



2012-2013

UNDERGRADUATE/GRADUATE CATALOG

EMBRY-RIDDLE

Aeronautical University

WORLDWIDE



EMBRY-RIDDLE

Aeronautical University

WORLDWIDE

Admissions

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Leading the World in Aviation and Aerospace Education

RESIDENTIAL LOCATIONS

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embryriddle.edu

WHAT'S INSIDE

UNIVERSITY INFORMATION

Embry-Riddle At A Glance	4
President's Welcome	6
University Mission Statement	7
University Information	8
Executive Vice President's Welcome	10
About Embry-Riddle Worldwide	11
Admissions	14
General Education Requirements	20

DEPARTMENT OF AERONAUTICS

Undergraduate Degree Programs	22
Associate/Bachelor of Science in Aeronautics	23
Associate/Bachelor of Science in Aviation Maintenance	25
Bachelor of Science in Transportation	27
Graduate Degree Programs	28
Master of Aeronautical Science	28
Master of Science in Occupational Safety Management	31
Master of Science in Space Education	32
Minor Courses of Study	33
Aviation Safety	33
Helicopter Operations and Safety	33
Occupational Safety and Health	33
Security and Intelligence	34
Transportation	34
Unmanned Aerial Systems	34
Undergraduate Certificates of Completion	34
Aviation Maintenance Technology Part 65	34
Aviation Safety	34
Helicopter Operations and Safety	35
Occupational Safety and Health	35
Security and Intelligence	36
Space Studies	36
Transportation	37

Graduate Certificates of Completion	37
Aviation/Aerospace Safety	37
Instructional System Design	37

DEPARTMENT OF ARTS AND SCIENCES

Undergraduate Degree Programs	38
Bachelor of Science in Fire Science	38
Minor Courses of Study	40
Fire Science	40
International Relations	40

DEPARTMENT OF BUSINESS ADMINISTRATION

Undergraduate Degree Programs	41
Associate/Bachelor of Science in Aviation Business Administration	42
Associate/Bachelor of Science in Technical Management	42
Bachelor of Science in Technical Management Management of Information Systems	44
Bachelor of Science in Technical Management Project Management	46
Bachelor of Science in Technical Management Information Security	47
Bachelor of Science in Technical Management Logistics	48
Bachelor of Science in Technical Management Occupational Safety and Health	49
Bachelor of Science in Technical Management Engineering Sciences	50
Graduate Degree Programs	51
Master of Business Administration in Aviation	51
Master of Science in Leadership	54
Master of Science in Logistics and Supply Chain Management	54
Master of Science in Management	55
Master of Science in Project Management	56
Minor Courses of Study	58
Airport Management	58
Aviation Management	58
Logistics Management	58
Management	58
Management Information Systems	58
Project Management	59
Technical Management	59
Undergraduate Certificates of Completion	59
Airport Management	59

Information Assurance (NSA) Management	60
Supply Chain Management	60
Aviation Management	61
Logistics Management	61
Management Information Systems	61
Project Management	61
Technical Management	62
Graduate Certificates of Completion	62
Air Transportation Management	62
Airport Planning Design and Development	62
Aviation/Aerospace Industrial Management	63
Aviation Enterprises in the Global Environment	63
Integrated Logistics Management	63
Modeling and Simulation Management	64
Project Management	64
DEPARTMENT OF ENGINEERING SCIENCES	
Graduate Degree Programs	66
Master of Systems Engineering	66
Minor Course of Study	67
Engineering Sciences	67
Undergraduate Certificates of Completion	67
Pre-Engineering Studies	67
Ph.D. in Aviation	68
Professional Education Programs	69
Undergraduate courses	86
Graduate courses	120
Student Services	141
Academic Affairs	141
Articulations and Educational Partnership Agreements	145
Student Affairs	155
International Student Services	155
Student Financial Services	160
Financial Aid	161
Veterans Affairs	162
Research/Library Support	163
Contact/Information Sources	164
Worldwide Locations	165
Faculty and Administration	169
Board of Trustees	174
Index	175

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/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, 2012.

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 40 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 150 locations 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 100,000 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 86 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 more than 150 locations 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.

A handwritten signature in black ink that reads "John P. Johnson". The signature is written in a cursive, flowing style.

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 150 locations around the world, Embry-Riddle Worldwide annually delivers instruction to 26,000 military and civilian students, with nearly 93,000 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 the three recently completed buildings in the James Hagedorn Aviation Complex that house flight training operations, aircraft maintenance training, and fleet maintenance. Newer structures include the College of Business building, the College of Aviation building, the Advanced Flight Simulation Center, and the Lehman Engineering & Technology Center, providing a level of on-campus training unique to higher education. Currently under construction is

the Jim W. Henderson Administration & Welcome Center. A new College of Arts & Sciences is also planned.

