**
Total Credits		**18**

CERTIFICATES OF COMPLETION

Undergraduate Certificates of Completion are focused academic programs in which students complete a series of courses in Aviation Maintenance Technology Part 65, Aviation Safety, Airport Management, 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.

AIRPORT MANAGEMENT

Certificate of Completion

The aviation industry has become more complex, and experts expect the growth to continue at a rapid pace. As the number of airports increases, so will the demand for aviation professionals with management skills. An Airport Management Certificate of Completion will help you reach the top. This dynamic program offers the core courses you need, with the flexibility of electives, so you can choose which area you want to focus on.

Embry-Riddle Worldwide's curriculum involves four core courses covering legislation, development and operations, management, and planning and design, providing you with a comprehensive base of knowledge. Plus, with a wide array of electives available, you can choose two courses from subjects such as national security, labor relations and crash and emergency management.

REQUIRED COURSES:

Course	Title	Credits
ASCI 254	Aviation Legislation	3
ASCI 401	Airport Development and Operations	3
MGMT 408	Airport Management	3
MGMT 412	Airport Planning and Design	3
Take two of the following courses:		
ASCI 320	Commuter Aviation	3
ASCI 405	Aviation Law	3
ASCI 412	Corporate and Business Aviation	3
MGMT 324	Aviation Labor Relations	3
MGMT 331	Transportation Principles	3
MGMT 406	Strategic Management of Technical Operations	3
MGMT 410	Management of Air cargo	3
MGMT 418	Airport Administration and Finance	3
MGMT 425	Trends and Current Problems in Air Transportation	3
MGMT 426	International Aviation Management	3

MGMT 499	Special Topics in Management	3
SCTY 400	Airport Security	3
SCTY 488	National Security Issues and Terrorism	3
SFTY 345	Aviation Safety Management Program	3
SFTY 350	Aircraft Crash and Emergency Management	3
SFTY 409	Aviation Safety	3
Total Credits		**18**

AVIATION MAINTENANCE TECHNOLOGY PART 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 Applications	3
AMNT 260	Aircraft Electrical Systems Theory	3
AMNT 270	Airframe Structures and Applications	3
AMNT 271	Airframe Systems and Applications	3
AMNT 280	Powerplant Theory and Applications	3
AMNT 281	Aircraft Propulsion Systems and Applications	3
Total Credits		**18**

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 CGPA of 2.8. The required courses are as follows:

REQUIRED COURSES:

Course	Title	Credits
SFTY 320	Human Factors in Aviation Safety	3
SFTY 330	Aircraft Accident Investigation	3
SFTY 345	Aviation Safety Program Management	3
SFTY 335	Mechanical and Structural Factors in Aviation Safety	
	-OR-	
SFTY 435	Aircraft Crash Survival Analysis and Design	3
SFTY 409	Aviation Safety	3
SFTY 440	System Safety Management	3
Take two of the following courses:		
SFTY 350	Aircraft Crash and Emergency Management	3
SFTY 355	Industrial Hygiene and Toxicology	3
SFTY 365	Fire Protection	3
SFTY 375	Propulsion Plant Investigation	3
SFTY 462	Health, Safety, and Aviation Law	3
Total Credits		**24**

HELICOPTER OPERATIONS AND SAFETY
Certificate of Completion

The helicopter industry continues to grow rapidly and is an ever increasing part of the aerospace environment. This certificate will provide a comprehensive grasp of the complexities involved in helicopter industry operations. The certificate is designed for those looking to obtain the advanced skill sets required at the pilot, operations, or management level, for this industry. The objectives of the Helicopter Operations and Safety Certificate is to provide both degree and non degree students alike an understanding of helicopter operational planning at many levels, learn about new technologies, understand the management skills applicable to the rotory wing discipline, and acquire a practical knowledge of all aspects of helicopter organizational operations.

REQUIRED COURSES:

Course	Title	Credits
ASCI 317	Rotorcraft	3
ASCI 378	Helicopter Flight Environments	3
ASCI 388	Helicopter Flight Planning	3
ASCI 428	Advanced Helicopter Systems and Functions	3
ASCI 438	Advanced Helicopter Operations	3
SFTY 345	Aviation Safety Program Management	3
SFTY 409	Aviation Safety	3
Total Credits		**21**

LOGISTICS
Certificate of Completion

Logistics, the art and science of procuring, maintaining, and transporting personnel and materials, is one of the fastest growing specialties in business today. In fact, logistics has become critical to the success of organizations and logistics professionals are increasingly in demand in the aviation and aerospace industries. Employment opportunities for logisticians include positions as logistics analysts, logistics engineers, inventory and warehouse managers, transportation analysts, or distribution supervisors.

Embry-Riddle Aeronautical University offers a logistics certificate program that provides non-degree-seeking students an opportunity to complement their practical experience with a thorough understanding of the tools, techniques, and theories that are widely applied across the discipline. In addition, the courses included in this certificate program cover a substantial amount of the material that is addressed on the Certified Professional Logistician (CPL) examination administered by the International Society of Logistics.

The University awards a Certificate of Completion in Logistics to those who have completed the following courses with a CGPA of at least 2.8.

REQUIRED COURSES:

Course	Title	Credits
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 419	Aviation Maintenance Management	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
Total Credits		**24**

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 a CGPA of 2.75.

REQUIRED CORE COURSES: 12

Course	Title	Credits
MGMT 201	Principles of Management	3
MGMT 314	Human Resources Management	
	-OR-	
MGMT 317	Organizational Behavior	3
MGMT 424	Project Management in Aviation Operations	3
MGMT 436	Strategic Management	3
Choose two of the following electives:		
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	Aviation Maintenance Management	3
MGMT 420	Management of Production and Operations	3
MGMT 427	Management of the Multicultural Workforce	3
SFTY 341	Occupational Safety and Health Program Management	3
SFTY 345	Aviation Safety Program Management	3
Total Credits		**18**

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 CGPA of 2.8.

REQUIRED COURSES:

Course	Title	Credits
SFTY 311	Fundamentals of Occupational Safety and Health	3
SFTY 315	Environmental Compliance and Safety	3
SFTY 321	Ergonomics	3
SFTY 341	Occupational Safety and Health Program Management	3
SFTY 355	Industrial Hygiene and Toxicology	3
SFTY 410	Design of Engineering Hazard Controls	
	-OR-	
SFTY 440	System Safety Management	3
SFTY 420	Systems Design for Fire and Life Safety	
	-OR-	
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
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
PHYS 150	Physics I for Engineers	3
PHYS 160	Physics II for Engineers	3
PHYS 250	Physics III for Engineers	3
Take two of the following courses:		
CESC 220	Digital Circuit Design	3
CSCI 210	Scientific Programming	3
ESCI 201	Statics	3
ESCI 202	Solid Mechanics	3
ESCI 204	Dynamics	3
ESCI 206	Fluid Mechanics	3
Total Credits		**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 CGPA of at least 2.8.

REQUIRED COURSES:

Course	Title	Credits
SCTY 315	Studies in Intelligence I	3
SCTY 385	Intelligence Analysis-Writing and Briefing	3
SCTY 488	National Security Issues and Terrorism	3
Take two of the following courses:		
GOVT 325	International Studies	3
GOVT 340	American Foreign Policy	3
GOVT 401	American Constitutional Law	3
GOVT 402	International Politics	3

Take three of the following courses:

SCTY 312	Global Crime and Criminal Justice Systems	3
SCTY 323	Intelligence and Technology	3
SCTY 324	Cybersecurity and Information Assurance	3
SCTY 400	Airport Security	3
SCTY 415	Studies in Intelligence II	3
SCTY 485	Corporate Security	3
Total Credits		**24**

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, seven-course 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 Aerospace	3
Total Credits		**21**

SUPPLY CHAIN MANAGEMENT

Certificate of Completion

Embry Riddle Worldwide's Supply Chain Management Certificate program presents a curriculum of five courses, which address what you need to know as a supply chain professional. The concepts presented in these courses are designed to help students prepare for the APICS Certified Supply Chain Professional examination.

A Supply Chain Management Certificate of Completion will benefit you by providing you with the skills you need to be successful in the rapidly growing field of supply chain management.

The University awards a Certificate of Completion in Supply Chain Management to those who have completed the following courses with a CGPA of at least 2.8.

REQUIRED COURSES:

Course	Title	Credits
ASCI 419	Aviation Maintenance Management	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
MGMT 444	Principles of Supply Chain Management	3
Total Credits		**15**

Living some distance from the local ERAU campus, EagleVision Home has given me the best of both worlds. I am able to interact with other students and the professor on a more personal basis, while operating with my computer from home. It lets me use my time for better things than commuting to school. I have completed one EV-H course and have signed up for a second.

Kathy Fisher
Current Student

The state-of-the-art learning experience at Embry-Riddle provides me the opportunity and the necessary tools to succeed in the aeronautics business and safety management fields.

Milton Jose Manuel
Current Student

DEGREES

Master of Aeronautical Science

Master of Business Administration in Aviation

Master of Science to the Master of Business Administration in Aviation

Master of Science in Logistics and Supply Chain Management

Master of Science in Management

Master of Science in Project Management

Master of Science in Space Education

Master of Science in Technical Management

GRADUATE CERTIFICATES OF COMPLETION

Air Transportation Management
Airport Planning Design and Development
Aviation/Aerospace Industrial Management
Aviation/Aerospace Safety
Aviation Enterprises in the Global Environment
Integrated Logistics Management
Instructional System Design
Modeling and Simulation Management
Project Management

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PROGRAM-SPECIFIC CRITERIA

PROGRAM-SPECIFIC CRITERIA:

Master of Business Administration in Aviation (MBAA)
Applicants for admission to the MBAA program are required to meet prerequisite knowledge in the following areas:

- Management
- Accounting Methods
- Finance
- Quantitative Methods
- Marketing
- Economics

Students should assume responsibility to see that prerequisites are satisfied. However, students who still lack prerequisite knowledge in one of the following areas may be required to register for one or all of the modules contained in MGMT 503 (A through F): management, quantitative methods, marketing, accounting, economics, and/or finance. The prerequisite subject knowledge for a specific graduate course must be satisfied before enrollment in that specific course is permitted. Students may enroll in other graduate level courses as they meet any specific prerequisite knowledge required.

The prerequisite knowledge can be validated through one of the following:

A. Completed an undergraduate or graduate course in each of the specific subject areas and upon validation of the course from an official transcript; **-OR-**

B. Completed a course listed in either the National or ACE Guide for which academic credit in one of the specific subject areas is recommended; **-OR-**

C. Received at least the minimum recommended score on a CLEP, DANTES, PEP, etc. exam in each of the subject areas as required; **-OR-**

D. Received at least the recommended score on the Graduate Management Admission Test (GMAT), see www.mba.com; **-OR-**

E. Completed the ERAU challenge exam score through Worldwide Student Services Office and receive at least the minimum recommended in each of the subject areas as required; **-OR-**

F. Satisfactorily complete each of the six one-semester-hour business foundation courses (MBAA 503 A through F) and receive at least the minimum recommended in each of the subject areas as required.

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

- Written Communications
- Communications
- Quantitative Methods

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

The MSTM program relies heavily on the student being able to use the computer as a tool to solve problems and present solutions. The student will be expected to produce professional, error-free documents, to design and use spreadsheets to solve a myriad of management related problems, conduct statistical analyses on data, collect, store, and retrieve data in databases and interconnect database tables, and to product high-impact graphics to support presentation. Therefore, the prospective student must be able to use Word, Excel, PowerPoint, and Access.

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

- Written Communications
- Quantitative Methods
- Computer Skills*
- Complete the MSPM student orientation

Access provided by ERAU staff at the location of register or on the Department of Business Administration – ERAU Worldwide website.

*Note: The MSPM program relies heavily on use of current PMIS (Project Management Information Systems) software and other common use software such as word processing, presentation software, and computational software. While the use of some of these, such as PMIS programs, will be the subject of learning exercises within the program, the successful student will be expected to show proficient use of word processing, spreadsheet usage, and presentation graphics.

GRADUATE DEGREES

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 604	Human Factors in the Aviation/ Aerospace Industry	3
ASCI 670	Research Methods for Aviation/ Aerospace	3
ASCI 665	Statistical Analysis for Aviation/Aerospace	3
Core Credits		**12**

AREAS OF SPECIALIZATION* **12**

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

ELECTIVES/GCP

ASCI 691	Graduate Capstone Course	3
Department of Aeronautics Graduate Courses (500-600 level)		9

Students electing the Aviation/Aerospace Management Specialization may also use the following courses as electives: MGMT 642, MGMT 643, MBAA 514, MBAA 520, MBAA 523.

Total Credits **12**

TOTAL DEGREE REQUIREMENTS* **36-39**

* For Specializations 1 – 7, the degree requirements are 36 semester hours. Dual specialization degree requirements vary depending on the specialization chosen. Specialization 8 degree requirements are 39 semester hours. Specialization 7 and 8 cannot be pursued as dual specializations.

SPECIALIZATIONS:

Specialization 1
AERONAUTICS

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

Course	Title	Credits
ASCI 509	Advanced Aerodynamics	3
ASCI 510	Advanced Aircraft Performance	3
ASCI 515	Aviation/Aerospace Simulation Systems	3
ASCI 516	Applications in Crew Resource Management	3
ASCI 517	Advanced Meteorology	3
ASCI 560	Advanced Rotorcraft Operations	3
ASCI 603	Aircraft and Spacecraft Development	3
ASCI 607	Advanced Aircraft/Spacecraft Systems	3

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 Systems	3
ASCI 550	Aviation Education Foundations	3
ASCI 610	Instructional Systems Design	3
ASCI 614	Advanced Aviation/Aerospace Curriculum Development	3
ASCI 652	Continuing Education's Role in Aviation	3
ASCI 654	Adult Teaching and Learning Techniques	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 Management in the Aviation/Aerospace Industry	3
ASCI 642	International Aviation Policy	3
ASCI 643	Management of Research and Development for the Aviation/Aerospace Industry	3
ASCI 644	Integrated Logistics in Aviation Management	3
ASCI 645	Airport Operations and Management	3
ASCI 646	Airline Operations and Management	3

Specialization 4
AVIATION/AEROSPACE OPERATIONS

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

Course	Title	Credits
ASCI 515	Aviation/Aerospace Simulation Systems	3
ASCI 518	Aviation/Aerospace Operations Research	3
ASCI 560	Advanced Rotorcraft Operations	3
ASCI 606	Air Traffic Control and the National Airspace System	3
ASCI 617	Airport Safety and Certification	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
ASCI 616	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 516	Applications in Crew Resource Management	3
ASCI 634	Aviation/Aerospace Psychology	3
ASCI 660	Sensation and Perception	3
ASCI 661	Human-Computer Interaction	3
ASCI 663	Memory and Cognition	3

Specialization 7

SPACE STUDIES

Students must complete the following four courses:

Course	Title	Credits
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
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 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 BUSINESS ADMINISTRATION IN AVIATION

The Master of Business Administration in Aviation degree program is designed to emphasize the application of modern management concepts, methods, and tools to the challenges of aviation and business. The special intricacies of aviation are woven into a strong, traditional business foundation by combining a specific core of distinct business competencies with a strong aviation foundation.

The demand for skilled professionals continues to grow in response to the increasing need for leaders who can manage the efficient and effective use of scarce resources; operate in an atmosphere of heightened national and international competition; and respond to the call to preserve our world's fragile eco-system – and the MBAA curriculum is oriented toward the needs of aviation leaders and decision-makers who can operate in this environment.

Specific prerequisites for each graduate course in the MBAA are contained in the Course Description section of this catalog. Students must assume responsibility to see that all prerequisites are satisfied. However, students who cannot demonstrate prerequisite knowledge in one of the following areas, may be required to register for one or all of the modules contained in MGMT 503 (A through F): management, quantitative methods, marketing, accounting, economics, and/or finance. The prerequisite subject knowledge for a specific graduate course must be satisfied before enrollment in that specific course is permitted. Students may enroll in other graduate-level courses as they meet any specific prerequisite knowledge required.

DEGREE REQUIREMENTS

AVIATION BUSINESS CORE

Course	Title	Credits
MBAA 511	Operations Research	3
MBAA 514	Strategic Marketing Management in Aviation	3
MBAA 517	Managerial Accounting for Decision Making	3
MBAA 518	Managerial Finance	3
MBAA 523	Advanced Aviation Economics	3
MBAA 635	Business Policy and Decision Making	3
Total Core Credits		**18**

AVIATION BUSINESS SPECIALIZATION

Complete a total of 12 credit hours from the following courses. The primary business specified electives for all Worldwide campuses are MBAA 520, MBAA 521, MBAA 604 and MBAA 607. Any course substitution must be approved by the MBAA Program Chair.

Course	Title	Credits
MBAA 520	Organizational Behavior, Theory and Applications in Aviation	3
MBAA 521	Global Information and Technology Management	3
MBAA 604	International Management and Aviation Policy	3
MBAA 696	Graduate Internship in Aviation Business Administration	1-3
MBAA 699	Special Topics in Business Administration	1-3
MBAA 607	Human Resource Development	3
MGMT 533	Legal, Ethical, and Regulatory Bases of Management Practices	3
MGMT 535	Theory and Application of Managerial Communications	3
MGMT 641	Airport Management	3
MGMT 642	Air Carrier, Passenger, and Cargo Management	3
MGMT 643	Labor Issues in Air Transportation	3
MGMT 651	Production and Procurement in Aviation and Aerospace Industries	3
MGMT 652	Concepts and Practices of Project Management	3
MGMT 671	Entrepreneurship and Leadership	3
MGMT 685	Global Logistics and Supply Chain Management	3
Total Aviation Business Specialization Credits		**12**

GRADUATE BUSINESS CAPSTONE PROJECT

Course	Title	Credits
MBAA 522	Business Research Methods	3
MBAA 690	Graduate Business Capstone Project	3
Total Graduate Business Capstone Project Credits		**6**

TOTAL DEGREE REQUIREMENTS	**36**

MBAA Program Notes:

1. The MBAA 700 Thesis is available to international programs or specialty developed programs by contract or articulation agreement. The MBAA 700 Thesis is not available to Worldwide campuses.
2. Additional courses or specializations that are in the Worldwide catalog may be approved by the MBAA Program Chair to form a specialization in the MBAA.
3. This program is available at selected ERAU Worldwide campuses and/or through partnerships as determined by specific articulation or contract agreement.

MASTER OF SCIENCE (MS) to the MASTER OF BUSINESS ADMINISTRATION IN AVIATION (MBAA)

This program is designed to offer those students that have graduated from the Master of Science in Management (MSM), Master of Science in Project Management (MSPM) or Master of Science in Technical Management (MSTM) program, the opportunity to also attain the MBAA degree. Students that have graduated from the MSM, MSPM or MSTM will complete an additional 21 hours of Worldwide graduate courses. The following are the required/elective MBAA/Management courses for those students that completed the MSM, MSPM or MSTM degree:

DEGREE REQUIREMENTS

MSM to MBAA:
For the MSM to the MBAA, students will transfer the following courses:

GCPP 605 or MGMT 605 for MBAA 522 Research Methods	3
MGMT 531/631 for MBAA 511 Operations Research	3
MGMT 533 Legal, Ethical, Regulatory (in both programs)	3
MGMT 633 for MBAA 517 Managerial Accounting for Decision Making	3
MGMT 644/654/674/684/690 for MBAA 690 Capstone	3
Total Transfer Credits	**15**

REQUIRED ADDITIONAL CORE COURSES:

Course	Title	Credits
MBAA 518	Managerial Finance	3
MBAA 523	Advanced Aviation Economics	3
MBAA 635	Business Policy and Decision-Making	3
Total Additional Core Courses		**9**

AVIATION BUSINESS SPECIALIZATION

Complete a total of 12 unduplicated credit hours from the Aviation Business Specialization listed in the MBAA section of the catalog or other department of business administration courses. Students may not transfer in additional credits taken from the MSM program.

Total Aviation Business Specialization Credits 12

TOTAL MSM TO MBAA DEGREE REQUIREMENTS: 36

MSPM to MBAA:

For the MSPM to the MBAA, students will transfer the following courses:

PMGT 501 for MGMT 652 Concepts and Practices of Project Management	3
MGMT 524 for MBAA 511 Operations Research	3
MGMT 533 Legal, Ethical, Regulatory (in both programs)	3
MGMT 633 for MBAA 517 Managerial Accounting for Decision Making	3
PGMT 690 for MBAA 690 Graduate Business Capstone	3
Total Transfer Credits	**15**

REQUIRED ADDITIONAL CORE COURSES:

Course	Title	Credits
MBAA 514	Strategic Marketing Management in Aviation	3
MBAA 518	Managerial Finance	3
MBAA 523	Advanced Aviation Economics	3
MBAA 635	Business Policy and Decision Making	3
Total Additional Core Courses		**12**

AVIATION BUSINESS SPECIALIZATION

Complete a total of 9 unduplicated credit hours from the Aviation Business Specialization listed in the MBAA section of the catalog or other department of business administration courses. Students may not transfer in additional credits taken from the MSPM program.

Total Aviation Business Specialization Credits 9

TOTAL MSPM TO MBAA DEGREE REQUIREMENTS: 36

MSTM to MBAA:

For the MSTM to the MBAA, students will transfer the following courses:

TMGT 605 for MBAA 520 Organizational Behavior Theory and Applications Aviation	3
TMGT 635 for MBAA 517 Managerial Accounting for Decision Making	3
TMGT 646 for MBAA 511 Operations Research	3
TMGT 611 for MBAA 522 Business Research	3
TMGT 690 Capstone for MBAA 690 Graduate Capstone.	3
Total Transfer Credits	**15**

REQUIRED ADDITIONAL CORE COURSES:

Course	Title	Credits
MBAA 514	Strategic Marketing Management in Aviation	3
MBAA 518	Managerial Finance	3
MBAA 523	Advanced Aviation Economics	3
MBAA 635	Business Policy and Decision Making	3
Total Additional Core Courses		**12**

AVIATION BUSINESS SPECIALIZATION

Complete a total of 12 unduplicated credit hours from the Aviation Business Specialization listed in the MBAA section of the catalog or other department of business administration courses. Students may not transfer in additional credits taken from the MSM program.

Total Aviation Business Specialization Credits 9

TOTAL MSTM TO MBAA DEGREE REQUIREMENTS: 36

MS to MBAA Program Notes: The aviation business specialization courses or other department of business administration courses may not be available at all campuses. If the MS to MBAA program is provided in cohort, the cohort may select aviation business specialization electives or other department of business admnistration courses. The local campus could determine the electives to offer, either will require program chair approval. Any course substitutions must be coordinated through the regional dean and approved by the department chair.

MASTER OF SCIENCE IN LOGISTICS AND SUPPLY CHAIN MANAGEMENT

Logistics and supply chain management play a key role in today's global economy. In the U.S. alone, logistics and supply chain-related costs exceeded $1 trillion for the first time in 2004 and, as the global economy continues to expand and become more interdependent, these costs are continuing to rise. As a result, there is tremendous demand for people with the right education to manage the transformational changes taking place in logistics and supply chain management in the aviation and aerospace industry, as well as related logistics and supply chain industries.

Embry-Riddle Worldwide's Master of Science in Logistics and Supply Chain Management program is designed to meet this need by offering students a curriculum that will provide them with the knowledge and skills they need to be competitive in both the private and public sector, including the military.

In addition to providing students with core management skills, the program addresses the full spectrum of knowledge needs and capabilities required to be successful leaders in logistics and supply chain management including sourcing; procurement; contracting; warehousing; inventory management; transportation; integrated logistics management; supply chain management; logistics and supply chain security; and global logistics and supply chain management. The curriculum also includes a mandatory graduate research project designed to provide students with an opportunity to define and systematically analyze one or more problems related to logistics or supply chain management.

The concepts presented in these courses are also intended to help students prepare for the American Productivity and Inventory Control Society (APICS) Certified Supply Chain Professional examination as well as the International Society of Logistics' Certified Professional Logistician program.

Finally, by leveraging existing courses in Embry-Riddle Worldwide's management programs, this program allows students to receive credit for relevant courses already taken – or to apply the core management courses taken in this program to another graduate degree in the management area. In the list of courses below, the first five courses are common to other Embry-Riddle Worldwide management programs.

DEGREE REQUIREMENTS

Course	Title	Credits
LGMT 536	Purchasing for Logistics and Supply Chain Managers	3
LGMT 634	Analytical Decision-Making for Logistics and Supply Chain Managers	3
LGMT 636	Transportation Management	3
LGMT 682	Integrated Logistics Management	3
LGMT 683	Supply Chain Management	3
LGMT 685	Global Logistics and Supply Chain Management	3
LGMT 690	Graduate Capstone Project	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 605	Methods and Procedures for the Graduate Capstone Project	3
MGMT 633	Principles and Practices of Accounting and Financial Control for Managers	3
TOTAL DEGREE REQUIREMENTS		**36**

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. Students wishing to complete multiple specializations must have "unduplicated" credit in each of the specializations.

- 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
MGMT 524	Management Science	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 605	Methods and Procedures for the Graduate Capstone Project	3
MGMT 633	Principles and Practices of Financial Accounting and Control for Managers	3
MGMT 690	Graduate Capstone Project	3
Core Credits		**24**

TOTAL DEGREE REQUIREMENTS **36**

SPECIALIZATIONS:

Specialization 1

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 673	Global Economic Analysis	3

Specialization 2
AVIATION/AEROSPACE INDUSTRIAL MANAGEMENT

Course	Title	Credits
MGMT 651	Production and 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 673	Global Economic Analysis	3

Specialization 3
AVIATION ENTERPRISES IN THE GLOBAL ENVIRONMENT

Course	Title	Credits
LGMT 685	Global Logistics and Supply Chain Management	3
MGMT 671	Entrepreneurship and Leadership	3
MGMT 672	Planning and Execution of Strategy	3
MGMT 673	Global Economic Analysis	3

Specialization 4
MANAGEMENT OF INTEGRATED LOGISTICS

Course	Title	Credits
LGMT 682	Integrated Logistics Management	3
LGMT 683	Supply Chain Management	3
LGMT 685	Global Logistics and Supply Chain Management	3
MGMT 652	Concepts and Practices of Project Management	3

Specialization 5
GENERAL MANAGEMENT OPTION

Select any four courses from the graduate Business Administration/Logistics and Supply Chain Management/ Management/Project Management/Technical Management sections of the Worldwide Catalog. 12

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 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 (CMQ/OE) examinations.

DEGREE REQUIREMENTS

Course	Title	Credits
MGMT 524	Management Science	3
MGMT 532	Philosophy, Principles, and Practices in Management of Quality	3
MGMT 533	Legal, Ethical, and Regulatory Bases of Management Practices	3
MGMT 633	Principles and Practices of Financial Accounting and Control for Managers	3
MGMT 672	Planning and Execution of Strategy	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 DEGREE REQUIREMENTS		**36**

MASTER OF SCIENCE IN SPACE EDUCATION

A collaboration between Embry-Riddle Aeronautical University and Nova Southeastern University:

The Master of Science in Space Education (MSSE) degree is offered by Embry-Riddle Aeronautical University – Worldwide with some courses provided by Nova Southeastern University. The program is designed for K-12 science educators, museum and science center personnel, and anyone interested in space education. The program is administered through innovative online instruction. This program covers (1) key concepts in Space Studies; and (2) how to apply those concepts in educational contexts with maximum effectiveness.

Upon completion of the course requirements students will receive a Master of Science in Space Education degree conferred from Embry-Riddle Aeronautical University. Students will complete 21 credits of coursework from Embry-Riddle and 15 credits from Nova Southeastern University's Fischler School of Education and Human Services for a total of 36 credits. In addition to meeting all admission requirements, applicants to the MSSE degree must have either completed at least one college-level mathematics class or passed a basic mathematics assessment. Nova Southeastern University also offers a separate, similar degree that accepts Embry-Riddle courses. The information below applies only to the Embry-Riddle MSSE degree.

DEGREE REQUIREMENTS

SPACE STUDIES FOCUS:

Course	Title	Credits
7	ERAU Courses	21
5	NSU Courses	15
TOTAL DEGREE REQUIREMENTS		**36**

ERAU COURSES:

Course	Title	Credits
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 603	Aircraft and Spacecraft Development	3
ASCI 604	Human Factors in the Aviation/ Aerospace Industry	3
Take two of the following electives:		
ASCI 514	Computer-Based Instruction	3
ASCI 601	Applications in Space: Commerce, Defense and Exploration	3
ASCI 610	Instructional Systems Design	3
ASCI 611	Aviation/Aerospace Systems Safety	3
ASCI 614	Aviation/Aerospace Curriculum Development	3
ASCI 634	Aviation/Aerospace Psychology	3
ASCI 636	Advanced Aviation/Aerospace Planning Systems	3
ASCI 654	Adult Teaching and Learning Techniques	3
Total ERAU Credits		**21**

NSU COURSES:

Course	Title	Credits
SCI 523	Methods for Teaching Secondary Science	3
SCI 600	Foundations of Physical Science for Teachers	3
SCI 601	Inquiry-Based Space Science for Teachers	3
SCI 602	Teaching Comprehensive Ocean Studies	3
SCI 605	Interdisciplinary Earth Science for Teachers	3
Total NSU Credits		**15**

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.

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
TMGT 503*	Quantitative Methods and Statistics	3
TMGT 535*	Business Communication Skills for Managers	3
TMGT 605	Organization Theory in a Technical Environment	3
TMGT 616	Production Operations Management	3
TMGT 621	Regulations, Ethics, and the Legal System	3
TMGT 630	Technical Management Information Systems	3
TMGT 635	Financial and Managerial Accounting and Control for Technical Managers	3
TMGT 641	Project Management: Concepts and Practices	3
TMGT 646	Operations Research and Management Science	3
TMGT 651	Quality Management and Quality Control	3
TMGT 661	Project Development Techniques	3
TMGT 690	Graduate Capstone Project	3
TOTAL DEGREE REQUIREMENTS		**36**

* Successful completion of these courses is required to continue in this program. Note 1: Because of the cohesive and intergrated nature of the program, no more than 6 credits may be transferred from previous graduate work. Note 2: Any course substitutions must be approved by the program chair.

Additional Courses Available:

Course	Title	Credits
TMGT 610	Managing Effective Technical Work Teams	3
TMGT 625	Marketing in the Technical Environment	3

CERTIFICATES OF COMPLETION

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

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:

Course	Title	Credits
MGMT 524	Management Science	3
MGMT 641	Airport Management	3
MGMT 642	Air Carrier, Passenger and Cargo Management	3
MGMT 643	Labor Issues in Air Transportation	3
MGMT 652	Concepts and Practices of Project Management	3
MGMT 673	Global Economic Analysis	3
Total Credits		**18**

AIRPORT PLANNING DESIGN AND DEVELOPMENT

Certificate of Completion

The combination of being the world's leader in aviation and the need for highly qualified, trained and academically educated airport planners and designers, the Airport Planning Design and Development certificate combines operations and management to excel in becoming an airport planner/designer or for those airport planners/designers who wish to complement their practical experience in the field.

This certificate also provides the specialty portion for those pursuing a graduate program of study. Subject areas include airport management, air carrier operations, labor issues, transportation security, and airport safety. The advanced curriculum provides six courses; however, offers the flexibility of substitution of two courses to provide an individual focus for the student.

REQUIRED COURSES:

Course	Title	Credits
ASCI 616	Transportation Security	3
ASCI 617	Airport Safety and Certification	3
ASCI 620	Air Carrier Operations	3
MGMT 641	Airport Management	3
MGMT 642	Air Carrier, Passenger and Cargo Management	3
MGMT 643	Labor Issues in Air Transportation	3
Total Credits		**18**

Note: Two of the above courses may be substituted by approval of the Program Chair.

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:

Course	Title	Credits
MGMT 524	Management Science	3
MGMT 532	Philosophy, Principles, and Practices in Management of Quality	3
MGMT 651	Production and Procurement in Aviation/Aerospace Industry	3
MGMT 652	Concepts and Practices of Project Management	3
MGMT 653	Labor Issues in an Industrial Environment	3
MGMT 673	Global Economic Analysis	3
Total Credits		**18**

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	Title	Credits
ASCI 611	Aviation/Aerospace System Safety	3
ASCI 617	Airport Safety and Certification	3
ASCI 618	Aviation/Aerospace Safety Program Management	3
Take three of the following courses:		
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
Total Credits		**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
LGMT 685	Global Logistics and Supply Chain Management	3
MGMT 524	Management Science	3
MGMT 652	Concepts 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
Total Credits		**18**

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 Management.

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:

Course	Title	Credits
MGMT 524	Management Science	3
MGMT 652	Concepts and Practices of Project Management	3
LGMT 682	Concepts of Integrated Logistics	3
LGMT 683	Supply Chain Management	3
LGMT 685	Global Logistics and Supply Chain Management	3
LGMT 636	Transportation Management	3
Total Credits		**18**

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	3
ASCI 614	Advanced Aviation/Aerospace Curriculum Development	3
ASCI 654	Adult Teaching and Learning Techniques	3
Total Credits		**15**

MODELING AND SIMULATION MANAGEMENT
Certificate of Completion

Management and leadership skills provide an advantage in today's competitive workplace. The field of modeling and simulation has been a significant business enterprise since World War II. The U.S. military, defense contractors and other government agencies recognize modeling and simulation as a distinct and separate career field and it is viewed by the U.S. government as a strategically important technology. For example, simulation for aircrew training and for aircraft design and manufacture has taken on ever increasing importance partly because these activities have demonstrated a positive return on investment.

The University of Central Florida (UCF) and Embry-Riddle Worldwide have developed a partnership to provide students a Professional Science Master's Degree in Modeling and Simulation from UCF and a certificate in Modeling and

Simulation Management from Embry-Riddle Worldwide. Student credit hours taken in this certificate may be transferred to UCF as a part of the UCF Professional Science Master's Degree in Modeling and Simulation. Students must meet all admissions requirements as determined by UCF and ERAU. Subject areas covered in the course of study include an overview of modeling and simulation, systems engineering, project management and management science. Equivalent courses may be approved by the UCF/ERAU Program Director.

Students in this certificate program typically have significant work experience and/or education related to some aspect of modeling and simulation. Graduates of the program are prepared to manage a wide variety of modeling and simulation programs.

UCF REQUIRED COURSES:

Course	Title	Credits
ESI 6551	Systems Engineering	
	-OR-	
IDS 6937	Modeling and Simulation Systems	3
IDS 6717	Perspectives on Modeling and Simulation	3

ERAU REQUIRED COURSES:

MGMT 524	Management Science	3

ERAU ELECTIVE COURSES:

Take three of the following courses:

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 Applications of Managerial Communications	3
MGMT 633	Principles and Practices of Financial Accounting for Managers	3
MGMT 652	Concepts and Practices of Project Management	3
MGMT 653	Labor Issues in an Industrial Environment	3
MGMT 671	Entrepreneurship and Leadership	3
MGMT 672	Planning and Execution of Strategy	3
Total Credits		**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 thorough 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 524	Management Science	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
PMGT 612	Leading Projects Across Cultural, Corporate, and International Boundaries	3
Total Credits		**18**

DOCTOR OF PHILOSOPHY (PH.D.) IN AVIATION

The demand for aviation professionals with the skills to conduct research and solve problems continues to grow in response to the increasing complexity and evolution of the aviation field. The Ph.D. in Aviation program is designed to address that need by allowing students to pursue doctoral studies in aviation in a diverse, intellectually versatile and multi-disciplinary environment. It is the first Ph.D. in aviation in the U.S.

Courses are offered online for greater accessibility to the working professional. Participation in three six-day on-campus residency seminars is required during the program. This program format provides doctoral degree students an innovative way to achieve their personal, educational, and professional goals.

The Ph.D. in Aviation program is designed to enable students to achieve the following learning objectives: develop mastery of the central theories and concepts in the field of aviation, including foundations, safety management, economics, and regulatory procedures; pose and solve theory-based and research-based problems designed to advance applications in the field of aviation; extend the aviation body of knowledge by conceiving, planning, producing, and communicating original research; develop and demonstrate expertise in instructional processes; and demonstrate leadership, collaboration, and communication necessary for scholarly work in aviation.

Courses are offered during three 15-week terms per year. The program requires completion of four aviation core courses, a four-course sequence in statistics and research methodology, and four specialization or cognate courses. A qualifying exam tests student's mastery of core and cognate subject matter and is conducted at the end of the course work. Completion and defense of a dissertation is the final phase of the program. The dissertation is a formal academic paper that constitutes the culmination of the doctoral program. The purpose of the dissertation is to prepare students to be professionals in a discipline, to develop the skills necessary to engage in independent research, and to advance the body of knowledge in aviation. The program requires completion of 90 credit hours of course work, residency seminars, and dissertation courses, including 30 credit hours from the student's master's degree.

Specific information about the program, including admission and course requirements, can be found in the Embry-Riddle Aeronautical University Doctoral Programs Catalog, and at the program website: aviationphd.erau.edu.

PROFESSIONAL EDUCATION
CERTIFICATE PROGRAMS

ADVANCED STRATEGIES IN HUMAN RESOURCE MANAGEMENT CERTIFICATE
(Web-based/self-guided)

The Advanced Strategies in Human Resource Management Certificate program is particularly well suited for anyone in human resources, human resource management, office administration, or anyone who is involved in the human resource process and function. The Advanced Strategies in Human Resource Management Certificate Program consists of 3 required courses and 2 electives. The 3 required courses are: Successful Selection Systems, Human Resources as a Strategic Partner, and High Performance Organizations. If you are electing to complete the certificate program all required courses must be completed prior to taking your selected electives.

REQUIRED COURSES:

ALF 3005	Successful Selection Systems
ALF 3006	Human Resources as a Strategic Partner
ALF 3007	High Performance Organizations

ELECTIVES:

ALF 3003	Strategic Management in Operations
ALF 3012	Persuasive Communication
ALF 3013	Budgeting Essentials
ALF 3014	Organizational Leadership and Decision-Making
ALF 3015	Organizational Development and Change
ALF 3017	Business Best Practices
ALF 3018	Negotiating Strategies
ALF 3019	Seven Management Disciplines

MANAGEMENT FOR IT PROFESSIONALS CERTIFICATE
(Web-based/self-guided)

The Management for IT Professionals Certificate program is particularly well suited for anyone in IT who has recently assumed management responsibilities, anyone who is managing IT professionals, or anyone who wants a perspective on some of the unique issues facing the management of IT professionals. The certificate program consists of 4 required courses and 3 electives. The 4 required courses are: Management Issues in the IT Environment, Collaborative Problem-Solving, Strategic Management and Business Best Practices. If you are electing to complete the certificate program all completed courses must be taken prior to taking your selected electives.

REQUIRED COURSES:

ALF 3003	Strategic Management in Operations
ALF 3017	Business Best Practices
ALF 3020	Management Issues in the IT Environment
ALF 3021	Collaborative Problem-Solving

ELECTIVES:

ALF 3004	Legal Issues in Operations
ALF 3012	Persuasive Communications
ALF 3013	Budgeting Essentials
ALF 3014	Organizational Leadership and Decision-Making
ALF 3015	Organizational Development and Change
ALF 3018	Negotiating Strategies
ALF 3019	Seven Management Disciplines
ALF 3022	Financial Accounting for IT Managers

MANAGEMENT STUDIES CERTIFICATE
(Web-based/self-guided)

The certificate in Management Studies is perfect for a business owner, entrepreneur or anyone seeking to learn the essentials of business and management. If you are thinking of starting a business or pursuing an MBA you will want to learn the essentials of accounting, management, marketing, tax, law, operations and strategy. The certificate in Management Studies consists of 4 required courses and 3 electives with one final course at the end. This program is geared to provide essential information in a timely manner and designed to fit busy work and family schedules.

REQUIRED COURSES:

ALF 3001	Financial/Accounting Management
ALF 3002	Marketing Management
ALF 3003	Strategic Management in Operations
ALF 3004	Legal Issues in Operations

ELECTIVES:

ALF 3008	Legal Aspects of Contracts
ALF 3009	Tax Issues
ALF 3014	Organizational Leadership and Decision-Making
ALF 3015	Organizational Development and Change
ALF 3017	Business Best Practices
ALF 3018	Negotiating Strategies
ALF 3019*	Seven Management Disciplines

*Final Required Course: (Must be taken as the final course subsequent to all required and elective courses for the Management Studies Certificate)

ONLINE PARALEGAL CERTIFICATE
(Web-based/self-guided)

The online paralegal program consists of 5 required courses and 4 electives. The program is focused on providing the necessary skills for working as a paralegal (legal assistant) as well as providing participants with skills required for career advancement. The program is also well-suited for anyone who wants to gain more knowledge about legal principles and procedures and start a career as a paralegal. Each online course can be completed at your own pace, anytime, anywhere with a high-speed Internet connection. A certificate program may be completed within 6-9 months.

REQUIRED COURSES:

ALF 3023	Introduction to the Legal System
ALF 3024	Paralegal Fundamentals (Introduction to Legal Assistantship)
ALF 3025	Legal Writing
ALF 3026	Legal Research
ALF 3027	Ethics for Paralegals

ELECTIVES:

ALF 3004	Legal Issues in Operations
ALF 3008	Legal Aspects of Contracts
ALF 3009	Tax Issues
ALF 3010	Business Plan Development
ALF 3012	Persuasive Communication
ALF 3016	Principles of Buying and Selling a Business
ALF 3018	Negotiation Strategies
ALF 3028	Introduction to Business Law (Transactions)
ALF 3029	Corporate Document Drafting
ALF 3030	Business Entity Formation
ALF 3031	Bankruptcy Law
ALF 3032	Intellectual Property Law
ALF 3033	Private Business Mergers and Acquisitions
ALF 3034	Real Estate Law
ALF 3035	Probate and Estate Planning
ALF 3036	Civil Litigation
ALF 3037	Transactional Drafting
ALF 3038	Trial Preparation
ALF 3039	Interviewing Skills for Paralegals

PURCHASING MANAGEMENT CERTIFICATE
(Web-based/self-guided)

The certificate in Purchasing Management is particularly well suited for anyone working in or interested in working in purchasing, supply chain management, procurement specialists, and buyers. The certificate in Purchasing Management will introduce you to the essentials of the supply chain process, management, purchasing and contracting issues. The certificate program consists of 4 required courses and 3 electives. The 4 required courses are: Essentials of Purchasing, The Supply Chain Process, Management Essentials and Budgeting Essentials. If you are electing to complete the certificate program, all completed courses must be taken prior to taking your selected electives. The required courses are introductory and not intended for those with significant purchasing or procurement experience. The program provides an excellent foundation for a CPM certification exam BUT is NOT a CPM review program. If you are interested in the certificate program and have purchasing experience you can opt out of the required courses by substituting an elective or a course from the certificate in Management Studies program.