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. A supersonic wind tunnel and shock tube are among the advanced equipment available for student research projects.

Approximately 4,800 undergraduate and graduate students are enrolled at the Daytona Beach Campus and 1,600 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 in descending order are Florida, New York, Pennsylvania, New Jersey, and Georgia/Texas (tied). At the Prescott Campus, the top five states of origin in descending order are California, Arizona, Washington, Texas, and Colorado. International students make up 16 percent of the student body at Daytona Beach and 4 percent at Prescott, with India at the top, followed by Saudi Arabia and South Korea. Females constitute 17 percent of the student population at the Daytona Beach Campus and 18 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 94 instructional aircraft and 41 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 325 students were awarded co-op or intern positions during the 2009-2010 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 2009-2010 fiscal year, 139 faculty members were involved in research and other activities with 180 sponsored projects. The total value of all active awards was more than \$12 million.

The most recent alumni survey 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 detachments 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 150 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 CAMPUS LOCATIONS

The Worldwide Campus offers the aviation/aerospace industry's most sought-after undergraduate degrees, graduate degrees, and certificate programs. With our flexible scheduling options, students are offered various learning modalities, including classroom, live virtual classroom (EagleVision), and online. Traditional classroom instruction is available at more than 150 locations throughout the United States and Europe, each offering a full range of student services and a variety of academic programs. Our online and EagleVision courses are available to students whose schedules or geographic locations prevent them from attending a traditional classroom setting. All of Worldwide's learning modalities, while distinct in delivery, provide the same course content and similar opportunities for interaction with faculty and fellow students. Students may enroll in classes at a Worldwide location 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 customized corporate training as well as 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, or to inquire about customized corporate training, 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 Southern Association of Colleges and Schools Commission on Colleges (SACS-COC) to award degrees at the associate's, baccalaureate's, master's, and doctoral levels.


Contact information for SACS-COC: 1866 Southern Lane, Decatur, Georgia 30033-4097, 404.679.4500. This information is provided in order to enable interested constituents to: (1) learn about the accreditation status of the institution; (2) file a third-party comment about the institution's decennial review of accreditation; (3) file a complaint against the institution for alleged non-compliance with a standard or requirement; or (4) provide a note of exemplary service or quality standards related to the institution.


Normal inquiries such as admissions requirements, financial aid, educational programs, etc., should be addressed directly to the Embry-Riddle Aeronautical University – Worldwide Campus by contacting (800) 522-6787 or worldwide@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** Embry-Riddle Aeronautical University is an approved Professional Development Provider (PDP).
APPROVED PDP PROVIDER

 **Project Management Institute** 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.
Registered Education Provider

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-Granting Institutions Act. This authorization is subject to periodic review and authorizes Embry-Riddle

Aeronautical University to offer the following degree programs: 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; Bachelor of Science in Transportation; 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.

Authorization by the HECB does not carry with it an endorsement by the board of the institution or its programs. 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 2.0 GPA or higher on a 4.0 scale.
- 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 that are not classified as a transfer student or have not served in the military must provide the following documentation:

- Official High School transcript or equivalent (GED) 2.0 GPA or higher on a 4.0 scale.
- Official transcripts from all post-secondary accredited degree-granting institutions attended
- Resume

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

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 colleges and universities (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.

A written petition must accompany the application and application fee for consideration of readmission.

CONDITIONAL ADMISSION UNDERGRADUATE

- Students who fail to satisfy the guidelines for full admission may be granted conditional admission under certain circumstances determined by the Admissions Office or Academic Standards Committee.
- 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,)

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. A written petition must accompany the application and application fee for consideration of readmission.

CONDITIONAL ADMISSION GRADUATE

- Students who fail to satisfy the guidelines for full admission may be granted conditional admission under certain circumstances determined by the Admissions Office or Academic Standards Committee.
- 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. This school is authorized under federal law to enroll nonimmigrant students.

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

Academic Credentials Evaluation Institute, Inc. (ACEI)
P.O. Box 6908
Beverly Hills, CA 90212
Phone: (310) 275-3530
Fax: (310) 275-3528
www.acei.com

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. Successful completion of a college level English composition course with a grade of "C" or better from a regionally accredited institution of higher learning (or equivalent, if from an overseas institution).

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
 Los Angeles, CA
 Oakland, CA
 Oklahoma City, OK
 Orlando, FL
 Phoenix-Chandler, AZ
 San Diego, CA
 Seattle, WA
 Sky Harbor, AZ
 Tucson, 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. 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 and Student Affairs Office, via e-mail at wwintstc@erau.edu or call toll free (800) 522-6787 or (386) 226-6912.