REQUIRED COURSES:

ALF 3013	Budgeting Essentials
ALF 3040	Essentials of Purchasing
ALF 3041	The Supply Chain Process
ALF 3042	Management Essentials

ELECTIVES:

ALF 3008	Legal Aspects of Contracts
ALF 3012	Persuasive Communication
ALF 3018	Negotiating Strategies
ALF 3044	The Procurement Process
ALF 3045	Supplier Contracting
ALF 3046	Price and Cost Analysis

START-UP AND BUSINESS OWNER MANAGEMENT CERTIFICATE
(Web-based/self-guided)

The Start-Up and Business Owner Management Certificate program will provide an excellent foundation for anyone interested in starting, owning, and operating their own business. Courses in this program include Business Plan Development, Positioning for Finding Financing, as well as Buying and Selling a Business, Marketing Management, and Legal Issues in Operations. Requirements for completion of the certificate program consist of a total of 9 courses, 5 required, and 4 out of 7 offered electives, however, anyone may take any of the courses at anytime without pursuing the certificate.

REQUIRED COURSES:

ALF 3000	Essentials of Business Ownership
ALF 3001	Financial/Accounting Management
ALF 3002	Marketing Management
ALF 3003	Strategic Management in Operations
ALF 3004	Legal Issues in Operations

ELECTIVES:

ALF 3010	Business Plan Development
ALF 3011	Understanding Financial Statements
ALF 3012	Persuasive Communication
ALF 3014	Organizational Leadership and Decision-Making
ALF 3015	Organizational Development and Change
ALF 3016	Principles of Buying or Selling a Business
ALF 3043	Positioning for and Finding Financing

CERTIFICATE COURSE DESCRIPTIONS

ALF 3000 Essentials of Business Ownership
Students will learn the basics of starting, owning and managing a business. This course will cover the fundamentals from idea generation all the way to implementation.

ALF 3001 Financial/Accounting Management
This course provides an understanding of financial and accounting terms even for students with no financial background. The course will cover foundational principles of interpreting financial statements, determining company profitability and measuring cash flow.

ALF 3002 Marketing Management
This course focuses on the principles and techniques of marketing by exploring the issues necessary in the management of the marketing process. The course will detail the entire marketing process including the role of ethics and technology and the basic principles of advertising and public relations.

ALF 3003 Strategic Management in Operations
This course develops the practical and managerial skills necessary to successfully plan for operational success. The course covers the basic details for developing an operational plan and designing the strategic direction necessary to achieve these goals.

ALF 3004 Legal Issues in Operations
In today's legal environment there are many issues that a business encounters when operating successfully. This course will explore some of the more important legal topics including employment law, licensing, and permits and tax issues.

ALF 3005 Sucessful Selection Systems
A successful selection system is a comprehensive recruitment to post-hire process for attracting, selecting and on-boarding the right candidates for your job and your company. Such a system will yield a highly engaged, immediately productive workforce with the knowledge, skills and abilities to contribute quickly to the organizations' objectives. This course will explore how to develop and implement such successful selection systems within your organization.

ALF 3006 Human Resources as a Strategic Partner
The HR department exists in large part to address issues that fall into grey areas. Human resource departments and managers are charged with a great deal of responsibility and as such this course focuses on working within HR as a strategic partner within the organization. This course explores what this means and how to accomplish this objective.

ALF 3007 High Performance Organizations
In today's fast paced business climate, becoming a high-performance organization is what sets the great organizations apart from the good. It is what makes the difference between surviving and thriving. High Performance or Performance Driven Organizations are known for realizing a higher return on investment, greater profits, increased productivity, decreased operational costs, improved customer and employee retention, and other key indicators that set them apart from average companies. This course will explore the characteristics and development of high performance organizations.

ALF 3008 Legal Aspects of Contracts
It is seldom that a business person does not encounter a contract. This course will focus on the basics of business contracts so as to draw attention to important business points that are found in every day business contracts. No legal knowledge is necessary for this course and this course will not equip you to evaluate the law but rather understand the legal and business issues in most business contracts.

ALF 3009 Tax Issues
This course covers the basic tax issues that are important in transactional work; whether the business is a sole proprietorship, partnership or corporation. The basic tax issues in operating a business will be covered in this course along with tax strategies for business planning.

ALF 3010 Business Plan Development
In this course students will learn the essentials of creating and developing a successful business plan that can be used for both internal strategic management and external positioning for financing. This course is a prerequisite for ALF 3043 Positioning for and Finding Financing.

ALF 3011 Understanding Financial Statements
In this course students will learn the fundamentals of understanding financial statements for purposes of obtaining financing. It is critical that every business owner understands how to interpret and explain the financial condition of their business. This course is a prerequisite for ALF 3043 Positioning for and Finding Financing.

ALF 3012 Persuasive Communication
Persuasive communication is essential for not only selling products and services of a business, but for obtaining financing and running daily operations as well. This course will provide students with the opportunity to gain confidence and improve their communication skills. Even the most skilled communicator can always learn additional techniques for success.

ALF 3013 Budgeting Essentials
In this course students will be introduced to the fundamentals of the budgeting process including understanding not only how to prepare a budget but how to manage a budget within the context of a hierarchical organizational structure.

ALF 3014 Organizational Leadership and Decision-Making
The leaders in an organization often set the tone and establish benchmarks for success. In this course the focus is on developing a successful leadership style so as to facilitate team-building, collaboration and a corporate culture that promotes success. Different decision-making techniques will be explored in the context of successful leadership styles.

ALF 3015 Organizational Development and Change
Since most business organizations are social systems, this course will focus on the organizational culture and how it influences the way people work so as to maximize the long-term health of the organization and its people. This course will explore the developmental process and how to be successful in effectuating change.

ALF 3016 Principles of Buying or Selling a Business
In this course students will be exposed to the acquisition and disposition process. Topics will include valuation, strategic positioning, and financing options. This course is excellent for anyone interested in buying an ongoing business rather than starting one from an idea as well as for anyone seeking to sell an ongoing business.

ALF 3017 Business Best Practices
Best practices are important in achieving excellence and success. This course focuses on several best practice models from various industries and integrates some of the common themes into a game plan for business success.

ALF 3018 Negotiating Strategies
The environment and culture of any business relationship is often the product of a negotiation. This course will explore the process of negotiating, evaluate negotiation styles and consider successful negotiation strategies for most environments. There will be an opportunity to role-play a negotiation.

ALF 3019 Seven Management Disciplines
The seven management disciplines essential to management and business success are discussed in the context of all areas of business operation and management. This course provides a round-table opportunity to evaluate real-life business issues.

ALF 3020 Management Issues in the IT Environment
This course introduces effective management principles for working with IT professionals. Management techniques and effective strategies are explored in this course.

ALF 3021 Collaborative Problem-Solving
This course develops collaborative problem-solving skills and focuses on the importance of teams in the IT environment.

ALF 3022 Financial Accounting for IT Managers
In this course you will be introduced to the fundamentals of financial accounting management and the profit and loss responsibility that is normally attributable to a position of management.

ALF 3023 Introduction to the Legal System
This course will introduce you to the legal system including the differences between Common Law and Statutory Law as well as procedures and systems of law, particularly the court system.

ALF 3024 Paralegal Fundamentals (Introduction to Legal Assistantship)
This course will provide an understanding of the role of paralegals and the general substantive areas of law encountered by paralegals as well as basic legal terminology.

ALF 3025 Legal Writing
This course introduces the student to the fundamentals of legal writing, including analytical reasoning and analysis as well as the importance of using legal authorities to support conclusions. Critical thinking is also an important part of this course.

ALF 3026 Legal Research
This course will familiarize the student with print and electronic research for the legal profession. Students will learn how to find legal authorities and cases.

ALF 3027 Ethics for Paralegals
This course is a more in-depth exploration of the Code of Professional Conduct for lawyers and paralegals. It is a follow-up to ALF 3024 Paralegal Fundamentals and provides the student with a solid foundation in the ethical requirements surrounding the field of law.

ALF 3028 Introduction to Business Law (Transactions)
This course is an introduction to contracts and transactions involving starting and selling businesses. The course will introduce students to basic concepts involved in real estate, commercial law, and banking.

ALF 3029 Corporate Document Drafting
In this course, students will have the opportunity to learn the fundamentals of how to draft various types of transactional drafting. The course emphasizes clear and concise writing, grammatical and syntactical principles and draftsmanship. This course is foundational for anyone who drafts or reviews documents or contracts.

ALF 3030 Business Entity Formation
In this course students will learn how to form, maintain and dissolve various business entities. Students will have a chance to prepare various documents related to entity formation and maintenance. Students will also learn some of the subtle differences between the various types of entities. This class is a follow-up to ALF 3028 Introduction to Business Law (Transactions).

ALF 3031 Bankruptcy Law
Students in this course will become familiar with the basic requirements of a Chapter 7, 11, and 13 bankruptcy. Students will also have the opportunity to become familiar with some of the more general court rules and preparation of documents for filing.

ALF 3032 Intellectual Property Law
In this course, students will become familiar with the various types of intellectual property; such as trademarks and copyrights. Students will become familiar with the preparation of documents of filing for intellectual property protection as well as the various types of business arrangements and documents that protect intellectual property rights.

ALF 3033 Private Business Mergers and Acquisitions
In this course, students will become familiar with transactional work that is built around the private company (small and middle market — from $5M to $50M in gross revenue) acquisition and sale of the assets of a business from initial negotiations through closing. This program delves into the deal drivers and business points facing smaller companies; such as cash flow, valuation of assets, intellectual property and tax and accounting issues.

ALF 3034 Real Estate Law
This is a survey course in which students learn about various real estate documents and the practice of real estate law. This includes deeds, mortgage instruments, foreclosure notices, mechanic's liens, leases and listing contracts.

ALF 3035 Probate and Estate Planning
In this course students will learn the effects of various types of ownership upon passage of property at owner death, with or without a will; administration, taxation of estates and inheritance; basic requirements for trusts, wills, and guardianships. The course will also cover the basics of the administration of a decedent's estate.

ALF 3036 Civil Litigation
The course is designed to follow the procedures of a civil lawsuit from the first client contact through discovery, settlement negotiations or trial, and appeal. Course work will focus on the role and responsibilities of the paralegal in preparing court documents, investigation, client and witness contact, discovery, and trial assistantship.

ALF 3037 Transactional Drafting
It is important that a paralegal be familiar with certain key provisions in most transactional documents, including representations and warranties, conditions to closing and certain provisions in the "General Clauses" or "Miscellaneous Clauses" section of the transactional document. Participants will learn why certain provisions are included in different types of general contracts.

ALF 3038 Trial Preparation
In this course, students will learn the fundamentals of preparing for trial. Students will learn about document preparation, discovery, scheduling and working with the courts.

ALF 3039 Interviewing Skills for Paralegals
In this course, students will learn the skills necessary to assist attorneys with interviewing witnesses and parties in the litigation process.

ALF 3040 Essentials of Purchasing
In this course, the student will learn the fundamentals of the purchasing function in the context of efficiency and organization. Topics such as the administrative aspects of purchasing, purchasing methodologies, and optimization strategies will be explored.

ALF 3041 The Supply Chain Process
In this course, students will be introduced to the various aspects of the supply chain environment including enterprise resource planning systems and requirement systems. The interrelationships between purchasing, vendor selection, sources of supply and the role of technology will also be explored in this course so that a student understands the integrated approach to planning, acquisition, flow and distribution from raw materials to finished products.

ALF 3042 Management Essentials
In this course, the focus is on the management function and the skills and resources that develop and grow a successful manager. Topics such as developing a corporate culture, working successfully with teams, developing and implementing successful people management strategies and workflow and performance management will be explored in this course.

ALF 3043 Positioning for and Finding Financing
This course, is essential for any business owner or manager who must find financing either for start-up purposes or for running existing business operations. This course discusses the various types of financing from venture capital to traditional financing sources. If taken as a part of the certificate program, this course requires two prerequisites; ALF 3010 Business Plan Development, and ALF 3011 Understanding Financial Statements.

ALF 3044 The Procurement Process
In this course, students will be introduced to principles that guide how suppliers are selected to provide goods and services through the various phases of the procurement process. This is an excellent course to gain an understanding of RFPs, responses and contract bid work.

ALF 3045 Supplier Contracting
This course explores the contracting process and provides an understanding of the source of supply (i.e., purchase orders, contracts, etc.) and explores decision-making in supplier contracting. This course provides a foundation in contracting issues.

ALF 3046 Price and Cost Analysis
In this course, students will learn various techniques associated with evaluating pricing and costing including methodologies and techniques to improve profitability and minimize losses. Different price comparison methods as well as strategic cost analysis will be explored.

INDIVIDUAL COURSE OFFERINGS

ONLINE GROUND SCHOOL COURSES

AVS 1000 Private Pilot Ground School

Upon successful completion of this comprehensive, online, instructor-facilitated Private Pilot Ground School course, students will possess the basic knowledge necessary to be a competent and safe private pilot, as well as pursue further study in Aeronautical Science, and be prepared to pass the FAA Private Pilot Written Exam. This online course examines the basics of: aerodynamics, aircraft performance, VFR cross-country navigation techniques, weather reports and forecasts, federal aviation regulations, elements of resource management, and safe flying practices. Approval to take the FAA Private Pilot Written Exam requires an instructor endorsement which is at the sole discretion of the course instructor per FAR 61.35. The FAA Private Pilot Written Exam is not included in this course and must be taken at an authorized FAA testing facility.

AVS 1100 Instrument Rating Ground School

This online, instructor-facilitated course is designed to allow the student to attain the required knowledge to successfully pass the Instrument-Airplane FAA Written Exam. Upon successful completion of this comprehensive online course students will be able to:

- Correctly locate and identify the training requirements, applicability, and Federal Aviation Regulations (FARs) that are required to safely operate an aircraft under instrument flight conditions.
- Correctly describe the vestibular, visual, and spatial illusions that can be commonly experienced in the instrument flight environment.
- Correctly define the basic aerodynamic principles of an airplane in normal flight and explain the aerodynamic changes that occur from ice accumulation on the wings, propeller, tailplane, and powerplant.
- Correctly explain common gyroscopic and pitot-static instrument errors.
- Correctly interpret aviation meteorological charts.
- Correctly describe the proper techniques and common errors associated with each phase of instrument flight, including climb, en-route, descent, and unusual attitude profiles.
- Compare modern navigation systems, including VOR, DME, RNAV, NDB, and GPS, and errors associated with each type. Thoroughly explain the structures of the National Airspace System and Air Traffic Control system in the U.S.
- Recall the procedural requirements for proper pre-flight, in-flight, and post-flight planning, including the proper implementation of publications, clearances, and departure, en-route, holding, and approach procedures.
- Demonstrate the proper usage of FAA/Jeppessen charts, including symbology, altitudes, and other required information pertinent to the instrument flight environment.
- Originate proper departure, en-route, and instrument flight approach procedures, including alternate airport contingencies, according to all applicable FAA Instrument Flight Rules (IFR).
- Correctly define the different types of in-flight emergencies and their respective corrective actions.
- Compare and contrast Crew Resource Management techniques and Aeronautical Decision Making processes to safely operate in the instrument flight environment.

Approval to take the FAA Instrument-Airplane Written Exam requires an instructor endorsement which is at the sole discretion of the course instructor per FAR 61.35. The FAA Instrument-Airplane Written Exam is not included in this course and must be taken at an authorized FAA testing facility.

AVS 1200 Commercial Pilot Ground School

This comprehensive online, instructor-facilitated course prepares students to become commercial-rated pilots. It examines aerodynamics, aircraft performance, VFR cross country navigation techniques, weather reports and forecasts, Federal Aviation Administration (FAA) regulations, elements of resource management, and safe flying practices. Successful graduates gain the requisite knowledge to pass the FAA Commercial-Pilot Airplane Knowledge Test and pursue commercial flight instruction to become safe and competent FAA-certified commercial-airplane pilots. Approval to take the FAA Commercial Pilot Written Exam requires an instructor endorsement which is at the sole discretion of the course instructor per FAR 61.35. The FAA Commercial Pilot Written Exam is not included in this course and must be taken at an authorized FAA testing facility.

ONLINE PILOT SPECIALTY COURSES

This comprehensive and interactive series of self-guided courses covers a wide variety of topics for pilots. These Professional Development courses are open enrollment and do not require application to the university.

AVS 2001 Controlled Flight into Terrain
The CFIT course is designed for qualified flight crew with experience on large jet transport aircraft. This syllabus may be required as part of a CRM recurrent training program for crews operating under the JAA or equivalent jurisdiction.

AVS 2002 ETOPS
After this lesson students will be able to explain ETOPS concept and how it has improved twin engine aircraft efficiency.

AVS 2003 FANS
When students have completed this lesson, they will be able to identify the following components associated with Future Air Navigation Systems otherwise known as FANS.

AVS 2004 GPS
This course teaches topics of GPS including system components, normal and non-normal operations, and authorization and documentation.

AVS 2005 High Altitude Training
The High Altitude Training course is designed to provide initial and recurrent training for flight or cabin crew members operating above 10,000 feet MSL. It is a required element of the regulations under ICAO, CARs, FARs, and JARs for all crewmembers operating or working onboard airplanes above 20,000 feet.

AVS 2006 Jet Upset Training
The Jet Upset Training course is designed for qualified flight crew with experience on large jet transport aircraft. This syllabus may be required as initial or recurrent training for crews operating under JAA or equivalent jurisdiction.

AVS 2007 MNPS
In this course you will be introduced to Minimum Navigation Performance Specifications (MNPS). This is an online self-paced course.

AVS 2008 North Atlantic Procedures
The NAT course is designed for airline crews with no previous experience in North Atlantic operations, or who require a review of North Atlantic procedures. This is an online self-paced course.

AVS 2009 Performance Training – Tire Speed
The goal of the Performance Training course is to enable flight crew and dispatchers to understand the rationale for tire speed and operational procedures related to tire speed limit. This course meets training requirements promulgated by the appropriate regulatory agencies requiring training. This is an online self-paced course.

AVS 2010 Polar Operations
This course will provide an understanding of: flight preparation and planning, designated polar routes, polar route planning charts, designated areas of magnetic unreliability, operation in true heading reference, Canadian airspace, Russian airspace, North Pole over flight, metric altitude conversions, use of QFE/QNH altitude references, polar diversions, dispatch considerations – solar flare activity, HF communications, general purpose (GP) radio stations, Satcom use and coverage areas, HF communications in Russia, VHF communications in Russia, CPDLC communications in Russia.

AVS 2011 Precision Runway Monitoring
This course teaches the meaning of Precision Runway Monitored approach (PRM), the difference between an Instrument Landing System (ILS)/PRM, and a Localizer Type Directional Aid (LDA/PRM) known as a Simultaneous Offset Instrument Approach (SOIA), and also the training required to legally conduct a PRM approach.

AVS 2012 Required Navigation Performance
The Required Navigation Performance (RNP) course is designed for experienced airline pilots requiring initial or recurrent training.

AVS 2013 Reduced Vertical Separation MINS
The RVSM course is intended for experienced airline pilots and flight dispatches requiring initial or recurrent training in areas where reduced vertical separation standards are used.

AVS 2014 RNAV SAAAR Approaches
This course teaches students the terminology, requirements, procedures and considerations of RNAV SAAAR approaches.

AVS 2015 TCAS/ACAS
The TCAS/ACAS course enables flight crew to operate the TCAS avionics, interpret the information presented by TCAS and conduct appropriate avoidance maneuvers.

SFY 2020 Dangerous Goods
The goal of the Dangerous Goods course is to enable flight crew to learn the hazards and operational procedures required to operate an aircraft carrying goods that are designated as dangerous goods or restricted for transport by air. This syllabus is required by CAR for Commercial Air Service.

SFY 5000 Safety Management Systems (SMS)
(Web-based/self-guided)
The Safety Management Systems course is designed for flight crew, cabin crew, maintenance engineers and operational staff including performance engineers, dispatchers, traffic managers, check-in staff, and ground handlers. The following main areas are covered in this course: Safety overview covering the basic safety concept lead to safety management systems, including concepts of organizational accidents, human error and safety cultures. Hazard identification and training to explain safety hazards, their consequences and strategies and techniques for identifying, analyzing and documenting those hazards. Risk management training to understand the concepts of risk management as they apply to safety management systems. SMS and airline operation to understand some of the particular programs and issues associated with airline applications of safety management systems.

WXR 2001 Cold Weather Winter Operations (C)
The Cold Weather Winter Operations course is for experienced airline pilots and flight dispatchers attending initial or recurrent training for ground icing conditions related to cold weather/winter operations.

WXR 2002 Hot Weather Operations
This course teaches the effects of hot weather on aircraft operations; relevant aircraft systems particularly susceptible to heat; hot weather considerations for various phases of flight.

WXR 2003 Low Visibility CAT II/CAT III Ops
The Low Visibility CAT II/CAT III Ops course is designed for experienced Airline Pilots requiring certification for operations under reduced visibility conditions. Can be delivered for either initial or recurrent training.

WXR 2004 Thunderstorm Avoidance
This course teaches students the components and hazards associated with thunderstorms and how to avoid them.

WXR 2005 Volcanic Ash Avoidance
The Volcanic Ash Avoidance course is designed for experienced airline pilots, initial or recurrent training for operation in areas where volcanic ash encounters are possible.

WXR 2006 Wind Shear
This course enables students to define, classify and understand the causes and risks to aircraft operations associated with wind shear and micro-burst. Students also learn wind shear avoidance and micro-burst recovery procedures in the event of an encounter.

AIRCRAFT-SPECIFIC GROUND SCHOOL COURSES

AVS 4000 DC-10 Refresher Course
The DC 10-30 Refresher Course is designed for experienced airline pilots and first officers and second officers attending ground school training related to aircraft familiarization.

This course meets the training requirements for FAA, JAA, CAA, Transport Canada and IOSA.

AVS 4001 MD-11 Ground School
This course is designed for experienced airline pilots attending ground school training. This is related to initial training for certification and licensing on the MD-11 aircraft. This course meets the training requirements for FAA, JAA, CAA, Transport Canada and IOSA.

AVS 4100 MD-80 Ground School
This course is designed for experienced airline pilots attending ground school training. This is related to initial training for certification and licensing on the Boeing MD-80 aircraft. This course meets the training requirements for FAA, JAA, CAA, Transport Canada and IOSA.

AVS 4200 CRJ-200 with 700 and 900 Differences Ground School
CRJ-200 with 700 and 900 Differences Ground School course is designed for experienced airline pilots and dispatchers requiring initial or recurrent training and will enable flight crew and dispatchers to explain the hazards and operational procedures required to operate the CRJ-200 series aircraft. This course meets the training requirements for FAA, JAA, CAA, Transport Canada and IOSA.

AVS 4300 A319 with A320/321 Differences Ground School
The A319 with A320/321 Differences course is designed for experienced airline pilots and dispatchers requiring initial or recurrent training on the Airbus A319 aircraft. This course meets the training requirements for FAA, JAA, CAA, Transport Canada and IOSA.

AVS 4301 A330 with A340 Differences Ground School
The A330 with A340 Differences course is designed for experienced airline pilots and dispatchers requiring initial or recurrent training on the Airbus A330 aircraft. This course meets the training requirements for FAA, JAA, CAA, Transport Canada and IOSA.

AVS 4700 B737-200 Ground School
The B737-200 course is designed for experienced Airline Pilots attending ground school training. This is related to initial training for certification and licensing on the Boeing 737-200 aircraft. This course meets the training

requirements for FAA, JAA, CAA, Transport Canada and IOSA.

AVS 4701 B737 Next Generation (NG) Ground School
The B737-NG course is designed for experienced Airline Pilots attending ground school training. This is related to initial training for certification and licensing on the Boeing 737-NG aircraft. This course meets the training requirements for FAA, JAA, CAA, Transport Canada and IOSA.

AVS 4702 B757 and 767 Ground School
The B757 and 767 Ground School course is designed for experienced airline pilots and first officers attending ground school training. This is related to initial training for certification and licensing on the Boeing 757/767-300ER aircraft. This course meets the training requirements for FAA, JAA, CAA, Transport Canada and IOSA.

AVS 4703 B747-400 Ground School
The B747-400 course is designed for experienced airline pilots attending ground school training. This is related to initial training for certification and licensing on the Boeing 747-400 aircraft. This course meets the training requirements for FAA, JAA, CAA, Transport Canada and IOSA.

AVS 4704 B777 Ground School
The B777 course is designed for experienced airline pilots attending ground school training. This is related to initial training for certification and licensing on the Boeing 777 aircraft. This course meets the training requirements for FAA, JAA, CAA, Transport Canada and IOSA.

ADDITIONAL CERTIFICATES AND PROGRAMS

CORPORATE AVIATION MANAGEMENT CERTIFICATE (CAMC)

(Web-based/instructor-facilitated)

The Certified Aviation Manager (CAM) credential is the ultimate recognition for business aviation professionals. The National Business Aviation Association (NBAA) developed the CAM program to recognize excellence in the field of business aviation and raise the quality of management within corporate flight departments. NBAA and the business aviation community recognize this individual as someone who has reached a high level of industry knowledge, and is qualified and prepared for management roles within business aviation. Through certification, an individual will gain recognition and credibility within the industry and show they are professionals committed to the safety, management, security, efficiency and acceptance of business aviation.

As an NBAA Approved Provider, Embry-Riddle Aeronautical University (ERAU) is the only institution that delivers a program which covers all the required objectives of the NBAA's CAM Program. Our Corporate Aviation Management Certificate (CAMC) program prepares the individual to sit for the NBAA CAM examination by teaching all five subject areas: Business Management, Leadership, Corporate Aircraft Operations, Human Resource Management, and Corporate Aviation Technical Services. In addition, students can receive a Certificate of Completion from ERAU provided they finish all 23 CAMC courses. CEUs and NBAA PDP points are awarded for each CAMC course.

BUSINESS MANAGEMENT COURSES

CE 2111 Value Proposition Analysis for Corporate Aviation

This course is designed for current or prospective flight department employees who will be making strategic decisions about the flight department and are managing the flight department's interactions with passengers, customers and/or the parent company. The course covers different methods used in conducting a travel analysis, evaluating options for lift, justifying the flight department value, proposing various travel options and optimizing the fit of the flight department with corporate goals.

CE 2112 Flight Department Finance, Budgeting and Accounting

This course is designed for anyone who desires more knowledge about and/or the ability to manage flight department finances using best practices, accepted accounting principles and efficient budgeting techniques. The course covers the basics of budgeting, forecasting, financial management, taxation, and cost recovery. It also provides an accounting primer to allow aviation professionals to better understand accounting principles and financial reports. The financial, taxation and insurance considerations of aircraft acquisitions and ownership are presented.

CE 2113 Community Relations

This course is designed for flight department personnel who will be involved in or are interested in community relations and public relations issues. Various areas of community interaction with the flight department are presented, including community service opportunities, community concerns, noise abatement, environmental issues, airport administration, and mediation strategies.

LEADERSHIP COURSES

CE 2121 Strategic Vision and Planning

This course is intended for flight department personnel and management who will be involved in or desire to know more about the planning process. Goal setting, value statements, mission statements, vision statements, strategic planning and business planning are presented in a practical manner focused on developing and communicating effective planning processes.

CE 2122 Leadership and Motivation
This course is designed for flight department management or prospective management employees. Course participants will learn how to exercise leadership by being a role model, empowering personnel, building effective teams, promoting the exchange of information, and making sound decisions in order to achieve flight department goals and promote corporate objectives.

CE 2123 Managerial Communications
This course is designed for flight department personnel who want to disseminate information using effective verbal and non-verbal communication strategies and engage personnel in order to enhance performance and understanding at relevant levels of the corporation. Communication techniques, tools, barriers and technologies are presented in a practical manner to assist in the management of a corporate flight department.

CE 2124 Professional Development
This course presents the resources and knowledge to enhance professional knowledge using industry resources (e.g., conferences, publications, local, regional, and national associations and legislation) in order to enhance personal effectiveness as a flight department manager.

CE 2125 Human Factors
This course is designed for aviation and transportation specialists who need a solid understanding of human factor issues in their work environment. The course focuses on aviation, specifically business aviation, but the concepts apply anywhere humans are performing complex tasks. Participants will learn how to detect, prevent and manage various human factors issues as part of a system safety culture.

CE 2126 Applied Human Factors
This course is designed for business aviation specialists who want to optimize human factors in flight, communication, situational awareness, decision making, team effectiveness and safety management. Improved interactions among maintenance, dispatch, flight and other employee functional areas of the department are stressed.

CORPORATE AIRCRAFT OPERATIONS

CE 2131 Standard Operating Procedures and Processes
This course is designed for all flight department personnel or aspiring flight department personnel who will work within or initially implement a system of standard operating procedures for flight operations using manufacturer's specifications, pertinent regulations, and accepted industry practices in order to ensure safety and efficiency.

CE 2132 Scheduling and Dispatch
This course is designed for those flight department employees who will be scheduling and dispatching corporate aircraft or will be establishing scheduling and dispatch procedures using industry resources (e.g., NBAA Management Guide, software packages) in order to conduct safe and efficient flight.

CE 2133 Record-Keeping and Regulatory Compliance
This course is designed for flight department personnel who will establish and/or maintain a record-keeping system using accepted industry practices in order to document regulatory compliance and initiate appropriate action within the department.

HUMAN RESOURCE MANAGEMENT

CE 2141 Workload Management and Staffing
This course is designed for managers who will determine the level of staffing needed for the flight department by assessing workloads in order to make efficient use of corporate assets.

CE 2142 Employee Training Programs
This course is designed for those flight department personnel who will be supporting technical training for all personnel within the flight department using recognized external and internal programs in order to ensure competence in each prescribed discipline, and promoting personal and professional growth through training and education by providing financial support and scheduling flexibility in order to support career development.

CE 2143 Staffing and Team Building
This course prepares employees to coordinate a team of qualified individuals by identifying internal and external talent in order to acquire the highest level of expertise and achieve department goals. Course participants will be able to fill key positions by identifying potential candidates and providing the necessary training and growth opportunities in order to ensure orderly transitions and minimize operational disruptions. Topics include the job market, training gaps, skills gaps, project management, knowledge management, teambuilding skills and forecasting human resource requirements.

CE 2144 Performance Reviews and Feedback Systems
This course is designed for flight department personnel to supply the skills and knowledge needed in conducting regular performance reviews by establishing appropriate goals for all employees consistent with department objectives and by evaluating progress in order to maximize employee performance.

CE 2145 Compensation and Reward Programs
This course is designed for managerial personnel who will be evaluating compensation for the flight department using benchmarking surveys and considering corporate policy and total compensation packages in order to attract and retain employees. Course participants will also learn how to respond to employee performance by rewarding or disciplining as appropriate in order to maximize the effectiveness of the department.

CE 2146 HRM Laws and Ethics
This course is designed for departmental managers who ensure compliance with regulatory requirements and corporate policies concerning human resource matters by providing documentation or access to people with the information in order to maintain company standards within the department.

CORPORATE AVIATION TECHNICAL SERVICES

CE 2151 Aviation Safety Programs and Emergency Preparedness
This course is designed for professionals who want to better understand and ultimately implement safety programs within the department. Concepts covered include emergency preparedness, emergency equipment, safety programs, best practices, and risk management.

CE 2152 Aviation Maintenance Management
This course is designed for those who will maintain aircraft and installed components in accordance with manufacturer's specifications and pertinent regulations in order to provide safe, secure, and efficient transportation of passengers and products, and maintain aircraft spares, supplies, and other inventories by following appropriate regulations and industry practices in order to minimize downtime and provide for efficient, safe service. Participants will also learn how to standardize technical reviews in the flight department by requiring all staff to adhere to uniform practices and accepted procedures in order to provide quality service.

CE 2153 Customer Service Programs
This course is designed for flight department employees who will maintain cabin information systems and passenger service items in accordance with manufacturer's specifications and pertinent regulations in order to ensure reliability, comfort, and effective service. Measuring customer expectations and satisfaction levels is also covered.

CE 2154 Aviation Security
This course is designed for those who intend to apply rigorous security procedures in accordance with regulations airport requirement, and corporate policies in order to provide a secure environment for passengers, employees, and assets. The concepts presented also include knowledge and skill areas needed to implement procedures using established company policies in order to safeguard information and physical assets of the corporation.

CE 2155 Vendor Management
This course is designed for those flight department employees who will be managing and negotiating contracts with qualified vendors and service providers using accepted business practices in order to procure needed services, equipment, and supplies for the department.

MODELING AND SIMULATION CERTIFICATE
(Web-based/self-guided)

Our Modeling and Simulation Certificate program is a comprehensive and interactive series of five self-guided courses covering a wide variety of Modeling and Simulation topics. These Professional Development courses are open enrollment and do not require application to the University.

CPT 1000 Introduction to Modeling and Simulation
In this course, the student will be presented with an introduction to the world of modeling and simulation. Modeling and simulation terms, concepts, organizations, activities, and issues are all discussed through a series of five Modeling and Simulation online lessons. The primary focus is to provide students with a strong knowledge base that will promote effective use of modeling and simulation tools/applications. This course is designed for both new and experienced modeling and simulation users, as well as managers, current and future, who are or will be tasked to incorporate modeling and simulation to enhance organizational outcomes and associated processes. The course lessons consist of: overview to modeling and simulation, history of modeling and simulation, fundamentals, the benefits of modeling and simulation, and modeling and simulation in training. Although the course pulls heavily from modeling and simulation in the Department of Defense, it is designed for any newcomer to the field of modeling and simulation and it provides examples of solutions that can be adapted to many fields of endeavor. Upon completion of each lesson, the student will have a 20-question test to evaluate course content and concepts retention and comprehension. This course is self-guided and may be taken at your own pace.

CPT 1001 Modeling and Simulation in Test and Evaluation
Modeling and Simulation is used extensively to augment live testing of new systems and equipment. Why? Because it saves time and money to test in the virtual world rather than build costly prototypes. This lesson provides information on modeling and simulation resources, organizations, policies, and process, and how these support test and evaluation (T&E) activities throughout the life cycle of an asset, system or process. Upon completion of the lesson, the student will take a short online test to evaluate course content and concepts retention and comprehension. This course is self-guided and may be taken at your own pace.

CPT 1002 Modeling and Simulation High Level Architecture
Interoperability between simulations is a goal of modeling and simulation users worldwide. There is no one modeling and simulation tool that can be all things to all people. Most tools were built for a specific purpose. But, there may come a time where you need information that is not in your simulation's database. Linking to another modeling and simulation tool that has the information needed is cheaper and faster than redesigning your simulation. Simulation interoperability allows simulations that are geographically distributed to share information. The HLA is a recognized architecture for simulation interoperability. This lesson discusses interoperability, the nature and role of the HLA, and its general purpose architecture for simulation reuse and interoperability. Upon completion of the lesson, the student will take a short test to evaluate course content and concepts retention and comprehension. This course is self-guided and may be taken at your own pace.

CPT 1003 Modeling and Simulation in Acquisition
Program managers worldwide have realized the value of modeling and simulation in the design and development of new products or systems. Using modeling and simulation throughout the development lifecycle can save time and money. This lesson discusses the critical role modeling and simulation plays in support of the full range of activities within the acquisition life cycle. In-depth discussion and examples of modeling and simulation use by the acquisition community are provided. Upon completion of the lesson, the student will have a 20-question test to evaluate course content and concepts retention and comprehension. This course is self-guided and may be taken at your own pace.

CPT 1004 Modeling and Simulation, Verification, Validation and Accreditation

Using modeling and simulation can be a risky business if the requirements, processes, and data used to build the modeling and simulation tool were not verified and validated and if the tool was not judged to be accurate for the purpose for which you want to use it. Proper use of Verification, Validation and Accreditation (VV&A) will reduce the risks involved with using modeling and simulation. This lesson discusses the critical role of VV&A in ensuring that modeling and simulation activities are most effectively organized in support of all functional area requirements. Specific emphasis is placed on the key roles decision-makers must play in ensuring that VV&A practices effectively support the systems acquisition processes. Upon completion of the lesson, the student will take a short test to evaluate course content and concepts retention and comprehension. This course is self-guided and may be taken at your own pace.

SIX SIGMA PROGRAMS

(Web-based/self-guided
with practical project in Black Belt)

Six Sigma is a system of practices originally developed by Motorola to systematically improve processes by eliminating defects. Since it was originally developed, Six Sigma has become an element of many Total Quality Management (TQM) initiatives. Our Green Belt program provides the learner with an overview of Six Sigma as well as key concepts associated with effective project teams, and our Black Belt program will introduce students to theories of enterprise-wide deployment of new processes and goals, business process management, project management, lean enterprise, and design for Six Sigma (DFSS).

Our Six Sigma program is the only Six Sigma program that specifically addresses issues and challenges associated with project management in the aviation industry, yet are still a great fit for professionals working in any industry. Six Sigma Certification has become a valuable credential in today's marketplace. Certification demonstrates that the student has done more than simply complete the training, it means the student has truly demonstrated knowledge and application of the Six Sigma methodology, tools, and practices.

MGM 5000 Six Sigma Green Belt Training

Six Sigma methodologies use data and statistical analysis to measure and improve operational performance by identifying and eliminating defects. The student will learn the principals and theories for each of the five steps of the DMAIC process (Define, Measure, Analyze, Improve and Control). The student will also learn to use and apply statistical analysis tools and formulas for each part of the process. The Six Sigma methodologies are not only valuable training for those in manufacturing but also those in service-related processes.

MGM 5001 Six Sigma Black Belt Training

Six Sigma methodologies use data and statistical analysis to measure and improve operational performance by identifying and eliminating defects. The student will learn the principals and theories for each of the five steps of the DMAIC process (Define, Measure, Analyze, Improve and Control). The student will also learn to use and apply statistical analysis tools and formulas for each part of the process. Additionally the Black Belt student will be introduced to theories of enterprise-wide deployment of new processes and goals, business process management, project management, lean enterprise and design for Six Sigma (DFSS).

The knowledge portion of Black Belt training is online. Black Belt training also requires a practical project under the mentorship of a Certified Black Belt. The Office of Professional Education can assist with finding a mentor if needed. Students are encouraged to choose a project related to their place of employement if applicable.

Upon satisfactory completion of Green and/or Black Belt programs, students are ready to take the American Society for Quality (ASQ) SIX SIGMA certification written examinations. For more information on the exams, students should contact ASQ directly.

SEMINARS AND WORKSHOPS

The Office of Professional Education delivers a variety of seminars and workshops throughout the year. Some reoccurring events are listed here. For the most up-to-date information on OPE seminars and workshops, please contact OPE directly.

AIRPORT WILDLIFE HAZARD MANAGEMENT WORKSHOP (FAA)

The goal of this course is to provide the knowledge, skills, and abilities needed by airport personnel to safely and accurately implement relevant portions of an FAA approved Wildlife Hazard Management Plan. The workshops are acceptable by the FAA Administrator for complying with part of the wildlife hazard management requirements of Title 14, Code of Federal Regulations, Part 139. They are suitable for those who train airport personnel involved in implementing FAA approved wildlife hazard management plans, as well as anyone directly involved in controlling wildlife hazards on airports. The workshops are three days in length. The first two days consist of intense classroom sessions led by four of the nation's premier wildlife management experts. Day three features a field trip to the host airport, during which hands-on wildlife mitigation exercises are performed and Wildlife Hazard Assessment (WHA) techniques are discussed. OPE holds these workshops at least three times per year at varying locations throught the United States and abroad.

AVIATION LAW AND INSURANCE SYMPOSIUM

An annual event, the Aviation Law and Insurance Symposium (ALIS) provides a forum for aviation attorneys, insurance personnel, and other professionals involved and interested in aviation law and insurance to discuss relevant issues. The focus is on present conditions, practices, and future trends. The symposium format consists of presentations, panel discussions and plenary sessions that facilitate interaction and communication among all participants.

NBAA EVENTS

OPE teaches courses at various NBAA events each year.

AVIATION WEEK EVENTS

OPE offers CEUs for select AVIATION WEEK events.

OFFICE OF PROFESSIONAL EDUCATION

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UNDERGRADUATE COURSE DESCRIPTIONS

Courses 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. Undergraduate prerequisite courses taken with Embry-Riddle must be completed with a grade of C or better.

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.

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 – Worldwide course offerings are listed on the following pages in alphabetical order.

AERONAUTICAL MANAGEMENT

AMGT 202
Aeronautical Science for Management (3,0)
3 Credits

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

AVIATION MAINTENANCE TECHNOLOGY

AMNT courses designated as Part 65 are available at the Worldwide 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 (Part 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 (Part 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 (3,0)
3 Credits

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

AMNT 271
Airframe Systems and Applications (3,0)
3 Credits

A study of airframe systems such as aircraft electrical systems, fuel systems, cabin atmosphere control systems, instrument systems, communication and navigation systems, ice and rain control systems, fire protection systems, and aircraft inspection (Part 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 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 Part 65 AMT coursework. (This course applies only to the Part 65 AMT Program.)

AMNT 280
Powerplant Theory and Applications (3,0)
3 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 (FAR Part 65).

AMNT 281
Aircraft Propulsion Systems and Applications (3,0)
3 Credits

Theory, principles of operation, and controls and systems for propellers and turbine engines are analyzed in this course (FAR Part 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 Part 65 AMT coursework. (This course applies only to the Part 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 Systems (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 Operations (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 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. Prerequisites: MATH 112 or 142 and PHYS 102.

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. Prerequisite: ASCI 309.

ASCI 315
Unmanned Aerial Systems and Operations (3,0)
3 Credits

This course chronicles the development of Unmanned Aerial Systems (UAS), Unmanned Aerial Vehicles (UAV), and their role in the aviation industry, as well as an increased awareness of the importance of UAS in modern commercial and military operations. This course chronicles the development of UAS, their operations and applications. An analysis of UAS is covered, including structural and mechanical factors, avionics, navigation, flight controls, remote sensing, guidance control, propulsion systems, and logistical support. Operations of UAS include an examination and analysis of their integration with commercial and military airspace, air traffic control and civilian/federal air and ground operations. The course will also look at past, current and future applications of UAS operations, with an emphasis on commercial applications.

ASCI 317
Rotorcraft (3,0)
3 Credits

This course traces the historical development of rotorcraft and introduces the many unique aspects of rotorcraft operations. Rotorcraft operations are examined from the operations, management, and maintenance perspectives. Included are rotorcraft operations and airworthiness regulations, airspace and facilities requirements, and environmental considerations. Uses of

rotorcraft to include military and civilian applications are studied. Rotorcraft design, manufacturing, materials, systems, and the variations in rotor configuration are topics of study.

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 356
Aircraft Systems and Components (3,0)
3 Credits

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

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 378
Helicopter Flight Environments (3,0)
3 Credits

During this course, the student obtains the foundation for helicopter operations in close proximity to the ground in varying environmental conditions. The student will be introduced to aspects particular to helicopter flight as it pertains to adverse weather, day and night environments specifically pertaining to take-off, cruise, and landing. Emphasis will be placed on understanding principles of flight close to the earth and hazards both natural and man-made. Additional emphasis will be placed on helicopter flight in and around mountains. The student will be exposed to visual references and how to adjust perceptions to maintain safe, low-level flight in and around hazardous conditions present in commercial helicopter operations. By the end of the course, the student will have sufficient knowledge to understand the concepts necessary for employment in the commercial helicopter industry. Prerequisites: Rotorcraft-Helicopter Commercial Pilot Certificate or instructor approval.