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

Embry-Riddle Aeronautical University
 Europe 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
 Europe Regional Office
 Europaallee 6
 D-67657 Kaiserslautern
 Germany

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.

PLACEMENT EXAMINATIONS

The purpose of the English and Mathematics Placement Exams 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 at ERAU for the first time must take the English Placement examination.
2. For students who do not possess transfer credit equivalent to ENGL 106 or above, the following placement criteria apply:
 - a. Students who score 70% or above on the placement examination may enroll in ENGL 123.
 - b. Students who score at least 50% but less than 70% on the placement examination must take ENGL 106.
 - c. Students who score less than 50% on the placement examination must take both GNED 104 and ENGL 106.
3. Students who possess transfer credit equivalent to ENGL 106 or above and who score less than 70% on the placement examination should take ENGL 106, and students who score less than 50% on the placement examination should take both GNED 104 and ENGL 106.
4. The placement examination may be taken one time only; there will be no opportunity to retake the examination after the first time it is completed and scored.
5. ENGL 106 cannot be used to satisfy General Education Communication Theory and Skills requirements.

Mathematics

1. All undergraduate students enrolling at ERAU for the first time must take the Mathematics Placement examination.
2. For students who do not possess transfer credit equivalent to MATH 106 or above, the following placement criteria apply:
 - a. Students who score 70% or above on the placement examination may enroll in MATH 111 or MATH 140.
 - b. Students who score at least 50% but less than 70% on the placement examination must take MATH 106.
 - c. Students who score less than 50% on the placement examination must take both GNED 103 and MATH 106.
3. Students who possess transfer credit equivalent to MATH 106 or above and who score less than 70% on the placement examination should take MATH 106, and students who score less than 50% on the placement examination should take both GNED 103 and MATH 106.
4. The placement examination may be taken one time only; there will be no opportunity to retake the examination after the first time it is completed and scored.
5. MATH 106 cannot be used to satisfy General Education Mathematics requirements.

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 between 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 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.
- 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 credit 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.

Associate Degree General Education Requirements

Candidates for associate degrees must complete the identical 36 General Education credit hour requirement as the candidates for bachelor degrees. The university is highly committed to insuring that students possess a general education knowledge which will help them be successful in whatever degree program they select.

UNIVERSITY GENERAL EDUCATION COMPETENCIES

While taking General Education required courses, students develop a basic set of General Education skills (i.e., competencies, listed below) based on course learning outcomes. This skill set will be instrumental to student success in upper level courses within their degree program; in these courses students will practice application of this skill set, eventually demonstrating mastery before graduation. As a result, students will graduate with a set of General Education competencies that will provide the basis for success in life and on the job. The following skills are the competencies that all University students will develop, practice, and master in preparation for graduate school or the workplace.

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 (including concepts, techniques and tools of computing), mathematics proficiency 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 his or her 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.

Cultural Literacy

The student will be able to analyze historical events, cultural artifacts, and philosophical concepts.

WORLDWIDE GENERAL EDUCATION COMPETENCIES

The following additional competency has been identified by the faculty as being relevant to students in the Worldwide Campus.

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 the Online Campus outside of the State of Nevada.

DEGREES

UNDERGRADUATE

Associate/Bachelor of Science in Aeronautics

Associate/Bachelor of Science in Aviation Maintenance

Bachelor of Science in Transportation

GRADUATE

Master of Aeronautical Science

Master of Science in Occupational Safety Management

Master of Science in Space Education

MINOR COURSES OF STUDY

Aviation Safety

Helicopter Operations and Safety

Occupational Safety and Health

Security and Intelligence

Transportation

Unmanned Aerial Systems

UNDERGRADUATE CERTIFICATES OF COMPLETION

Aviation Maintenance Technology Part 65

Aviation Safety

Helicopter Operations and Safety

Occupational Safety and Health

Security and Intelligence

Space Studies

Transportation

GRADUATE CERTIFICATES OF COMPLETION

Aviation/Aerospace Safety

Instructional System Design

DEPARTMENT OF AERONAUTICS

The mission of the Aeronautics Department is to develop and provide graduate and undergraduate academic programs that enable students to excel in the multi-disciplinary field of aerospace; in the aeronautics industry, in the military, and in the local, state and federal government organizations connected to aerospace programs. The mission also includes assessing program outcomes and using these assessments to update courses and programs.