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

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

ASCI 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, maintenance personnel, aircraft manufacturers, and airport and aircraft 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 406
Airborne Law Enforcement (3,0)
3 Credits

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

of airborne law enforcement in preventing and responding to terrorist threats is also reviewed. Safety issues, as they apply to airborne law enforcement, will also be studied.

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

This course includes a comprehensive examination of maintenance policies, programs, and procedures. Emphasis is placed on all aspects of maintenance, including organizational management, planning, forecasting, cost control, reliability, flight scheduling, and safety.

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 428
Advanced Helicopter Systems and Functions (3,0)
3 Credits

During this course, the student will study the principles and functions of advanced helicopter systems with an emphasis on automatic flight control systems and associated pilot interface mechanisms, power and rotor systems, avionics, environmental systems, and

structures. Prerequisites: ASCI 317 or FAA helicopter pilot certification.

ASCI 438
Advanced Helicopter Operations (3,0)
3 Credits

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

ASCI 490
Aeronautical Science Capstone Course (3,0)
3 Credits

The Aeronautical Science Capstone Course is the culminating effort of the student's entire learning experience. The student will complete a project that provides significant evidence of experience in aviation and aeronautical studies. Students will work with designated faculty members to formulate, develop, and complete the aviation/aeronautical project. The completion of the Capstone Course is designed to document significant evidence that program outcomes have been met, and provides the student evidence of experience to show to current and prospective employers. The Capstone Course will be taken at the end of the student's degree program.

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 – AERONAUTICAL SCIENCE

ASCI 396, 397, 398
Co-op 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
Co-op 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.

AIR TRAFFIC CONTROL

AT courses are available online only.

AT 200
Air Traffic Management I (3,0)
3 Credits

AT 200 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; (j) 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. Prerequisite: AT 200.

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.

BUSINESS ADMINISTRATION

BSAB 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.

BSAB 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.

BSAB 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.

BSAB 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.

BSAB 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.

BSAB 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.

BSAB 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.

BSAB 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.

BSAB 371
Leadership (3,0)
3 Credits

The focus of this course is about leadership in organizations. In the increasingly competitive global economy, leaders must develop the necessary skills to lead organizational development, change, and create a motivating workplace. This course focuses on analyzing the leadership skills that enhance organizational success. Topics discussed are the approaches and models of leadership, organization change, and organization development. Prerequisite: MGMT 201.

BSAB 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.

BSAB 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.

BSAB 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.

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 required to already have an understanding of traditional computer-based applications before beginning CSCI 109. These applications include word processing, basic spreadsheet use, basic database use, basic presentation software use, electronic mail, and accessing web resources via the Internet. The purpose of this course is to build on students' existing knowledge of using computer systems and pertinent applications. Students are given an introduction to computers and PC applications. Computer literacy is presented through lectures, discussions, and readings 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, presentation software, 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 250.

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 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 counter-cyclical 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: ECON 210, MATH 222, 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

Review ERAU Worldwide English placement policy under the Assessment Examinations section of the Worldwide Catalog, p. 19.

ENGL 106
Introduction to Composition (3,0)
3 Credits

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

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, proposals, instructions, business correspondence, and other forms of technical communication. The course places a major emphasis on the researched technical report, professional relevance, 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.

ENGINEERING SCIENCE

ESCI 105
Fundamentals of Engineering (3,0)
3 Credits

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

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 252.

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.

GENERAL EDUCATION

GNED 101
Fundamentals of College Student Success (1,0)
1 Credit

This performance-oriented course is designed to increase success in college by empowering students to develop the necessary skills, knowledge and habits for learning. Topics include: college life, learning strategies and styles, self-assessment and awareness, setting college and career goals, values clarification, test preparation, test taking, problem solving, campus diversity and wellness. The course will also provide students with a comprehensive introduction to study skills; critical thinking, reading, listening, speaking, and writing a research paper; computer literacy and library research. This course cannot be used to satisfy credit for General Education requirements.

GNED 102
Library Research (1,0)
1 Credit

This performance-oriented course is designed to increase student success in college by introducing and actively engaging students in the research

process. Topics include: understanding research, sourcing, using a library, choosing a research topic, gathering and organizing information, developing a thesis and outline, and citing and referencing sources. Students will develop an annotated bibliography to demonstrate their research skills. This course cannot be used to satisfy credit for General Education requirements.

GNED 103
Developmental Mathematics (1,0)
1 Credit

The purpose of this course is to enable the student who did not take algebra in high school or who took it several years ago to succeed in an intermediate algebra course or in courses that require a very basic knowledge of the fundamentals of algebra. Topics included in the course are properties of the rational numbers to include review of operations with fractions, simple linear equations and inequalities in one variable, ratio, proportion, percent, basic operations with simple polynomials and applications to problem solving integrated throughout the course. This course cannot be used to satisfy credit for General Education requirements.

GNED 104
Basic English (1,0)
1 Credit

Emphasis in the course is placed on improving conceptual and organizational skills, grammar, spelling, capitalization, punctuation, and word choice. Students will also practice arranging ideas and supporting details in logical order, identifying topic and thesis statements, recognizing errors in pronoun usage, using verb tenses

correctly, recognizing parallel structures and misplaced modifiers, and using coordination and subordination effectively. Students will also complete a variety of writing assignments. They will practice editing and revising paragraphs before submitting them for a grade, making corrections in sentence structure, content and rhetoric. The culmination of the course is applying learned skills to a final essay. This course cannot be used to satisfy credit for General Education requirements.

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 Credits

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 Credits

An exploration of the development of U.S. political and economic relations with Latin America from their beginnings in the 19th 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 l500 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 20th 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. Skills 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 210
World Culture (3,0)
3 Credits

This course focuses on the cultural development of world societies including but not limited to religious, social, political, and philosophical arenas as all apply to contemporary circumstances. Skills emphasized are: comprehensive comparative reading, analysis and critiques, and writing.

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 400
Science and Aviation/Aerospace Technology in Society (3,0)
3 Credits

Throughout history, science and technology have consistently transformed society. From medicine to communications to the arts and all points between, our culture is very much a society of science and technology. A systemic awareness of how science and technology both impact and are influenced by society is critical to function as a responsible professional in an increasingly complex world. This course will examine the interrelated roles that science and technology play in society, with a particular emphasis on aviation and aerospace.

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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.

MATHEMATICS

Review ERAU Worldwide Mathematics placement policy under the Assessment Examinations section of the Worldwide Catalog, p. 19.

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 assessment 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 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 assessment 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 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 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. Prerequisite: 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. 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. Prerequisite: 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 253.

MANAGEMENT

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

This course offers an overview 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 aviation-related 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
Introduction to Management Information Systems (3,0)
3 Credits

The course integrates topics of management and organization theory, information and communication theory, information security, and systems theory. Special attention is given to computer hardware and software, telecommunications, database concepts, and e-commerce and Internet based business models.

MGMT 308
Public Administration (3,0)
3 Credits

The characteristics of organization and management in government will be discussed in this course. The course 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 371
Leadership (3,0)
3 Credits

The focus of this course is about leadership in organizations. In the increasingly competitive global economy, leaders must develop the

necessary skills to lead organizational development, change, and create a motivating workplace. This course focuses on analyzing the leadership skills that enhance organizational success. Topics discussed are the approaches and models of leadership, organization change, and organization development. Prerequisite: MGMT 201.

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 394
Information Security Management (3,0)
3 Credits

This course presents the concepts of information security in an enterprise approach to provide managers with tools and understanding needed to allocate scarce security resources. Introduction to security attributes and policies, developing effective and appropriate enterprise security plans, threats, vulnerabilities, and risk management concepts. Study of the architecture of an enterprise security system is developed to include a need analysis, levels of protection, detection strategies and correction/recovery with crisis management, risk analysis, and business continuity plans.

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 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 (3,0)
3 Credits

The principles of airport planning and design are studied. This course covers essential elements of current U.S. and international airport planning and design trends, including airport master planning and layout plans, geometric design and layout of the airfield and terminal facilities, obstruction analysis, signage and lighting, forecasting, airside and landside interface, and capacity and delay effects. The course also focuses on environmental planning, such as hazardous wildlife attractants, airport noise, and compatible land use.

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 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 436
Strategic Management (3,0)
3 Credits

Strategic management principles involving strategy, formulation, implementation, evaluation, and organization analysis are studied in this management capstone course. Case analysis and the use of strategic management principles are used to examine and solve organizational problems.

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 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 444
Principles of Supply Chain Management (3,0)
3 Credits

Supply Chain Management is one of the hottest topics in business today. The focus of this course is on understanding the history, principles, and major elements of supply chain management. Specific topics include sourcing and purchasing management; managing supplier relationships; demand forecasting; inventory management; quality management; domestic and international transportation; customer relationship management; enterprise resource planning systems; facility location decision-making; performance management; and future challenges facing supply chain managers.

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 492
Information Systems Project Management (3,0)
3 Credits

Although project management has been an established field for many years, managing information technology requires ideas and information that go beyond standard project management. By weaving together theory and practice, this course presents an understandable, integrated view of the many concepts skills, tools, and techniques involved in project management. Because the project management field and the technology industry change rapidly, this text provides up-to-date information on how good project management and effective use of software can help you manage projects, especially information technology projects. In this course, students apply all nine project management knowledge areas: project integration, scope, time, cost, quality, human resource, communications, risk, and procurement management; all five process groups: initiating, planning, executing, monitoring and controlling; and closing to information technology projects.

MGMT 494
Aviation Information Systems (3,0)
3 Credits

This course will focus on a variety of information technology systems that are in use and their impact on successful operations within the aviation industry. An overview of current and emerging technologies in reservation systems, aircraft productivity modeling, air traffic control systems and various database, data communication and e-commerce systems will be explored.

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 – MANAGEMENT

MGMT 396, 397, 398
Co-op 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
Co-op 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

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

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

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. Corequisite: MATH 252.

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 252.

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 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.

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.

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 323
Intelligence and Technology (3,0)
3 Credits

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

SCTY 324
Cybersecurity and Information Assurance (3,0)
3 Credits

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

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 "intelligence-oriented 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 215
Introduction to Health, Occupational, and Aviation Safety (3,0)
3 Credits

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

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 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 and 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 non-engineering 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. (Cannot be used for credit toward degrees in Fire Science.) 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 covers all facets for an aviation safety program including both flying safety and safety of ground operations. Major problem areas in aviation safety, safety program evaluation, and impact of accidents on industry are covered. Focus is on human factors, basic accident prevention programs, and the roles of various government and industry organizations have in preventing accidents. Prerequisite: SFTY 320.

SFTY 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. (Cannot be used for credit toward degrees in Fire Science.) 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

This course is the culminating experience that derives from previous work in the occupational safety and health technology field. In this course, a heavy emphasis is placed on the analysis of previously learned occupational safety and health theories and concepts so as to determine their appropriate application. A secondary emphasis is placed on the horizontal integration of these theories and concepts in a practical framework, which will serve as professional guidance for the practicing Occupational Safety and Health Technologist. Students will draw on previous occupational safety and health studies, and develop and defend an in-depth analysis of an occupational safety and health issue in a program or business of their choice. Prerequisites: SFTY 311, SFTY 341, and SFTY 355.

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 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.

SPEECH

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.

TRANSPORTATION

TRAN 274
Transportation Science (3,0)
3 Credits

The principles and analytical research tools applicable to the various modes of transportation, including highway, railroad, marine, urban transportation, pipeline, and aviation, are studied. The focus is on public policy, the economy, operations, and management of model and intermodal transportation. Major subjects of analysis include carrier strategies, intermodal transportation, the shipping process, and globalization issues related to transportation.

TRAN 301
Transportation Legislation (3,0)
3 Credits

A study of the evolution and development of federal transportation legislation including highway, railroad, marine, urban transportation, pipeline, and aviation; students will examine both past and present problems resulting in the regulation of transportation as well as the funding process. A review of applicable international treaties and conventions is included.

TRAN 321
Air Transportation Systems (3,0)
3 Credits

This course examines operations and management of air transportation as

part of a global transportation system. The course reviews the evolution of the technological, social, environmental, and political aspects of this system since its inception. The effects of U.S. economic deregulation, energy shortages, federal regulations, national and international issues, including security concerns, are discussed. Passenger, cargo and general aviation transportation modes are studied in relation to ever-changing transportation requirements.

TRAN 331
Road and Highway Transportation (3,0)
3 Credits

This course applies transport characteristics and regulations to the study of the movement of people and goods on the road and highway system. The focus is on economics, policy, regulations, vehicle characteristics, and the value of time to the cost of transporting goods and people. The multiple factors influencing rate development and rate structure are part of the course.

TRAN 341
Railroad Operations (3,0)
3 Credits

This course examines the characteristics of rail transport for the movement of passengers and materials. The topics of rail operations and management, including economic issues, regulatory issues, and labor issues are studied. Factors influencing the transport costs of passengers and materials that move on the railroad

system, as well as the development of rail rate structures, are examined.

TRAN 351
Urban Transportation and City Planning (3,0)
3 Credits

The various modes of urban transportation, as well as their advantages and disadvantages, are discussed. The importance of incorporating both practicality and efficiency into transportation systems, including non-motorized systems such as bicycles and bikeways, is explored. Methods of implementing an urban transportation system, meeting the expectations of users, effectively utilizing land and energy resources, and satisfying environmental and zoning regulations to design safe and effective urban transportation systems are discussed.

TRAN 361
Marine Transportation (3,0)
3 Credits

The focus of this course is on the physical, economic, and domestic and international regulatory characteristics of marine transportation, which includes the movement of passengers and goods on the oceans as well as on inland waterways. A review of economics, regulation, policy, and labor as it pertains to the domestic and international maritime industries is included.

TRAN 371
Pipelines, Land Use, and the Environment (3,0)
3 Credits

This course examines the economics, regulatory environment, policy issues, management, and operations of domestic and international pipeline systems for the movement of gases, liquids, and slurries. Special emphasis is placed on environmental and land use issues as they relate to the construction and operation of pipelines.

TRAN 401
Transportation and the Environment (3,0)
3 Credits

This course examines environmental considerations relevant to the principal transportation systems. Transportation systems provide incalculable economic, political, and social benefits, but these benefits come at a price. The challenge is to provide an effective and efficient transportation system while mitigating environmental impacts. Included is an examination of the economic, regulatory, legal, and political issues as they relate to the environment in which transportation systems operate.

TRAN 411
Strategic Intermodal Alliances (3,0)
3 Credits

In this course the student is introduced to complex issues of the physical, economic, and regulatory aspects of intermodal transportation alliances. Partnerships in highway, railroad, marine, urban transportation, pipeline, and aviation transportation systems are explored, including the Intelligent Transportation Systems and Information and Communication Systems that integrate the intermodal transportation of goods and products. Containerized shipping is also examined, including container design, load factors, product design and the standard transportation packaging regulations used in domestic and international shipping. Simulation models will be used to develop an intermodal transportation flow chart for international and domestic shipping of standard and non-standard containerized products.

TRAN 421
Transportation Safety and Security (3,0)
3 Credits

This course provides an analysis of the procedures and management decisions required to maintain safety in transportation networks, vehicles, and facilities. Security and protection of vehicles, cargo, facilities, and personnel is examined. Construction and design of operational and managerial criteria for defense of property are discussed.

TRAN 490
Transportation Science Capstone Course (3,0)
3 Credits

The Transportation Science Capstone Course is the culminating effort of the student's entire learning experience. The student will complete a project that provides significant evidence of experience in transportation studies. Students will work with designated faculty members to formulate, develop, and complete the transportation project. The completion of the Capstone Course is designed to document significant evidence that Program Outcomes have been met, and provides the student evidence of experience to show to current and prospective employers. The Capstone Course will be taken at the end of the student's degree program.

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 followership 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 followership 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 Leadership
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.

METEOROLOGY

WEAX 201
Meteorology I (3,0)
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.

WEAX 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 real-time 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: WEAX 201.

GRADUATE COURSE DESCRIPTIONS

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

An in-depth study in the use of mathematical and scientific tools and techniques in managerial decision-making. Operations research seeks to determine how best to design and operate a system, usually under conditions requiring the allocation of scarce resources. Emphasis will be on the applications of these methods in aviation/aerospace industries. Topics include: linear programming, probabilistic dynamic programming, game theory, forecasting, regression analysis, transportation models and decision making under uncertainty.

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
Advanced 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, defense-related 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 short-term 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 605
Methods and Procedures for Aviation/Aerospace Research
3 Credits

This course encompasses an explanation of methodology and data analysis procedures associated with aviation/aerospace research. 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 3 graduate ASCI credit hours.

ASCI 606
Air Traffic Control and the National Airspace System
3 Credits

This course provides a detailed analysis of current and future developments and trends in Air Traffic Control (ATC), Federal Aviation Administration (FAA), and the National Airspace System (NAS). NAS topics addressed include the

evolution of current national policies, plans, and objectives that will ensure the safe and efficient transformation to the Next Generation Air Transportation System (NextGen). 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
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. The course focuses on instructional strategies and delivery modalities, as well as the impact of social forces, in aviation/aerospace educational environments. Systematic approaches to planning, designing, implementating and evaluating curriculum development will also be explored.

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 systems life cycle approach is examined as it relates to production and procurement of general aviation aircraft, business and commercial aircraft, and/or air carrier aircraft. The efficient and effective production and procurement of the resources required to support an aircraft throughout its life cycle from (a) conceptual design; (b) preliminary system design; (c) detail design and development; (d) production and/or construction; (e) utilization and maintenance support; and (f) retirement and disposal are addressed. The role of the Federal Aviation Administration pertaining to the aircraft certification process, including maintenance support, is also considered.

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 Credits

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
Statistical Analysis for Aviation/Aerospace
3 Credits

The review, design, planning, analysis and statistical interpretation of data from the aviation/aerospace industry. Students will build on statistical theory and learn advanced techniques that can be applied to problem solving, research analysis and numerical interpretation of data from the aviation/aerospace industry. Students will learn to identify parametric and non parametric statistics, develop correlation methods for linear and non linear data, and statistical significance testing between samples and within samples. Students will undertake projects using computer programs for data that is derived or given. Statistical results will be presented in tabular, graphical and numerical ways in accordance with the American Psychological Association format.

ASCI 670
Research Methods for Aviation/Aerospace
3 Credits

This course is designed to equip students with the theoretical techniques and skills to identify and apply for solving qualitative and quantitative Aviation/Aerospace research problems. The course introduces the need for non-numerical data analysis and how part of a methodology can allow for in-depth analysis of complex issues and relationships. Sampling and data gathering in systematic manners are incorporated into research methodologies. The use of numerical analysis of qualitative data is covered to result in significance solutions and recommendations.

ASCI 691
Graduate Capstone Course
3 Credits

The Master of Aeronautical Science Capstone Course is the culminating effort of the student's entire learning experience. The student will complete a project or comprehensive exam that provides significant evidence of experience in aviation and aeronautical studies. Students will work with designated faculty to formulate, develop, and complete the aviation/aerospace project or exam. The completion of the Capstone Course is designed to document significant evidence that all Program Outcomes have been met, and provides the student evidence of experience to show to current and prospective employers. The Capstone Course will be taken at the end of the student's degree program.

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 Director of Academics 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: ASCI 605.

LOGISTICS AND SUPPLY CHAIN MANAGEMENT

LGMT 536
Purchasing for Logistics and Supply Chain Managers
3 Credits

This course addresses the critical role of purchasing in supply chain management. The course begins with a review of the basic components of purchasing followed by a discussion of the role of purchasing in the supply chain and how it contributes to the strategy and profitability of the enterprise. The course also addresses the legal aspects of purchasing and the relationship between purchasing and inventory management, materials management, just-in-time manufacturing, and manufacturing resource planning. Global sourcing and the role of supply chain partnerships are also addressed, along with how to evaluate, bargain, and negotiate with suppliers. Other topics include the relationship between purchasing and quality assurance; different pricing methods; the use of different pricing strategies for different transportation modes; and the role of purchasing in evaluating capital investments as well as professional services.

LGMT 634
Analytical Decision Making for Logistics and Supply Chain Managers
3 Credits

The focus of this course is on applying the principles of management science and quantitative analysis to logistics and supply chain decision making. This course begins with an introduction to quantitative analysis and then addresses the use of analytical tools and decision-making processes to solve logistics and supply chain problems. Specific applications include the use of linear and non-linear programming, integer programming, goal programming, simulation modeling, Markov analysis, and algebra to solve problems in forecasting, waiting lines, inventory modeling, transportation modeling, network modeling, and statistical quality control. PERT and CPM are also addressed to prepare students for planning and managing complex logistics activities. Prerequisites: Successful completion of college-level algebra and statistics.

LGMT 636
Transportation Management
3 Credits

Transportation plays a key role in today's global economy. The focus of this course is on understanding the technical, operational, and economic characteristics of the different freight and package transportation modes and their application in integrated physical distribution systems. This course addresses regional, national, and international passenger transportation and explores the impact of the different transportation modes, transportation intermediaries, and intermodality on small package, freight, and passenger systems. The course also addresses national and international regulatory constraints and their impact on passenger transportation and global supply chain management. Additional topics include carrier and shipper strategies; alliance management and the use of third parties; transportation metrics; transportation security; and the role of information technology in modern transportation management. Prerequisites: LGMT 634 or MGMT 531 and MGMT 631.

LGMT 682
Integrated Logistics Management
3 Credits

The focus of this course is on integrated logistics management. Although different organizations define the concept differently, at its core, integrated logistics is all about the systematic management of activities associated with the delivery of goods and services to meet customer needs. As a result, this courses addresses the cross-functional management of a number of activities including sourcing, procurement, packaging, in-bound transportation, warehousing, inventory management, distribution, customer service, and reverse logistics where appropriate. Additional topics include the concept of life cycle cost, outsourcing, performance management, international logistics, and the role of web and EDI in managing the logistics information needs of the enterprise. Case studies and problems are used throughout the course to highlight important principles and best practices in integrated logistics management. Prerequisites: LGMT 634 or MGMT 531 and MGMT 631.

LGMT 683
Supply Chain Management
3 Credits

The focus of this course is on supply chain management. Topics include the evolution and objective of supply chain management; the major stages and processes involved in planning and managing supply chains; and why the concept of strategic fit is so important to supply chain managers. Successful students will also understand the major drivers of supply chain performance; key metrics for managing performance; and how to plan and forecast demand under conditions of uncertainty to meet desired customer service levels. This course also addresses the purpose and content of the Supply Chain Operations Reference (SCOR) Model. Case studies and problems are used throughout the course to highlight important principles and best practices in supply chain management. Prerequisites: LGMT 682 and LGMT 634 or MGMT 531 and MGMT 631.

LGMT 685
Global Logistics and Supply Chain Management
3 Credits

Today, globalization is affecting almost every aspect of the world's economy – and the world's economy is sustained by global logistics. The focus of this course is on understanding the role of logistics and supply chain management in meeting the needs of the transnational enterprise, from the sourcing of raw materials through delivery of the finished product to the final customer. The course addresses the role and scope of logistics in the global economy; key strategies for supporting different market entry alternatives; the impact of different transportation modes on international supply chain management; the use of international commerce terms and contracts; the impact of exchange rates on supply chain profitability; supply chain security; and the role of global supply chain management as a key source of competitive advantage. A number of case studies are also analyzed throughout the course to highlight important principles and best practices in global logistics and supply chain management.

LGMT 690
Graduate Capstone Project
3 Credits

This course provides students with a unique opportunity to identify and systematically analyze one or more problems related to logistics and supply chain management while simultaneously demonstrating their expertise in the technical aspects of writing. This course is included in the curriculum to provide students with the opportunity to pursue a project of special interest while applying the knowledge and skills acquired throughout the program to define, analyze, and solve a theoretical or real problem in their area of study. Prerequisite: MGMT 605.

BUSINESS ADMINISTRATION

MBAA 511
Operations Research
3 Credits

This course is an advanced study in the use of mathematical and scientific tools and techniques in managerial decision making. Operations Research seeks to determine how best to design and operate a system, usually under conditions requiring the allocation of scarce resources. Emphasis will be on the applications of these methods in aviation, and aviation related industries. Topics include: linear programming, probabilistic modeling, game theory, forecasting, inventory modeling, queuing theory, transportation, decision theory, network models, simulation models, and Markov Chains. Prerequisites: Satisfactory completion of Business Foundation courses, and/or permission of the graduate program chair.

MBAA 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 within the aviation industry. Prerequisites: Satisfactory completion of Business Foundation courses, and/or permission of the graduate program chair.

MBAA 517
Managerial Accounting for Decision Making
3 Credits

Financial control procedures for a systems approach to program management are presented. Cost elements in manufacturing, research and development, logistic and support services are explored. Included will be 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; budget and overhead analysis; pricing, capital budgeting and investment decisions. Prerequisites: Satisfactory completion of Business Foundation courses, and/or permission of the graduate program chair.

MBAA 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 business settings. Topics include capital budgeting, risk and diversification, asset and liability management, financial derivatives and financial engineering, swaps, options and financial futures, and international finance. Prerequisites: Satisfactory completion of Business Foundation courses, and/or permission of the graduate program chair.

MBAA 520
Organizational Behavior, Theory, and Applications in Aviation
3 Credits

This course focuses on current theoretical and practical organizational issues which 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 which must be resolved for successful leadership. Topics provide insights to behavior, structure, authority, motivation, leadership, organizational development, and social responsibility. Prerequisites: Satisfactory completion of Business Foundation courses, and/or permission of the graduate program chair.

MBAA 521
Global Information and Technology Management
3 Credits

This course aims to develop knowledgeable and effective users of information technology in aviation and 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 within the aviation 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. In addition, topics relating to the management of information resources are presented. Prerequisites: Satisfactory completion of Business Foundation courses, and/or permission of the graduate program chair.

MBAA 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 the graduate program chair.

MBAA 523
Advanced Aviation Economics
3 Credits

This course pursues an economic analysis of the global airline industry. Topics include the history and economic rationale of government regulation and the effects of worldwide liberalization, demand for air transportation and modeling, pricing and revenue management, supply and route architecture, cost structure and methods of control, and fleet selection and financing. Prerequisites: Satisfactory completion of Business Foundation courses, and/or permission of the graduate program chair.

MBAA 604
International Management and Aviation Policy
3 Credits

This course addresses international management and aviation policy through the examination of major trends and issues challenging the international 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 operations, such as designing and staffing the organization. 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. Prerequisites: Satisfactory completion of Business Foundation courses, and/or permission of the graduate program chair.

MBAA 607
Human Resource Development
3 Credits

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. Prerequisites: Satisfactory completion of Business Foundation courses, and/or permission of the graduate program chair.

MBAA 635
Business Policy and Decision Making
3 Credits

This is a capstone course in the MBAA 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 formulate the strategic vision and policies to achieve such a perspective. Emphasis is on the extant corpus of research and scholarship in the field of Strategic Management. Applications of the concepts are applied to the domestic and international activities of airlines, airports, manufacturing and government to sustain a competitive advantage. Prerequisites: Completion of all MBAA core courses.

MBAA 690
Graduate Business Capstone Project
3 Credits

A written document on an aviation/aerospace or business management topic which exposes the student to the technical aspects of writing to including problem definition, analysis, and solution process utilizing statistical methods of evaluation. This course is included in the MBAA curriculum to provide the student with the opportunity to pursue a project of special interest, but not to the level of a thesis. Prerequisite: MBAA 522.

MBAA 696
Graduate Internship in Aviation Business Administration
1-3 Credits

Temporary professional or industrial work appointments 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 graduate student. Prior approval of the graduate program chair is required.

MBAA 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. Prerequisites: Satisfactory completion of Business Foundation courses, and/or permission of the graduate program chair.

MBAA 700
Thesis Research
3-9 Credits

A written document on an aviation/aerospace management topic supervised throughout its preparation by the student's Thesis Committee, which demonstrates the student's mastery of the topic and is of satisfactory quality for publication. This course is available by articulation agreement as an International Program Option and is not available to Worldwide campuses. MBAA 522 may be incorporated by articulation agreement.

MANAGEMENT

MGMT 503
Business Foundations (503A, 503B, 503C, 503D, 503E, 503F)
1 Credit Each

This course examines in-depth the major competencies that have been identified as essential prerequisite knowledge for a graduate student enrolled in the MSM or MBAA program to successfully complete the course work. The course is broken down into six stand-alone modules: management, quantitative methods, marketing, accounting, economics, and finance. Each student will only take those modules which 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 524
Management Science
3 Credits

In this course, students have the opportunity to gain knowledge and experience in the application of management science processes and models used in decision making in management. Techniques include decision theory, queuing theory, forecasting models, inventory theory, linear and integer programming, transportation and assignment models, and network models including project management calculations (time and cost) using PERT and CPM. Computer techniques are used to solve problems and to communicate the results in a clear and understandable fashion. Emphasis is placed on using quantitatively based analytical methodologies, interpreting quantitative results, and communicating conclusions. Successful completion of college-level algebra and statistics is required for this course.

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© 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 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. 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 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/aerospace and/or management-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.

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 633
Principles and Practices of Financial Accounting and Control for 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, job-order 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 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 651
Production and 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 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 690
Graduate Capstone Project
3 Credits

In this course, students are required to write a document on an aviation/aerospace and/or management topic which exposes the student to the technical aspects of writing to include problem definition, analysis, and solution process utilizing statistical methods of evaluation. This course is included in the MSM curriculum to provide the student with the opportunity to pursue a project of special interest, but not to the level of a thesis. Prerequisite: MGMT 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

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 or MGMT 524.

PMGT 502
Effective Communications for Managing Projects
3 Credits

This course is designed to help the student 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 502.

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 projects 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, the Project Management Office (PMO), and software tool use involving multiple projects. Sensitive issues surrounding multinational and multicultural environments will be addressed and discussed. Prerequisite: PMGT 502.

PMGT 613
Assessing and Managing Project Risk
3 Credits

More difficult economic conditions, increasing competition, and exponentially expanding technology create 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 611 and PMGT 612.

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. 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. Prerequisite: PMGT 613.

PMGT 690
Project Management Capstone
3 Credits

This course is designed to provide the student the opportunity to demonstrate knowledge gained throughout the degree program. This will normally be accomplished utilizing a project management portfolio. Demonstration of project scope planning, project scheduling, project cost planning, project quality planning, risk assessment planning, and project communications planning, project management ethics and continuing education are among the skills and knowledge demonstrated. A capstone project may alternatively address a current problem in the student's workplace that addresses the enumerated issues listed above. Approval of the program chair is required for this alternative. Prerequisite: PMGT 614.

TECHNICAL MANAGEMENT

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. Mathematical and descriptive and inferential statistical applications will be explored. Successful completion is necessary to proceed in the MSTM program.

TMGT 535
Business Communication Skills for Managers
3 Credits

This course explores the impact of communication in managing contemporary technical organizations and provides a broad survey of the technical aspects of communications. Emphasis is placed on the application of theory to practice 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. Students will practice communicating conclusions to problems 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 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

This course examines Operations Management from a systems perspective, and demonstrates how dynamic interchanges between the constituent parts of the system affect the operations. This course relates to the management of product and process design, operations, and supply chains. A great deal of focus is on efficiency and effectiveness of processes, and this course includes substantial measurement and analysis of internal processes. This course demonstrates that the products or services in an organization, as well as their management, drive how Operations Management is carried out in an organization.

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 646
Operations Research and Management Science
3 Credits

In this course, students explore quantitative analysis techniques for program management. Techniques include decision theory, queuing theory, forecasting models, inventory theory, linear and integer programming, transportation and assignment models, and network models. 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 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.

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 661
Project Development Techniques
3 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 data-gathering instruments, formulation of a research model and plan, and appropriate statistical data analysis. The DAB Capstone Guidelines format and American Psychological Association (APA) style will be reviewed and followed. A formal Graduate Capstone Project proposal will be developed and presented by each student as a basic course requirement. Prerequisite: TMGT 646.

TMGT 690
Graduate Capstone Project
3 Credits

A written document on a technical management topic which 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 661.

STUDENT SERVICES
MISSION STATEMENT

Our mission is to provide comprehensive student 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.

ACADEMIC AFFAIRS

ACADEMIC ADVISEMENT

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' education 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 this Worldwide catalog, also available at: worldwide.erau.edu/degrees-programs/catalog.

A student's primary point of contact is the Director of Academic Support or the Director of Academics at their Worldwide Campus home location. For Online students not associated with a Worldwide Campus location, their primary contact is their Online Academic Advisor in the Admissions, Advising and Student Affairs Office. Servicemembers Opportunity Colleges (SOC) students who are no longer located at a Worldwide Campus should contact the Admissions, Advising and Student Affairs Office at (800) 359-3728, option 8 or e-mail wwcmpadv@erau.edu.

STUDENT RESPONSIBILITIES

All Embry-Riddle Aeronautical University students are responsible for knowing the academic regulations and procedures required for continued attendance at the University. Academic regulations and procedures are detailed in University publications. A student who requires clarification of any policy or regulation should seek help from his/her academic advisor at their local campus or their advisor in the office of Admissions, Advising and Student Affairs. University regulations will not be waived because a student is unaware of established policies and procedures. The University reserves the right to change curricula, and academic regulations and procedures without notice or obligation.

REGISTRATION

Students are responsible for initializing enrollment each term by contacting their home location/campus. At all campus locations, students are allowed to register online if they meet the required criteria. Registration must be completed according to instructions published by the Office of Enrollment Management. Payment of all tuition deposits and fees must be made at the time of registration. Students are not officially enrolled until they complete all phases of registration, including financial requirements. Enrollment may be restricted for students who have outstanding incompletes or a history of incompletes by the Director of Academic Support, the Director of Admissions, Advising and Student Affairs Office, or the Registrar.

ERAU undergraduate students who are within two courses of completing their bachelor's degree may, under some circumstances, enroll in graduate courses. An undergraduate student who wishes to enroll in a graduate program must complete an application for that program and be processed by the Admissions Office. Specific program completion rules and GPA requirements apply to eligibility for this program; students should consult an Admissions representative for details.

SERVICEMEMBERS OPPORTUNITY COLLEGES (SOC)

Embry-Riddle has been a member of SOC for almost 20 years. Prior to membership, the University had still 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's and bachelor's 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's Degrees - Affiliate Member
  Army: SOCAD-2
  Navy: SOCNAV-2
  Marines: SOCMAR-2
  Coast Guard: SOCCST-2

- Bachelor's Degree
  Army: SOCAD-4
  Navy: SOCNAV-4
  Marines: SOCMAR-4
  Coast Guard: SOCCST-4

- Aviation Operations Management Network
  Bachelor of Science in Professional Aeronautics
  Bachelor of Science in Aviation Maintenance

- 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 standard University rules and regulations, to obtain advance approval for taking certain courses, and to provide official transcripts, as appropriate, from other schools where they have earned credit.

ASSESSMENT OF PRIOR CREDIT

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 documentation for such credit as part of the admission process.

Previous academic credit is evaluated on a course-by-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.

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:

1. Appropriate coursework completed with a grade of A, B, C, pass, satisfactory (or equivalent) will be accepted.

2. Credits 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) will be considered for transfer credit. Academic credit is accepted without regard to the date that the course was completed. Embry-Riddle has sole discretion in determining which and how many transfer credit hours will be accepted toward degree requirements.

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 notified that an official evaluation has been completed, which details all applicable transfer credit that has been accepted by the University.

Advanced Standing Credit
Advanced standing credit for prior learning may be awarded 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 course work, military learning experiences, credit by examination, and all FAA certificates are 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) designation recommended by ACE for a passing score on each of the exams will be accepted by the University. As per University policy, challenge exams (including CLEP, DANTES, etc.) must be completed prior to the time the student reaches the last 30 credits of a Bachelor's degree, or the last 15 credits of an Associate's degree.

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 challenge exams, students who believe their knowledge and prior learning experience qualify them for credit for a specific Embry-Riddle course may submit the Petition for Award of Validated Advanced Placement (VAP). To be eligible for an award of VAP credit, you must be admitted to an ERAU degree completion program and have received the completed evaluation of previous credit. Students may petition for VAP credit only once and this must be done within one year of the first term of enrollment. The student must submit a VAP petition form, a detailed comparison of the training to the learning outcomes in the outline of the course(s) in question and creditable supporting documentation to substantiate the petition, which is then retained by the University in the student's academic file. ERAU department chairs will review the petition and make the determination of credit. There are eligibility maximums established for both undergraduate and graduate VAP credit awards. Credits awards through the VAP process are generally minimal. Contact the Registrar's Office at worldwide.registrar@erau.edu or (866) 393-9046 to request additional information regarding the Validated Advanced Placement process.

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, up to a maximum of 15 semester credit hours. As per University policy, challenge exams (including CLEP, DANTES, etc.) must be completed prior to the time the student reaches the last 30 credits of a bachelor's degree, or the last 15 credits of an associate's degree. Only undergraduate students who have matriculated are eligible for challenge examinations.

Graduate
Credits 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) will be considered. Credit may be received for certain graduate courses taken as nondegree graduate work or as part of another (completed or incomplete) Embry-Riddle graduate degree program. When transferring from one Embry-Riddle graduate program to another this credit may include prior work on a Graduate Capstone Project (GCP). The combined total credit applied to an Embry-Riddle graduate degree for most programs is 12 credit hours. A maximum of 6 credit hours may be applied to the Master of Science in Technical Management Program. Students pursuing the Master of Science in Management or Master of Science in Technical Management to the Master of Business Administration in Aviation degree may transfer a maximum of 15 credit hours. 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 and program chair will make these determinations.

Credit will be granted only if the student demonstrates academic performance expected of a graduate student at Embry-Riddle, meaning 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 only be considered for course work that is not more than seven years old at the time the admissions application is received at Worldwide Headquarters. 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 seven-year limit for such applicants commences on the date the service member separates from active military service.

VETERANS TRANSFER CREDIT

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

TRANSCRIBING TRANSFER AND ADVANCED STANDING CREDIT

Students are eligible for an Embry-Riddle transcript showing credit awarded from other sources toward their degree, after they have matriculated. Matriculation occurs when an applicant has been officially accepted for admission, has enrolled in an Embry-Riddle course within one year of the date of admission, and has maintained that enrollment beyond the drop period. If an applicant fails to maintain enrollment beyond the drop period, he/she will need to reapply for admission.

Continuing student status is maintained through enrollment beyond the drop period in at least one course within a two-year period. If a student fails to maintain enrollment beyond the drop period, he/she will forfeit active student status, need to reapply for admission, and the matriculation process will begin again. Courses previously taken with ERAU will not immediately matriculate a returning student.

MILITARY DEGREE COMPLETION PROGRAM FOR ACTIVE-DUTY PERSONNEL

Undergraduate

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 admissions applications for any such program must be completed by the student and submitted to the Worldwide Office of Enrollment Management at least 60 days prior to the first day of the term/semester in which the student desires to start the program. Upon receipt of the student's application and supporting documents, the University will evaluate previous college coursework, military education and work experience to determine eligibility for advanced standing.

DEGREE COMPLETION TIME LIMIT

Graduate

All requirements for an Embry-Riddle master's degree must be completed within seven years from the date of enrollment into the degree program. If a student must reapply for admission, the seven years commences from the new enrollment date rather than the initial enrollment date.

ARTICULATIONS AND EDUCATIONAL PARTNERSHIP AGREEMENTS

Articulation and Educational Partnerships are two distinct types of cooperative agreements that facilitate the transfer of students from other institutions to Embry-Riddle Aeronautical University.

Articulation Agreements provide for formal evaluation and guaranteed acceptance of courses within specific degree programs from other institutions to ensure that their content and course objectives are the equivalent of those at the University. The primary benefits of an Articulation Agreement to the student are guaranteeing acceptance of courses completed at the other institution satisfying specified degree requirements at the University and locking students into the requirements of the curriculum specified in the catalog at the time of enrollment. As long as the student has completed and signed the Articulation Agreement Enrollment Form, he/she is assured that the courses taken will still apply, even though the curriculum may have undergone significant change before the student has actually transferred to the University (subject to matriculation and continuous enrollment requirements).

Educational Partnership Agreements seek to link specific programs for transfer into the University, but without the same level of evaluation and guaranteed, program-specific, credit acceptance under a specific catalog year.

For more information regarding either of these types of curricular agreements, please contact the Worldwide Campus location that you plan to attend or, for online students, contact the Worldwide Admissions, Advising and Student Affairs Office, (p. 156).

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. Converted credit totals are not rounded to the nearest whole credit.

COURSE LOAD

Undergraduate

Due to compressed term length at the Worldwide Campus, six semester hours constitute the minimum load for full-time student status for students enrolled at a campus location. Students carrying less than the minimum full-time load are classified as part-time students.

The maximum load for students is 12 hours per term. A student whose cumulative GPA is 3.00 or higher may enroll for an overload of 3 credit hours with advance approval from the Director of Academic Support. Requests for overloads in excess of 3 credits must be approved by the Regional Dean.

Graduate

The maximum course load for graduate students is nine credit hours per term. Three semester credit hours constitute a full time load for courses of nine weeks or less; six semester credit hours constitute a full-time load in courses of 10-15 weeks. If a student demonstrates exceptional academic performance, a maximum one course overload may be approved by the Director of Academic Support or Director of Admissions, Advising and Academic Affairs. A student's enrollment may be restricted when deemed in the best interest of the student.

CLASSIFICATION OF UNDERGRADUATE 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	less than 28 hours
Sophomore	28-57 hours
Junior	58-87 hours
Senior	88 hours or more

REPEATING A COURSE

Undergraduate

An undergraduate student may repeat any university course without limit, with the exception of residential campus flight courses, which may be repeated only once. In determining the Cumulative Grade Point Average (CGPA), the grade for second course attempt replaces the first, and the grade for the third course attempt replaces the second. The grade(s) and credit hours for the third and all subsequent attempts will be used in calculating the CGPA. All course attempts are recorded on the University transcript.

Graduate

A graduate student may repeat any university course without limit. All course attempts are included in the computation of the Cumulative Grade Point Average (CGPA), with one exception. Graduate students may petition to repeat one course in which a grade of less than "B" was earned for the purpose of improving their CGPA. Both grades earned are recorded on the University transcript, but, in this instance, only the replacement grade is included in the calculation of the grade point average. Additional repeated coursework beyond that approved petition will not be used to revise the student CGPA.

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 Worldwide locations, 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. Each petition is considered individually; not all petitions are approved, nor all waivers granted. 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)

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. All audited courses are added to courses taken for credit in determining the student's course load for a term.

INCOMPLETE GRADES (I)

Students who are unable to complete course requirements due to extenuating circumstances may complete and submit a written request for an incomplete grade. An incomplete grade must be completed 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 (VA) funds were used, similar restitution of Veterans Educational Benefits may have to be made to the VA if a course is not completed. Students not completing their courses within the time limit will receive a failing grade (F) in the course.

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 credit hours attempted in that term. The CGPA is determined by dividing the total number of grade points by the total number of hours attempted at the University. For undergraduate students, grade points and hours attempted are accrued in courses graded A, B, C, D, and F.

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 credit hours attempted in that term. The CGPA is determined by dividing the total number of grade points by the total number of hours attempted at the University. For graduate students, grade points and hours attempted are accrued in courses graded A, B, C, F, and WF.