UNDERGRADUATE DEGREE PROGRAMS

AERONAUTICS

Bachelor of Science or Associate in Science

Take your future to new heights! Whether you want to break into an aeronautical career, break away from the competition or advance your current position and earnings potential, the Associate and Bachelor of Science in Aeronautics opens the door to new opportunities in the dynamic aviation/aerospace industry.

Aeronautics curriculum is closely mapped to the needs and demands of the aviation/aerospace industry and to general education guidelines. You'll be exposed to a multidisciplinary program with courses of study in human factors, security, aviation safety, occupational safety and

health, air traffic control, aircraft maintenance, and aeronautical science. Within that broad base, electives and minors allow you to tailor your degree to your particular interests and career goals.

It doesn't have to take long, either. You can earn more than a quarter of the required semester hours from prior life experience and receive your bachelor's degree in as few as three years.

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	27 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.

"I am so thankful to have found a university that understands that soldiers have a job to do—a university that works with us to help us get our education. That's Embry-Riddle Worldwide."

Terry Hamm – Ft. Eustis, FL
Bachelor of Science in Professional Aeronautics
Master of Aeronautical Science

AERONAUTICS

Bachelor of Science or Associate in Science
(Continued)

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 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. 18-27
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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.

36 designated credits as follows:

Embry-Riddle courses in the general education categories of Communication Theory and Skills, and Humanities, Social Sciences, Physical and Life Science, Mathematics and Computer Science may be chosen from as listed, assuming prerequisites 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

HUMN 330 Values and Ethics	3	3
Humanities elective	3	3

Social Sciences:

ECON 210 Microeconomics -OR-		
ECON 211 Macroeconomics	3	3
Social Science elective	3	3

Physical and Life Science

PHYS 102 Explorations in Physics	3	3
WEAX 201 Meteorology	3	3

Mathematics:

MATH 111 College Mathematics for Aviation I	3	3
MATH 112 College Mathematics for Aviation II	3	3

Computer Science:

CSCI 109 Introduction to Computers and Applications	3	3
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Total Credits	36	36
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PROGRAM SUPPORT:

Course	Title	A.S. Credits	B.S. Credits
ASCI 202	Introduction to Aeronautical Science	3	3
ASCI 254	Aviation Legislation	3	3
ASCI 404	Applications in Aviation/Aerospace Law	0	3
MATH 211	Statistics with Aviation Applications -OR-		
MATH 222	Business Statistics	3	3
MGMT 201	Principles of Management	0	3
MGMT 210	Financial Accounting	0	3
MGMT 221	Introduction to Management Information Systems	0	3
RSCH 202	Introduction to Research Methods*	0	3
Total Credits		9	24

PROFESSIONAL DEVELOPMENT CORE

ASCI 309	Basic Aerodynamics		
	-OR-		
ASCI 310	Basic Aircraft Performance	0	3
ASCI 490	Aeronautical Science		
	Capstone Course	0	3
MGMT 436	Strategic Management	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) 0-6 0-9

*RSCH 202 available July 2013.

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 18 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.

DEGREE REQUIREMENTS

AVIATION MAINTENANCE CORE COURSES:

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

A.S. B.S.

AVIATION MAINTENANCE ELECTIVES:	0	12
Aviation Maintenance, Aeronautical Science, Avionics Technology, Management, Computer Science, Electrical Engineering Technology.		
Total Credits	18	30

-AND-

36 designated credits as follows:

Embry-Riddle courses in the general education categories of Communication Theory and Skills, and Humanities, Social Sciences, Physical and Life Science, Mathematics and Computer Science 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 English Composition	3	3
Speech/English	6	6

Humanities

HUMN 330 Values and Ethics	3	3
Humanities elective	3	3

AVIATION MAINTENANCE

Bachelor of Science or Associate in Science
(Continued)

Social Sciences:

ECON 210 Microeconomics -OR-		
ECON 211 Macroeconomics	3	3
Social Science elective	3	3

Physical and Life Science

PHYS 102 Explorations in Physics	3	3
Physical/Life Science elective	3	3

Mathematics:

MATH 111 College Mathematics for Aviation I -AND-		
MATH 112 College Mathematics for Aviation II		
-OR-		

MATH 140 College Algebra -AND-		
MATH 142 Trigonometry	6	6

Computer Science:

CSCI 109 Introduction to Computers and Applications	3	3
Total Credits	36	36

PROGRAM SUPPORT:

Course	Title	A.S. Credits	B.S. Credits
ASCI 202	Introduction to Aeronautical Science	3	3
MGMT 201	Principles of Management	0	3
MATH 211	Statistics with Aviation Applications		
	-OR-		
MATH 222	Business Statistics	3	3
RSCH 202	Introduction to Research Methods*	0	3
Total Credits		6	12