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 = 4.00, B=3.00, 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 3.00 GPA to graduate. See current catalog for full details.

DEAN'S LIST AND HONOR ROLL

Undergraduate

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 Registrar's Office. Students who earn an overall cumulative GPA of 3.500-4.00 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 3.200-3.499 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 credit-hour period will not be eligible for the Dean's List or Honor Roll regardless of the CGPA.

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, UNDERGRADUATE SUSPENSION AND GRADUATE DISMISSAL

Undergraduate

Warning: A Worldwide Campus student whose cumulative GPA falls between 1.00 - <2.00 for 12 consecutive credit hours of coursework will be placed on academic warning.

Probation: If the cumulative GPA remains between 1.00 - <2.00 after an additional 12 consecutive credit hours of academic work, the student will be placed on academic probation.

Suspension: A student on academic probation whose cumulative GPA remains between 1.00 - <2.00 for another consecutive period of 12 credit hours will be suspended from the University. Any student whose term or cumulative GPA falls below 1.00 may be suspended from the University.

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 completing a minimum of 15 semester hours of academic credit with a CGPA of 2.500 on a 4.00 scale or higher from an accredited institution. The suspending Campus renders the decision for readmission to the University. Unless readmitted to the University, suspended students will not be permitted to take any further courses with the University.

Graduate

Warning: Students whose cumulative grade point average (CGPA) falls below 3.00 are placed on academic warning. Students on academic warning must raise their cumulative grade point average (CGPA) to 3.00 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 3.00 CGPA within the next 12 hours of graduate work.
5. Student earns less than a 2.500 CGPA.

Students may appeal their academic dismissal from the University by submitting a petition in writing detailing the existence of any exceptional mitigating circumstances to the Office of Enrollment Management within 30 days of the receipt of the dismissal notice.

The dismissing Campus renders the decision for readmission to the University. Unless readmitted to the University, dismissed students will not be permited to take any further courses with the University.

ACADEMIC INTEGRITY

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 involve imposing sanctions which may include, but are not limited to, a failing grade on the assignment, a failing grade in a course, suspension or dismissal from the University, upon students who commit the following academic violations:

1. **Plagiarism:** Presenting the ideas, words, or products of another as one's own. Plagiarism includes use of any source to complete academic assignments without proper acknowledgement of the source.
2. **Cheating:** A broad term that includes, but is not limited to, 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, or presented as, 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.

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 program or minor, the requirements of the catalog in effect at the time the request was initiated apply. When a student elects to change a specialization within a degree program, the catalog year remains the same. Students considering such changes should contact their Director of Academic Support, the Worldwide Admissions, Advising and Student Affairs Office, or the Registrar's Office to determine how they will be affected.

TRANSFER BETWEEN GRADUATE DEGREE PROGRAMS

Credit may be accepted for certain graduate courses taken as graduate work or as part of another (complete or incomplete) Embry-Riddle graduate program. When transferring from one Embry-Riddle graduate program to another, this credit may include prior work on a Graduate Capstone Project (GCP) or thesis.

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.

DECLARATION OF A CONCURRENT SECOND UNDERGRADUATE DEGREE OR MINOR

Students must declare their intention to seek an associate's degree concurrently with a bachelor's degree as early as possible, preferably at the time of admission. Students may declare their intention to seek an associate's degree later in their baccalaureate studies with ERAU, but not after the date on which their application for graduation in the bachelor's degree program is received by the Registrar's Office. For university policy regarding earning a second degree at the same academic level, please refer to the catalog section titled: "Two Degrees of the Same Rank," (above).

Students must declare their intention to seek their minor(s) as early as possible, preferably at the time of admission. Students may declare their intention to seek a minor later in their academic career with ERAU, but not after the date on which their application for graduation is received by the Registrar's Office.

The student is subject to the requirements of a second degree track or minor as stated in the catalog in effect at the time the request is made. Students must complete each degree or minor with a 2.0 GPA or higher. Both degree programs will be reflected on the student transcript, and each will generate an individual diploma. A minor is reflected on the student transcript, but is not noted on the diploma.

At least 6 hours in each minor must be completed with ERAU courses. Of the 6 hours completed at ERAU, 3 hours must be from an upper-level course. Students may request a substitution of one course for another in the minor,

however, the maximum number of course subs allowed in minors is two, regardless of the number of minors pursued. When a student is pursuing multiple minors and the same course is required in both or all, the course may apply to all and the student does not have to make up additional hours for the shared course.

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 pursue a second graduate degree, the student must satisfy all the requirements of the first degree sought. However, because of the cohesive and integrated nature of the Master of Science in Technical Management degree program, no more than 6 credits may be transferred from previous graduate work.

CONTINUOUS ENROLLMENT

Students remain in continuous student status unless they:

1. Enroll at another institution without advance written approval. Once admitted to Embry-Riddle 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. If applicants fail to disclose on their applications for admission that they are currently attending another school, or if they decide to take courses outside of Embry-Riddle after they have applied and been admitted, that credit won't be considered for transfer unless they have obtained prior written authorization from Embry-Riddle.
2. Fail to complete at least one course at Embry-Riddle in any two-year period from the end date of last course.
3. Have been suspended or dismissed from the University.
4. Graduate students who do not complete the degree requirements of a graduate program within 7 years from the date of initial enrollment in the graduate program.

Students failing to maintain continuous enrollment for any reason are required to reapply for admission under the catalog in effect at the time of their readmission.

CATALOG APPLICABILITY

The catalog in effect at the time of a student's initial academic evaluation remains applicable as long as the student remains in the original degree program, major, or area of concentration and maintains continuous enrollment status.

Students enrolled through an active-duty military degree completion program or Servicemembers 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. Course prerequisites are not catalog year specific. Students must adhere to the

course prerequisites in effect at the time that they enroll for a course. 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, etc.) contained in that catalog or addendum.

TRANSCRIPT REQUESTS

Embry-Riddle transcripts are provided through the Scrip-Safe® Transcripts on Demand™ (TOD) service.

- Current students may request an official transcript via ERNIE, the ERAU Online Student Services Portal at ernie.erau.edu. To access portal services, a student will need a current username and password. As logging into ERNIE satisfies federal requirements for establishing identity, students may then complete the Scrip-Safe® Transcripts on Demand™ (TOD) online request form alone; there is no need to submit an additional signed request. Unofficial transcripts are available to current students only, and may be obtained directly through ERNIE at no cost.

- Prior students and alumni may request an official transcript by visiting the Scrip-Safe® Transcripts on Demand™ (TOD) website: iwantmytranscript.com and completing the consent form that will allow its release. The consent form must be completed only the first time that the service is used; it will be maintained by TOD for future requests. Unofficial transcripts are not available to prior students and alumni who no longer have a current username and password for ERNIE.

Transcripts are available for delivery either in traditional paper form or electronically. The format must be selected by the student during the ordering process. There is a fee for either official paper or electronic transcripts. The fee is the same regardless of the format in which the transcript is issued. The Registrar's Office does not provide unofficial transcripts. Electronic transcripts may be obtained through the TOD service only. Transcripts are not available via fax.

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 non-disclosure request. Students are required to file requests for non-disclosure with the Registrar's Office. Non-disclosure forms remain in place permanently, unless the office is notified otherwise. Directory information consists of student name, address, e-mail 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:

1. The records to be released.
2. The purpose of the disclosure.
3. Identify the party or class of parties to whom disclosure may be made and their address.
4. Do not designate a recipient fax number; transcripts are not available via fax. If urgency exists, students are advised to request the delivery of an electronic transcript, via the Scrip-Safe® Transcripts on Demand™ (TOD) service.
5. 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 Registrar's Office. The Registrar's 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 review the ERAU Worldwide FERPA Notification in ERNIE at (ernie.erau.edu) or contact the Registrar's Office.

GRADING SYSTEM

Undergraduate
The indicators at right are used on grade reports and transcripts.

Graduate
The indicators at right are used on grade reports and transcripts.

GRADES

Final grades are issued at the end of each term. Students can access their grades immediately after they are posted by the faculty, via ERAU Online Services.

The University is prohibited by federal law 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.

GRADE APPEALS

Students who wish to appeal the final course grade must first communicate 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.

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 Director of Academics for students taking courses at Worldwide campuses or the Director of Admissions, Advising and Student Affairs, for online students. The Director of Academics will then follow the applicable University policy to render a final decision.

Letter Grade	Student Performance	Grade Points Per Credit Hour
A	Superior	4
B	Above Average	3
C	Average	2
D	Below Average	1
F	Failure	0
WF	Withdrawal from the University 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 instructor	N/A
X	Credit by means other than course equivalency exam	N/A
XP	Credit by course equivalency exam	N/A

Letter Grade	Student Performance	Grade Points Per Credit Hour
A	Excellent	4
B	Satisfactory	3
C	Passing	2
F	Failure	0
WF	Withdrawal from the University Failing	0
W	Withdrawal from a course	N/A
AU	Audit	N/A
I	Passing but incomplete	N/A
N	No grade submitted by instructor	N/A
P	Passing grade (credit)	N/A
IP	In Progress	N/A
S	Satisfactory (noncredit)	N/A
T	Transfer credit	N/A

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 permitted in all programs except the Master of Science in Technical Management. A maximum of 6 credit hours may be applied to the Master of Science in Technical Management program.

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 program being pursued. Graduation requirements are not subject to petition or waiver. Students must initiate an application for graduation through the Worldwide campuses, Worldwide Admissions, Advising and Student Affairs Office, or the Registrar's Office. Graduate status will not be conferred until a graduation application has been received and processed by the University.

GRADUATION HONORS

Undergraduate

Graduation honors recognizes students who have demonstrated excellent performance throughout their academic careers. They are only awarded to students who complete bachelor's degree programs. In order to be eligible, the student must have completed at least 45 credit hours in residence at ERAU. The level of graduation honors will be based on the cumulative grade point average for all courses taken at Embry-Riddle. 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	3.900-4.000
Magna cum laude	3.700-3.899
Cum laude	3.500-3.699

Graduate

Graduate students are recognized through inclusion of the notation "With Distinction" on diplomas and transcripts. To be eligible, graduate students must have completed their degree program with a CGPA of 4.0, based on grades received in all courses that apply to specific degree requirements.

DIPLOMAS

Diplomas are issued upon successful fulfillment 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 Registrar's Office.

GRADUATION CEREMONY

Any eligible student may participate in the Worldwide graduation ceremony held annually in Daytona Beach, Fla.

Eligible students may also choose to attend the formal graduation ceremony held at the Prescott, Ariz., residential campus. Additionally, many Worldwide campuses conduct local graduation ceremonies. Worldwide and other University officials are often guests at local graduation

festivities. Ask your Director of Academic Support about the graduation custom at your campus.

To be eligible, undergraduate students must be within 12 credit hours of degree completion. Graduate students MUST be degree complete to participate.

If a student wishes to participate in the annual graduation ceremony in Daytona Beach or Prescott, 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. Graduation ceremony deadline dates are:

Ceremony	Location	Deadline
Spring	Worldwide @ Daytona Beach	February 1
Spring	Prescott	February 1
Winter	Prescott	October 1

CAREER SERVICES

The Worldwide Career Services Office provides career development assistance to all Worldwide 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, resources for experienced job seekers, links to company websites, co-op/internship opportunities and current job listings though our web-based resume referral and job posting system, known as the EagleHire Network.

Industry/Career Expos are held in the fall at both the Daytona Beach, Fla. and Prescott, Ariz. 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. Additionally, Virtual Hiring Events are held every spring and fall through the EagleHire Network. Worldwide alumni and students are encouraged to attend these events and publish their resumes in the resume books in the EagleHire Network.

The Worldwide Career Services Office employs staff dedicated to the Worldwide Campus to provide career advisement, interview and job search assistance, and resume/cover letter critiquing. Students are encouraged to contact the Worldwide Career Services Office early in their education to explore career options and develop a successful job search strategy.

For more information, contact:

Worldwide Career Services
Embry-Riddle Aeronautical University
600 S. Clyde Morris Blvd.
Daytona Beach, FL 32114-3900
Phone: (386) 226-7991
E-mail: wwcareer@erau.edu

Or visit the Career Services website at www.erau.edu/career.

CLASS SCHEDULES

Term dates vary at each Worldwide location. The start date of the term is used in accordance with the following schedule for entry on the official transcript. Consult the Director of Academic Support for the class schedules at your Worldwide campus location, or the Admissions, Advising and Student Affairs Office for online term information. The University reserves the right to make necessary and appropriate adjustments to the published schedule to include cancellation or rescheduling of any class.

(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 at a variety of locations on and near the military installations hosting Embry-Riddle campuses, as well as at a growing number of civilian sites. You might find that classes meet in the base education center, on the flight line, in squadron meeting rooms, in chapels, at local airports, or in business offices. Be sure to ask your Director of Academic Support 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. Students have expressed high praise for the flexibility, reflection, and interaction that blended instruction affords. Blended courses will be indicated as such on the syllabus.

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.

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 Director of Academic Support, 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 Director of Academic Support. Your safety is very important to Embry-Riddle.

TEXTBOOK PURCHASE

At many campuses, textbooks are purchased at the time of registration. Several campuses use a telephone-ordering system with a national book service. Please consult your Director of Academic Support or Admissions, Advising and Student Affairs Office advisor for details.

Students may sell their used books to other students who will be taking the same class if the same text is used. The Worldwide Campus staff does not participate in this resale; it is a student-to-student transaction. There is a website for used texts at www.ec.erau.edu/apps/booksales.

IDENTIFICATION CARDS

Student identification cards are available through the website at www.erau.edu/db/eaglecard. These identification cards may be required to use the library facilities of other universities and might be used for student discounts wherever a student identification card is honored.

STUDENT AFFAIRS

The Student Affairs Office is comprised of the following student services: Student Life, Orientation, International Student Services, Disability Support Services, Counseling Support, and Ombudsman. Student Affairs oversees all non-academic disciplinary matters and maintains disciplinary records.

STUDENT LIFE

The Student Life unit provides Worldwide students with the opportunity to enhance their academic learning experiences through development of, exposure to, and participation in social, cultural and intellectual programs. Students are encouraged to become a member of our Student Affairs Facebook, join our Facebook Fan Pages, and follow us on Twitter.

We highly recommend that students who qualify apply to become a member of the Alpha Sigma Lambda National Honor Society (ASL) NU Kappa Chapter. Alpha Sigma Lambda's purpose is to recognize the achievements of adults who accomplish academic excellence while facing the competing interests of home and work. Alpha Sigma Lambda is the Premier National Honor Society created exclusively for nontraditional undergraduate students. To learn more about the benefits of Alpha Sigma Lambda, other Honor Societies, and scholarship opportunities visit the website via ERNIE at ernie.erau.edu.

Online Orientation
The Orientation Program aids students in understanding the nature and purpose of the campus, their membership in the academic community and their relationship to the intellectual, social and cultural climate of the campus. Its purpose is to:

1. Facilitate in the transition of new students into the campus taking into consideration their status as either First Year, Transfer or Graduate students.
2. Inform new students of academic policies and procedures.
3. Initiate new students into the intellectual and cultural climate of the campus.
4. Prepare new students for the campuses educational opportunities and support services.

INTERNATIONAL STUDENT SERVICES

The Worldwide International Student Services Counselors serve as the central point of contact for issues concerning international students. The counselors provide services that include advising students on immigration regulations, financial and personal matters. International students receive an orientation that familiarizes them with University policies and procedures.

The counselors also assist international students with the processing of forms and documentation of status required by foreign governments, sponsors, the U.S. government and the University.

International students should contact the International Counselors toll free at (800) 359-3728, option 5 or by e-mail wwintstc@erau.edu. For additional information visit the website via ERNIE at ernie.erau.edu.

DISABILITY SUPPORT SERVICES

Embry-Riddle Aeronautical University recognizes its responsibility under the mandates of Section 504 of the Rehabilitation Act of 1973 and Title III of the Americans with Disabilities Act of 1990, to provide equal access to its programs and services for students with a documented disability. To assure nondiscrimination, the University is prepared to make reasonable accommodations to promote students' effective participation in their academic and co-curricular objectives.

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.

Services for Worldwide students are coordinated through the Worldwide Student Affairs Office and needs are addressed on an individual basis. The Student Affairs provider will collaborate with the University Director of Disability Support Services to identify resources, examine and clarify academic issues and strategize approaches that deliver optimum student service.

Prospective students considering a program of study are encouraged to visit the Disability Support Services website via ERNIE at ernie.erau.edu or contact the Student Affairs office at (386) 226-4911 or e-mail: wwdss@erau.edu for information on eligibility concerns or campus-specific services.

STUDENT GRIEVANCE

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, Worldwide students are provided an opportunity to express any complaints, grievances, or disputes that upon investigation may be redressed through the Worldwide support system.

Students are encouraged to first address any issues with the faculty or staff member for which the grievance is based. If unresolved, the student should provide a written document outlining the situation and submit it to their Advisor at the Worldwide Campus location they attend, or if an Online student, their Advisor in the Admissions, Advising, and Student Affairs Office. It may be necessary for the Advisors to elevate the issue to the correct Department Chair, Director, or Dean. At any time, students may contact the Student Ombudsman to gain advice and specific direction in seeking a resolution.

In the event a student going through the above mentioned remedies is still not satisfied with the outcome of their grievance, they may make a final appeal in writing to the Asscoiate Vice President and Chief Academic Officer (or his designee) for academic issues, or the Director of Student Affairs for student affairs issues and ultimately the Executive Vice President.

STUDENT OMBUDSMAN

The Ombudsman is available to listen to concerns, clarify issues and resolve conflicts by referring students to the appropriate services within the Worldwide Campus and is a source of information and assistance to students concerning University policy and procedures. For additional information visit ERNIE at ernie.erau.edu.

Issues related to grades, differences of opinion with instructors or academic matters should first be brought to the attention of the faculty member or the appropriate campus staff. If the problem is not resolved at this level then the Program Chair or Regional Deans' office should be included in the discussion.

The Ombudsman may also make recommendations to the appropriate authorities about changes to University policy and procedures.

How the Ombudsman can help you

- By listening carefully to concerns and complaints.
- By helping analyze the situation.
- By looking into a concern, including talking with involved parties, and reviewing pertinent documents and policies.
- By identifying and explaining relevant University policies, procedures, and problem-solving channels.
- By helping define options.
- By following up to make sure a concern is resolved.
- By recommending changes in University policies or procedures.

When the Ombudsman does not get involved

- When you want legal advice or legal representation. The Ombudsman can advise you of your rights within the University, but will not provide legal advice or represent you in a legal matter.
- When you have a non-University-related disagreement or problem.
- When you want someone to represent you in a University grievance procedure. The Ombudsman will discuss the process and clarify the options available before and after the proceedings.

STUDENT CONDUCT

If an enrolled or continuing student is found responsible for an infraction of any of the following rules or regulations, he/she will be subject to disciplinary action through the University Judicial System. Any student who leaves the University prior to the disposition of an alleged violation(s) will not be allowed to register for future semesters until the matter has been adjudicated through the normal judicial process. Sanctions imposed will depend on the severity of the violation(s) and/or the student's previous disciplinary record. The following is a list of various violations:

Student Conduct Code

1. **Abusive/Threatening Behavior:** Any conduct that threatens or endangers the health and/or safety of a member of the university community (including oneself) on university property, or at a university sponsored or supervised activity/event.*
    i. **Verbal/Written:** Threats, intimidation, harassment, coercion, profanity.
    ii. **Physical:** Sexual misconduct, stalking, fighting, false imprisonment, intimidation.
2. **Computer Security Violations:** Any misuse of computing facilities, software, hardware, unauthorized use of another individual's computer account, misuse of one's own computer account, or any violation of the policies for using computing network resources at ERAU or through the ERAU system.
3. **Disorderly Conduct:** Excessively loud, lewd, indecent, obscene or conduct inappropriate for a university setting.
4. **Theft:** Theft or attempted theft, unauthorized possession, misuse or wrongful appropriation, vandalism or malicious destruction, or sale of property belonging to the university, an organization affiliated with the university, or a member of the university community.
5. **Unauthorized Entry or Use:** Unauthorized attempted entry, or entry or use of university facilities and/or equipment, including unauthorized possession, duplication or use/misuse of university keys.
6. **Weapons Possession:** The possession or use of a weapon, including, but not limited to firearms, BB guns, air guns, dangerous chemicals, incendiary devices and other explosive substances including fireworks; sling shots; martial arts devices; or other objects classified or used as weapons with potential for danger or harm. †
7. **Criminal Violation:** Violation of any State or Federal criminal code while on university property or at any university sponsored or supervised/controlled event.

Important Notes

* Because the safety of our students and employees is paramount, all employees and students have an affirmative duty to immediately report to local or military police agencies should a student or other employee exhibit behavior at any university sponsored activity that is deemed to threaten or endanger the health or safety of others.

†All employees and students have an affirmative duty to immediately report to local or military police agencies the presence of dangerous weapons on any premises owned or controlled by ERAU.

Sanctions

Disciplinary sanctions may be imposed for violations under the Student Conduct Code. All disciplinary sanctions are noted in the student's non-academic student file and may be kept for a period of three years after they leave the University. Records of suspended or dismissed students are kept indefinitely.

1. **Warning:** A disciplinary warning is a verbal or written notice given to a student whose behavior is in violation of University policy.
2. **Probation:** University Conduct Probation is an intermediate sanction imposed for a specific period. The probationary period allows a student to demonstrate acceptable behavior in order to continue enrollment at Embry-Riddle. Guidelines for a student's behavior may be included as conditions of the probation. If an offense is committed during the probation period, actions may be instituted that result in suspension or dismissal.
3. **Suspension:** Suspension is an involuntary separation of the student from the University for a specific period. Readmission to the University may be granted after the suspension period or conditions have been satisfactorily met.
4. **Dismissal:** Dismissal is the involuntary and permanent separation of the student from the University.

The Non-Academic Judicial Affairs board convenes to adjudicate and make decisions on students that are facing University suspension or dismissal.

CRIMINAL CONVICTIONS AND VIOLATIONS

Unless specifically exempted from disclosure by law or order of court, students and applicants have an affirmative duty to immediately disclose any criminal convictions or charges against them for violent offenses, offenses against minors, and/or offenses that are punishable as a felony.

The presence on campus of students or applicants who commit serious violations of University rules, regulations, and procedures, or have unacceptable character, academic or behavioral record, criminal record, or other aspects may be inconsistent with the safety and other business and academic interests of the University. Accordingly, the University may, in the University's sole discretion, temporarily or permanently bar from all or any part of University owned or

controlled property, or impose reasonable conditions upon any student or applicant who violates University rules, regulations, and procedures, or whose character, academic or behavioral record, or criminal record is determined by the University to pose an unreasonable risk to the interests of the University, its students, employees, or visitors. No adverse action based on conduct shall under normal circumstances be taken against admitted students until the student has been afforded due process consistent with applicable policies and procedures. Nonetheless, the University reserves the right to take immediate reasonable action to protect the health or safety of people or property.

The applicable rules and regulations may be modified or updated from time to time, and shall be binding as of the date published. Students and applicants are bound by the terms in effect at the time of any event or occurrence. The electronic version of applicable rules, regulations, and procedures shall be the official current version.

SERVICES AND OPPORTUNITIES AVAILABLE TO ALUMNI

Alumni Chapters and Groups: Chapters 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.

Alumni Support: At Embry-Riddle, alumni may use the Career Services Office for assistance with resume development, job searches, 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. To learn more about the services provided to alumni through Career Services, please visit www.erau.edu/career.

Communications: The eaglesNEST (eraualumni.org), the online community for Embry-Riddle alumni, is the primary tool for keeping in touch with the University and other alumni. The eagleNEWS e-newsletter is sent out monthly and provides alumni with an up-to-date calendar of University and alumni events, athletic news, alumni news and University happenings. LIFT, the alumni magazine, is a biannual magazine that features in-depth stories on alumni, the industry and the University. Alumni Association news, events and photos are also posted on the official Embry-Riddle Alumni Association Facebook fan page, as well as the official Twitter page. Alumni can watch videos on the official YouTube channel at youtube.com/user/ERAUalumni and also on the eaglesNEST Videos section. Communication with the University is also available at Embry-Riddle's website: embryriddle.edu.

Student Alumni Association: The Student Alumni Association (SAA) is a student-run organization that resides within the ERAU Alumni Association. SAA is a place for students to meet new people, network with alumni, attend exciting social/professional events, develop leadership skills and gain real-world experience. SAA prepares students to be great alumni after graduation and provide for better student/alumni relations. SAA members serve as Ambassadors for the ERAU Alumni Association and becoming an Ambassador is open to all undergraduate and graduate ERAU students.

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.

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.

STUDENT FINANCIAL SERVICES

TUITION AND FEES

Payment in full is required at time of registration. Detailed tuition rates are published on the web at worldwide.erau.edu/finance/costs.

USER FEES

Application fee (nonrefundable)	$50
Late registration fee	$25
Transcript fee (includes service charge)	$7.25
Graduation fee (nonrefundable)	$50
Duplicate diploma	$15
Previously earned diploma	$40
MSTM transfer credit fee (per semester hour)	$50
Worldwide Campus Co-op (per 3 credits)	$325

UNIVERSITY WITHDRAWAL/REFUND SCHEDULE

First week	100%
After first week	0%

*Unless specified by M.O.U., contract, or state regulations.

Students who withdraw from a course when the effective date of the withdraw does not fall under a refund period 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.

For nonmilitary students enrolled in Georgia, Indiana, Kentucky, North Dakota, Virginia and South Carolina, refund tables are available at the local Worldwide locations.

Arizona Students Cancellation and Refund Policy
An applicant rejected by the school is entitled to a refund of all monies paid. An applicant who provides written notice of cancellation within three days (excluding Saturday, Sunday and federal and state holidays) of signing an enrollment agreement is entitled to a refund of all monies paid. No later than 30 days of receiving the notice of cancellation, the school shall provide the 100% refund. An applicant requesting cancellation more than three days after signing an enrollment agreement and making an initial payment, but prior to entering the school, is entitled to a refund of all monies paid (minus an administrative or registration fee, not to exceed $200, if applicable).

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. The "first day of instruction" is defined by ERAU as the first day of the term in which a class is scheduled. 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.

Nevada 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.

Delinquent Accounts
When a student's account is delinquent registration for any subsequent semesters will be denied. A delinquent student account will result in suspension of all academic processing and information on class performance, grades, and transcripts will be withheld. If the delinquent status is not resolved, the University may place the account with a commercial collection agency for further collection and/or litigation action. The student is also subject to the costs of collection (33-50%) and reasonable attorney's fees. Delinquent accounts may be reported to one or all three major credit bureaus.

FINANCIAL AID

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 Embry-Riddle's established cost of attendance.

ELIGIBILITY REQUIREMENTS

To be considered eligible to apply for most financial programs students must:

1. Be a U.S. citizen or eligible noncitizen.
2. Be accepted in a degree program (Associate's, Bachelor's, Master's or Doctorate).
3. Be enrolled or accepted for enrollment as at least a half-time student in a degree program.
4. Be making satisfactory academic progress toward a degree.
5. Be registered with Selective Service, if required to do so.
6. Establish financial need.
7. 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 are encouraged to 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 should renew their aid application each year through the Internet at www.fafsa.ed.gov.

Grants

- Federal Pell Grant State and Institutional
- Florida Resident Access Grant
- Florida Bright Futures Scholarship Program
- Georgia Hope Scholarship and TEG (Tuition Equalization Grant)
- Kentucky Grant

Loans

- Federal Stafford Loan
- Federal Parent Loan for Undergraduate Students
- Private educational loans

Scholarships
Embry-Riddle endowed and term scholarships are funds that are generously donated to help students pay for their education. Selected students for a scholarship will be paid in the Fall and Spring semesters of the following academic year. The scholarship award amounts and criteria vary. Continuing students can apply during the month of February through ERNIE. Sign into ERNIE and click on "Financial Aid Apply for Scholarships" under "Colleague Student Services." The scholarship link will be available early February through early March each year.

Worldwide is also pleased to introduce the Chancellor's Scholarship and Annual Scholarship funds. The amount of the Annual Scholarship is one semester hour of tuition, and scholarships will be awarded quarterly. Winners will be

selected from the pool of qualified applicants by the Scholarship Committee. The amount of the Chancellor's Scholarship is a one-time amount of $500. Winners will be selected from the pool of qualified applicants through a Scholarship Committee.

FINANCIAL ASSISTANCE

A complete description of financial aid assistance and optional financing programs are available to students and their parents. Types of financial assistance are detailed online in the Financial Aid section at embryriddle.edu. This includes information about eligibility criteria, application procedures, and deadline dates.

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.

Payment Plan
The Tuition Payment plan offered requires only one-third of the term's tuition at the time of registration for those students requesting to defer payment. The remaining balance of two-thirds is due by the end of the term. A tuition payment agreement must be signed by the student. Payment for the cost of books, course materials, and shipping fees may *not* be deferred. Students are encouraged to contact the Worldwide Campus or Worldwide Admissions, Advising and Student Affairs 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.

VETERANS AFFAIRS

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 (VA).

Students must be pursuing an approved degree or certificate 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 VA 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 VA 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 re-entrance. The VA 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 VA 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 or certificate program. Students who receive VA 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 of study and the application process, eligible persons should contact the Veterans Certifying Official at the Worldwide Campus location they plan to attend. Students enrolled through Worldwide Online and Worldwide international campus locations should contact the University Veterans Affairs Office in Daytona Beach, Fla.

University Veterans Affairs
Embry-Riddle Aeronautical University
600 S. Clyde Morris Blvd.
Daytona Beach, FL 32114-3900
Telephone: (386) 226-6350

For additional information concerning Veterans Education Benefits administered by the Department of Veterans Affairs go to www.gibill.va.gov.

RESEARCH/LIBRARY SUPPORT

HUNT LIBRARY

The mission of the Hunt Library is to provide materials, services and facilities to students, faculty and staff in support of the University's commitment to excellence in teaching, learning and research for both the Daytona Beach and Worldwide campuses.

Hunt Library users will find resources in a variety of formats: books, government documents, periodicals, microforms, conference proceedings, videos, DVDs and electronic resources. The Hunt Library's web pages are located at library.erau.edu; choose the Embry-Riddle Worldwide link. The electronic library includes 24/7 access to the Library's online catalog, Voyager, over 60 online databases (which include many full-text resources), and instructions on how to access the Hunt Library databases using ERNIE.

HELP

The Hunt Library is the researcher's primary resource provider. Members of Embry-Riddle's Worldwide community (regardless of location) have circulation (check out) privileges, online quick help opportunities and access to a web-based document delivery system. Reference Librarians are also available via (800) 678-9428 or (386) 226-7656 (8 a.m. - 5 p.m. Eastern) or 24/7 by e-mailing us at library@erau.edu. Reference Librarians may provide detailed advice on research strategies, referrals to relevant reference sources, assistance with literature searches, and help navigating the website. An overview of the Hunt Library's help features is available from library.erau.edu/worldwide/help.

LIBRARY GUIDES AND BROCHURES

A Guide to Library Resources is available from the local campus and full-text online from the library's web pages - library.erau.edu/worldwide/help/library-guide; the guide provides descriptions of the resources and services available through the Hunt Library and from selected local libraries. The Guide includes access information and search strategies

for the many online databases available from the Hunt Library. The Library Guide also includes a selection of Hunt Library informational and instructional brochures. Ask the local campus personnel for the latest copy of the library guide, or for the individual library brochures.

LOCALLY AVAILABLE RESOURCES

The Riddle Aviation Collection (RAC) 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. Riddle Aviation Collections may be located onsite at the campus office or at a local library. The Hunt Library also provides number of current periodical titles to each Worldwide Campus location or local library; locally held periodical lists and Riddle Aviation Collection holdings are included in the Guide to Library Services, along with their locations.

HOW TO CONTACT THE HUNT LIBRARY

Reference Phone: (800) 678-9428 or (386) 226-7656
Fax: (386) 226-7040
E-mail: library@erau.edu
Internet: library.erau.edu/worldwide
ERAU-Worldwide Services Librarian:
Edward Murphy: (386) 226-6947

When I got deployed to Iraq in 2001, a few of the other soldiers were Embry-Riddle students. We went over to the services commander and asked to get an education office going. We got a tent and six computers, and continued all our courses online. In fact, I was deployed most of the time I was working on my bachelor's, and ended up doing almost my entire degree online.

Lawrence (Robert) St. Onge
Alumni, Class of 2010
Chief Master Sergeant,
U.S. Air Force, retired
Data Analysis Engineer
Qualis-Corp.

Transferring to Embry-Riddle Worldwide has been one of the best decisions I've made. The small classes and great faculty have made it fun and exciting to go to class. The knowledge of the professors goes beyond their education, having real experience from working out in the work field.

Vanessa Lebron
Current Student

CONTACT/INFORMATION SOURCES

WORLDWIDE CAMPUS

GENERAL INFORMATION
Phone: (386) 226-6910
OR (800) 522-6787
E-mail: wwinfo@erau.edu

WORLDWIDE ADMISSIONS, ADVISING AND STUDENT AFFAIRS OFFICE
600 S. Clyde Morris Blvd.
Daytona Beach, FL 32114-3900
Phone: (800) 359-3728
Fax: (386) 226-7627

OFFICE OF PROFESSIONAL EDUCATION
Worldwide Campus
600 S. Clyde Morris Blvd.
Daytona Beach, FL 32114-3900
Phone: (386) 226-7694
Fax: (386) 323-8692
Toll free: (866) 574-9125
E-mail: training@erau.edu

STUDENT SERVICES

ENROLLMENT MANAGEMENT OFFICE
Worldwide Campus
Embry-Riddle Aeronautical University
600 S. Clyde Morris Blvd.
Daytona Beach, FL 32114-3900

Admissions
(800) 359-3728 or (386) 226-6397
E-mail: worldwide@erau.edu

Worldwide Financial Aid
(866) 567-7202
E-mail: wwfinaid@erau.edu

Registrar
(866) 393-9046
E-mail: wwregist@erau.edu

Disability Support Services
(386) 226-4911
E-mail: wwdss@erau.edu

Worldwide Online Advising
(800) 359-3728 or (386) 226-6397
E-mail: wwaasa@erau.edu

STUDENT ACCOUNT SERVICES
Embry-Riddle Aeronautical University
600 S. Clyde Morris Blvd.
Daytona Beach, FL 32114-3900
Phone: (386) 226-6280

CAREER SERVICES
Embry-Riddle Aeronautical University
600 S. Clyde Morris Blvd.
Daytona Beach, FL 32114-3900
Phone: (386) 226-6054
E-mail: eccareer@erau.edu

VETERANS AFFAIRS
Embry-Riddle Aeronautical University
600 S. Clyde Morris Blvd.
Daytona Beach, FL 32114-3900
Phone: (386) 226-6350

WORLDWIDE LOCATIONS

STATE	LOCATION	CAMPUS/TEACHING SITE	TELEPHONE
Alabama	Fort Rucker	Fort Rucker	(334) 598-6232
	Mobile	Mobile, AL* – Out of Keesler, MS	(251) 441-6737
	Redstone Arsenal	Huntsville	(256) 876-9763
Alaska	Elmendorf AFB	Anchorage	(907) 753-9367
	Fort Wainwright	Fairbanks	(907) 356-7773
Arizona	Fort Huachuca	Fort Huachuca*	(520) 459-1033
	Glendale	Luke	(623) 935-4000
	Chandler	Phoenix-Chandler	(480) 279-1150
	Phoenix	Sky Harbor	(602) 275-5533
	Davis Monthan AFB	Tucson	(520) 747-5540
Arkansas	Jacksonville	Little Rock	(501) 983-9300
California	Beale AFB	Beale	(530) 788-0900
	Coronado	North Island	(619) 435-6673
	Edwards AFB	Edwards	(661) 258-1264
	Long Beach	Los Angeles (Metro)	(562) 627-5870
	March ARB	Inland Empire	(951) 653-4074
	NAS Lemoore	Lemoore	(559) 998-6026
	Oakland	Oakland	(510) 636-2424
	Oceanside	Camp Pendleton	(760) 385-4423
	Palmdale	Palmdale	(661) 947-4025
	Port Hueneme	Ventura	(805) 271-9691
	Ridgecrest	China Lake	(760) 939-4557
	San Diego	San Diego	(858) 576-4375
	Travis AFB	Travis	(707) 437-5464
	Vandenberg AFB	Vandenberg	(805) 734-4076
	Victorville	Victorville*	(760) 530-0875
Colorado	Fort Carson	Buckley*	(719) 526-3387
	Fort Carson	Colorado Springs	(719) 576-6858
	Fort Carson	Schriever*	(719) 526-3387
Connecticut	East Hartford	Hartford	(860) 565-0464
Florida	Eglin AFB	Fort Walton Beach	(850) 678-3137
	Ft. Lauderdale	Ft. Lauderdale	(954) 497-3774
	Hurlburt Field	Hurlburt Field*	(850) 581-2106
	Jacksonville	Jacksonville	(904) 645-0333
	NS Mayport	NS Mayport*	(904) 249-6700
	MacDill AFB	Tampa	(813) 828-3772
	Miami	Miami*	(305) 871-3855
	Jacksonville	NAS Jacksonville*	(904) 779-0246
	NAS Pensacola	Pensacola	(850) 458-1098
	Orlando	Orlando	(407) 352-7575
	Patrick AFB	Space Coast	(321) 783-5020
	Seminole	St. Petersburg*	(727) 394-6218
	Tallahassee	Tallahassee*	(850) 201-8330
	Tyndall AFB	Tyndall	(850) 283-4557
Georgia	Marietta	Atlanta	(770) 426-9990
	Atlanta	Delta Air Lines*	(404) 714-3248
	Columbus	Columbus	(706) 568-5485

STATE	LOCATION	CAMPUS/TEACHING SITE	TELEPHONE
Georgia	Moody AFB	Moody	(229) 244-9400
	Robins AFB	Robins	(478) 926-1727
	Savannah	Savannah	(912) 355-0644
Hawaii	Honolulu	Honolulu	(808) 422-0835
	Kailua	Kaneohe	(808) 254-2106
	Schofield Barracks	Schofield Barracks	(808) 624-2334
Idaho	Mountain Home AFB	Mountain Home	(208) 832-2222
Illinois	Rockford	Rockford	(815) 969-4409
Indiana	Indianapolis	Indianapolis	(317) 487-6281
Kansas	McConnell AFB	McConnell	(316) 687-3006
Kentucky	Fort Campbell	Fort Campbell	(270) 798-2775
	Louisville	Louisville	(502) 964-9204
Louisiana	Barksdale AFB	Barksdale	(318) 747-4508
	NAS New Orleans	New Orleans*	(504) 398-7672
Maine	Brunswick	Brunswick	(207) 721-0664
Maryland	Andrews AFB	Andrews	(301) 735-6340
	Lexington Park	Patuxent River	(301) 863-8776
Mississippi	Biloxi	Keesler	(228) 432-5312
Montana	Malmstrom AFB	Great Falls	(406) 727-9901
Nebraska	Offutt AFB	Offutt	(402) 292-6655
Nevada	Las Vegas	Las Vegas	(702) 643-0762
	Fallon	Fallon*	(775) 423-4018
New Jersey	Cookstown	McGuire	(609) 723-1337
New Mexico	Albuquerque	Albuquerque	(505) 846-8946
	Cannon AFB	Cannon	(505) 784-8763
	Holloman AFB	Holloman	(505) 479-6892
N. Carolina	Elizabeth City	Elizabeth City	(252) 331-2225
	Fayetteville	Fayetteville	(910) 323-2126
	Greensboro	Greensboro*	(336) 605-3030
	Seymour Johnson AFB	Seymour Johnson	(919) 734-9211
N. Dakota	Minot AFB	Minot	(701) 727-9007
Ohio	Cincinnati	Cincinnati	(513) 733-3728
	Fairborn	Dayton Area	(937) 878-3728
Oklahoma	Altus AFB	Altus	(580) 481-5991
	Oklahoma City	Oklahoma City	(405) 739-0397
	Vance AFB	Vance	(580) 213-7320
Oregon	Portland	Portland	(503) 288-8690
S. Carolina	Charleston AFB	Charleston	(843) 767-8912
	Greenville	Greenville	(864) 233-5288
	MCAS Beaufort	Beaufort	(843) 228-7585
	Shaw AFB	Shaw	(803) 666-7401
S. Dakota	Ellsworth AFB	Ellsworth	(605) 923-6291
Tennessee	Memphis	Memphis	(901) 507-9969
	Millington	Millington*	(901) 872-6236
Texas	Corpus Christi	Corpus Christi	(361) 937-4951
	Dyess AFB	Dyess	(325) 692-2007
	Fort Worth	Fort Worth	(817) 737-8180
	Houston	Houston	(281) 461-3728
	Randolph AFB	San Antonio	(210) 659-0801
	Corpus Christi	Kingsville*	(361) 937-4951
	Randolph AFB	Laughlin AFB*	(210) 659-0801
	Sheppard AFB	Sheppard	(940) 851-6458

STATE	LOCATION	CAMPUS/TEACHING SITE	TELEPHONE
Utah	Hill AFB	Northern Utah	(801) 777-0952
Virginia	Fort Eustis	Fort Eustis	(757) 887-0980
	Langley AFB	Langley	(757) 764-2662
	NS Norfolk	Norfolk	(757) 440-5078
	NAS Oceana	Oceana*	(757) 437-8061
Washington	Everett	Everett	(425) 514-0220
	Fairchild AFB	Spokane	(509) 244-3832
	McChord AFB	Tacoma	(253) 589-1728
	Oak Harbor	Whidbey Island	(360) 279-0959
	Renton	Seattle	(425) 226-2484
Wyoming	F.E. Warren AFB	Cheyenne	(307) 634-9693

INTERNATIONAL

Embry-Riddle Aeronautical University – Worldwide
International Regional Office

Mailing address:
CMR 429
APO, AE 09054-0429

Physical address:
Europaallee 6
D-67657 Kaiserslautern
Germany

DSN: 483-7811
Civilian: 011-49-631-303-27811
FAX: 011-49-631-303-27810
E-mail: europe.rdo@erau.edu

INTERNATIONAL WORLDWIDE LOCATIONS:

COUNTRY	LOCATION	CAMPUS/TEACHING SITE	TELEPHONE
Afghanistan	Bagram Airfield	Afghanistan	011-44-1638-522464
Germany	Berlin	Berlin	011-49-0305-3063549
	Katterbach	Katterbach	011-49-9802-832379
	Ramstein	Ramstein	011-49-6371-47-5755
	Spangdahlem	Spangdahlem	011-49-6565-7297
	Geilenkirchen	Geilenkirchen*	011-49-2451-63-2246
	Wiesbaden	Wiesbaden*	011-49-611-4118032
Iraq	Balad Air Base	Iraq – Balad	DSN 318-433-2101
	CampVictory	Iraq – Victory	DSN 318-485-2648
Italy	Aviano	Aviano	011-39-0434-66-0631
	Sigonella	Sigonella	011-39-095-56-4550
	Napoli	Naples*	011-39-081-568-4364
Kuwait	Kuwait	Deployed Locations	011-49-631-303-27816
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