PROGRAM CORE:

Course	Title	A.S. Credits	B.S. Credits
ASCI 419	Aviation Maintenance Management	0	3
MGMT 210	Financial Accounting	0	3
MGMT 221	Introduction to Management Information Systems	0	3
MGMT 311	Marketing		
	-OR-		
MGMT 325	Social Responsibility and Ethics in Management	0	3
MGMT 314	Human Resource Management		
	-OR-		
MGMT 317	Organizational Behavior	0	3
MGMT 324	Aviation Labor Relations	0	3
MGMT 436	Strategic Management	0	3
ASCI 490	Aeronautical Science Capstone Course	0	3
Total Credits		0	24

PROGRAM SPECIALIZATION:

	0	18
TOTAL DEGREE REQUIREMENTS	60	120

*RSCH 202 available July 2013.

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	A.S. Credits	B.S. Credits
MGMT 411	Logistics	0	3
MGMT 420	Management of Production and Operations	0	3
MGMT 422	Life Cycle Analysis and Systems and Programs in Aviation	0	3
MGMT 424	Project Management	0	3
	Upper-Level Management Electives	0	6
Total Credits		0	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	A.S.	B.S.
SFTY 320	Human Factors in Aviation Safety	0	3
SFTY 335	Mechanical and Structural Factors in Aviation Safety	0	3
SFTY 409	Aviation Safety	0	3
SFTY 440	System Safety Management	0	3
Upper-Level Safety Electives		0	6
Total Credits		0	18

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, Humanities, Social Sciences, Physical and Life Science, Mathematics and Computer Science 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.

TRANSPORTATION

Bachelor of Science
(Continued)

Communication Theory & Skills

ENGL 123 English Composition	3
Speech/English	6

Humanities:

HUMN 330 Values & Ethics	3
Humanities elective	3

Social Sciences:

ECON 210 Microeconomics -OR-	
ECON 211 Macroeconomics	3
Social Science elective	3

Physical and Life Sciences

PHYS 102 Explorations in Physics	3
Physical Science elective	3

Mathematics

MATH 111 College Mathematics for Aviation I	
MATH 112 College Mathematics for Aviation II -OR-	
MATH 140 College Algebra	
MATH 142 Trigonometry	6

Computer Science:

CSCI 109 Introduction to Computers and Applications	3
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Total Credits **36**

PROGRAM SUPPORT:

Course	Title	Credits
MATH 211	Statistics with Aviation Applications -OR-	
MATH 222	Business Statistics	3
MGMT 201	Principles of Management	3
RSCH 202	Introduction to Research Methods*	3
Total Credits		9

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 Resource Management	3
MGMT 390	Business Law	3
Total Credits		12

TRANSPORTATION SPECIFIED ELECTIVES: **12**

Any 300-400 Level ASCI, SCTY, or SFTY courses or any of the following courses:

ECON 420	Economics of Air Transportation	3
MGMT 415	Airline Management	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 [ACEI], 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

*RSCH 202 available July 2013.

TOTAL DEGREE REQUIREMENTS **120**

GRADUATE DEGREE PROGRAMS

MASTER OF AERONAUTICAL SCIENCE

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

Upon completion of this multi-disciplinary program,

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

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

DEGREE REQUIREMENTS

Course	Title	Credits
ASCI 602	The Air Transportation System	3
ASCI 604	Human Factors in the Aviation/ Aerospace Industry	3
RSCH 665	Statistical Analysis	3
RSCH 670	Research Methods	3
Core Credits		12

AREAS OF SPECIALIZATION*

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.

Total Specialization Credits	12
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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 Electives 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

MASTER OF AERONAUTICAL SCIENCE
(Continued)

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 603	Aircraft and Spacecraft Development	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
ASCI 623	Aircraft Design and Development	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 513	Space Habitation and Life Support Systems	3
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 SCIENCE
IN OCCUPATIONAL SAFETY
MANAGEMENT**

The Master of Science in Occupational Safety Management (MSOSM) degree program provides the safety, health and environmental professional or aspiring professional with an advanced educational experience to enhance the practice of occupational safety, health and environmental management. This graduate degree provides the requisite skills, knowledge and credentials necessary to succeed in the practice of safety and also provides specialized skills and knowledge needed to achieve leadership positions in the safety, health, and environmental fields. The MSOSM degree prepares graduates for several professional careers, such as director of safety, safety manager, safety consultant, compliance officer,

or loss control manager, in virtually every occupational setting including heavy industry, light manufacturing, construction, transportation, service industries, federal, state, and local government operations, and insurance companies.

The curriculum is a cohesive and rigorous educational experience providing advanced academic work in occupational safety and health. This degree requires the completion of 36 credit hours of study composed of Safety Management (27 credit hours) and Research (9 credit hours). Courses in the area of safety management include: occupational safety and health management; hazard control methods; environmental protection; industrial hygiene and toxicology; human factors and ergonomics; fire safety management; disaster preparedness and emergency response; legislation, litigation and compliance operations; and, systems safety. The research courses include statistics, research methods and the student's graduate capstone course.

DEGREE REQUIREMENTS

Course	Title	Credits
SFTY 510	Industrial Hygiene and Toxicology	3
SFTY 530	Safety, Health and Environmental Legislation, Litigation & Compliance	3
SFTY 540	Disaster Preparedness and Emergency Response	3
SFTY 570	Fire Safety Management	3
SFTY 580	Environmental Protection for the Safety, Health and Environmental Manager	3
SFTY 590	Hazard Control Methods in Occupational Safety and Health	3
SFTY 600	Occupational Safety and Health Management	3
SFTY 619	Human Factors & Ergonomics	3
SFTY 630	System Safety Programs	3
SFTY 691	Graduate Capstone Course	3
RSCH 665	Statistical Analysis	3
RSCH 670	Research Methods	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

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 System Design	3
ASCI 611	Aviation/Aerospace System Safety	3
ASCI 614	Advanced 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

TOTAL DEGREE REQUIREMENTS

36



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.

AVIATION SAFETY
Minor

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



HELICOPTER OPERATIONS AND SAFETY
Minor

Course	Title	Credits
ASCI 317	Rotorcraft	3
ASCI 378	Environmental Helicopter Flight	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

OCCUPATIONAL SAFETY AND HEALTH
Minor
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
<i>Take three of the following courses:</i> (SFTY 315, SFTY 341, SFTY 365, SFTY 360, SFTY 410, SFTY 420, SFTY 440, SFTY 450, SFTY 470)		9
Total Credits		18

SECURITY AND INTELLIGENCE
Minor

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
<i>Take three of the following courses:</i> (SCTY 312, SCTY 323, SCTY 324, SCTY 400, SCTY 415, SCTY 485)		9
Total Credits		18

TRANSPORTATION

Minor

Course	Title	Credits
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
Total Credits		18

UNMANNED AERIAL SYSTEMS

Minor

Course	Title	Credits
ASCI 315	Unmanned Aerial Systems and Operations	3
ASCI 316	Operational and Business Aspects of Unmanned Aircraft Systems	3
ASCI 318	Unmanned Aerial Systems Robotics	3
ASCI 410	Unmanned Sensing Systems	3

Core Credits **12**

Take two of the following courses: **6**

(ASCI 404, ASCI 406, SCTY 315, SCTY 323, SCTY 415, SFTY 320, SFTY 410, SFTY 440)

Total Credits **18**

UNDERGRADUATE CERTIFICATES OF COMPLETION

Undergraduate Certificates of Completion are focused academic programs in which students complete a series of courses .

Most 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 degree program. The cumulative GPA for the series of courses in the certificate program must be 2.8 or higher on a 4.0 scale.

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	3
-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 rotary 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	Environmental Helicopter Flight	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

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

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 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
<i>Take two of the following courses:</i>		
GOVT 325	International Studies	3
GOVT 340	U.S. Foreign Policy	3
GOVT 401	American Constitutional Law	3
GOVT 402	Globalization and World Politics	3
<i>Take three of the following courses:</i>		
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

TRANSPORTATION

Certificate of Completion

Transportation is an integral part of our society. There is a growing need for transportation professionals and a program that provides a comprehensive understanding of the theories and concepts of a global, multimodal, multi-disciplinary field.

The objectives of the Transportation Certificate of Completion are to provide degree and non-degree seeking students an opportunity to expand their knowledge through a

comprehensive study of the theories and concepts of the transportation industry. The University has approved a Certificate of Completion in Aviation Safety for those students who complete a specified series of Transportation courses with a CGPA of 2.8.

REQUIRED COURSES:

Course	Title	Credits
TRAN 301	Transportation Legislation	3
TRAN 321	Air Transportation Systems	3
TRAN 331	Road and Highway Transportation	3
TRAN 341	Railroad Operations	3
TRAN 361	Marine Transportation	3
TRAN 371	Pipelines, Land Use, and the Environment	3
TRAN 401	Transportation and the Environment	3
TRAN 421	Transportation Safety & Security	3
Total Credits		24

GRADUATE 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.

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
<i>Take three of the following courses:</i>		
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

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

DEGREES

UNDERGRADUATE

Bachelor of Science in Fire Science

MINOR COURSES OF STUDY

Fire Science
International Relations

DEPARTMENT OF ARTS AND SCIENCES

The mission of the Department of Arts and Sciences is to promote in students the development of competency in inquiry and problem-solving skills, communication skills, and ethical interaction with the contemporary social world. This mission is accomplished by striving, in every interaction and at every moment during the educational process, to achieve seven encompassing and mutually informative core outcomes: critical thinking, quantitative reasoning, information literacy, communication, scientific literacy, cultural literacy and life-long personal growth.

UNDERGRADUATE DEGREE PROGRAM

FIRE SCIENCE

Bachelor of Science

The Fire Science degree provides students with the theoretical foundations for leadership and administration of fire service organizations. The curriculum includes the principles, theory, and practices associated with today's fire service professionals. Coursework incorporates analytical approaches to fire dynamics and fire protection, fire prevention organization and management, fire analysis and investigation, disaster planning including dealing with hazardous materials, administration and personnel management, and the political and legal issues occurring in

the Fire Service. This degree is based on the National Fire Academy-Fire and Emergency Services Higher Education (FESHE), Model Curriculum Bachelor's Degree 2008. Our curriculum is designed to maintain FESHE "Certificate of Recognition". The fire courses are also intended to meet higher education criteria set forth by the National Fire Protection Association and the International Association of Fire Chiefs. Eligibility to sit for many certification and promotional examinations based on college credit varies according to the authority having jurisdiction and students are advised to inquire directly with those agencies.

There are two specializations offered: Aviation Emergency Management and Fire and Emergency Services.

The Aviation Emergency Management Specialization focuses on the fire and aviation safety, leadership and management skills, and technical knowledge needed to lead the fire and emergency services organizations into the future.

The Fire and Emergency Services Specialization focuses on the leadership and management skills and technical knowledge needed to lead the fire and emergency services organizations into the future.

DEGREE REQUIREMENTS

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.

Communication Theory and Skills:

ENGL 123 English Composition	3
Speech/English	6

Humanities:

HUMN 330 Values & Ethics	3
Humanities elective	3

Social Sciences:

ECON 210 Microeconomics -OR-	
ECON 211 Macroeconomics	3
Social Science elective	3

History/Government/Social Science/Psychology/Economics)

Physical and Life Science Lower-Level electives:

Physics/Biology/Meteorology	6
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Mathematics:

MATH 111 College Mathematics for Aviation I &	
MATH 112 College Mathematics for Aviation II	

-OR-

MATH 140 College Algebra &	
MATH 142 Trigonometry	6

Computer Science:

CSCI 109 Introduction to Computers and Applications	3
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Total Credits 36

PROGRAM SUPPORT:

MATH 211 Statistics with Aviation Applications -OR-	
MATH 222 Business Statistics	3
WEAX 201 Meteorology I	3
RSCH 202 Introduction to Research Methods*	3

Total Credits 9

PROGRAM SPECIALIZATIONS:

AVIATION EMERGENCY MANAGEMENT SPECIALIZATION:

Course	Title	Credits
ASCI 254	Aviation Legislation	3
ASCI 401	Airport Development and Operations	3
ASCI 412	Corporate and Business Aviation	3
FIRE 301	Community Risk Reduction for the Fire and Emergency Services	3
FIRE 302	Fire Dynamics	3
FIRE 303	Fire Protection Structures & Systems Design	3
FIRE 305	Fire Prevention Organization and Management	3
FIRE 400	Analytical Approaches to Public Fire Protection	3
FIRE 401	Applications of Fire Research	3
FIRE 403	Disaster Planning and Control	3
FIRE 404	Managerial Issues in Hazardous Materials	3
FIRE 405	Personnel Management for the Fire and Emergency Services	3
FIRE 480	Advanced Principles in Fire and Emergency Services Safety and Survival	3

SFTY 320	Human Factors in Aviation Safety	3
SFTY 330	Aircraft Accident Investigation	3
SFTY 350	Aircraft Crash and Emergency Management	3
SFTY 409	Aviation Safety	3

Total Credits 51

OPEN ELECTIVES 15

SPECIFIED ELECTIVES 9

(Choose 9 credits from ASCI/ SFTY/FIRE Courses)

TOTAL DEGREE REQUIREMENTS 120

-OR-

FIRE AND EMERGENCY SERVICES SPECIALIZATION:

Course	Title	Credits
FIRE 300	Fire-Related Human Behavior	3
FIRE 301	Community Risk Reduction for the Fire and Emergency Services	3
FIRE 302	Fire Dynamics	3
FIRE 303	Fire Protection Structures & Systems Design	3
FIRE 304	Fire Investigation and Analysis	3
FIRE 305	Fire Prevention Organization and Management	3
FIRE 400	Analytical Approaches to Public Fire Protection	3
FIRE 401	Applications of Fire Research	3
FIRE 402	Advanced Fire Administration	3
FIRE 403	Disaster Planning and Control	3
FIRE 404	Managerial Issues in Hazardous Materials	3
FIRE 405	Personnel Management for the Fire and Emergency Services	3
FIRE 406	Political and Legal Foundations of Fire Protection	3
FIRE 410	Terrorism: Roots and Responses	3
FIRE 480	Advanced Principles in Fire and Emergency Services Safety and Survival	3
SFTY 341	Occupational Safety and Health Program Management	3
SFTY 420	Systems Design for Fire and Life Safety	3

Total Credits 51

OPEN ELECTIVES 15

SPECIFIED ELECTIVES 9

(Choose 9 credits from ASCI/ SFTY/FIRE Courses)

*RSCH 202 available July 2013.

TOTAL DEGREE REQUIREMENTS 120

"My strategic management classes gave me tools that I was able to apply to a real world situation: the development of Lake Nona and the hospitals being built near the airport."

Jenny Iglesias-Hamann - Orlando, FL
Master of Science in Management



**Airspace Analyst, Greater Orlando
 Aviation Authority**
Wife
Mother
Active Reservist, United States Army
Artist

DEGREES
 Master of Science in Management

LEARNING MODES
 Classroom: Orlando, FL

DREAMS OF
 Returning to Embry-Riddle for a Ph.D.
 Teach aviation to the next generation

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.

FIRE SCIENCE

Minor
 Not open to BS in Fire Science students

Course	Title	Credits
These courses may not be substituted with other FIRE courses.		
FIRE 301	Community Risk Reduction for the Fire and Emergency Services	3
FIRE 302	Fire Dynamics	3
FIRE 400	Analytical Approaches to Public Fire Protection	3
FIRE 403	Disaster Planning and Control	3
<i>Take two of the following courses:</i>		6
(FIRE 300, FIRE 303, FIRE 304, FIRE 305, FIRE 401, FIRE 402, FIRE 404, FIRE 405, FIRE 406, FIRE 410)		
Total Credits		18

INTERNATIONAL RELATIONS

Minor

Course	Title	Credits
GOVT 331	Current Issues In America	3
HIST 130	History of Aviation In America	3
<i>Take three of the following courses:</i>		9
(GOVT 325, GOVT 340, GOVT 363, GOVT 402, HUMN 210, MGMT 335)		
Total Credits		15

DEGREES

UNDERGRADUATE

Associate/Bachelor of Science in Aviation Business Administration

Associate/Bachelor of Science in Technical Management

Bachelor of Science in Technical Management – Management of Information Systems Major

Bachelor of Science in Technical Management – Project Management Major

Bachelor of Science in Technical Management – Information Security Major

Bachelor of Science in Technical Management – Logistics Major

Bachelor of Science in Technical Management – Occupational Safety and Health Major

Bachelor of Science in Technical Management – Engineering Sciences Major

GRADUATE

Master of Business Administration in Aviation

Master of Science in Leadership

Master of Science in Logistics and Supply Chain Management

Master of Science in Management

Master of Science in Project Management

MINOR COURSES OF STUDY

Airport Management
Aviation Management
Logistics Management
Management

Management Information Systems
Project Management
Technical Management

UNDERGRADUATE CERTIFICATES OF COMPLETION

Airport Management
Information Assurance (NSA)
Management
Supply Chain Management
Aviation Management

Logistics Management
Management Information Systems
Project Management
Technical Management

GRADUATE CERTIFICATES OF COMPLETION

Air Transportation Management
Airport Planning Design and Development
Aviation/Aerospace Industrial Management
Aviation Enterprises in the Global Environment

Integrated Logistics Management
Modeling and Simulation Management
Project Management

DEPARTMENT OF BUSINESS ADMINISTRATION

The Department of Business Administration strives to be the premier global educator of leaders and managers in aviation and aerospace. We support this mission by providing undergraduate and graduate programs in leadership and business management that are developed with a focus on the following core objectives:

- To add value to students' lives and careers
- To foster excellence in learning
- To nourish entrepreneurship and discovery in learning
- To remain connected to the aviation and aerospace industry
- To encourage diversity in all that we do

UNDERGRADUATE DEGREE PROGRAMS

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.

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.

DEGREE REQUIREMENTS	A.S.	B.S.
Communication Theory and Skills:		
ENGL 123 English Composition	3	3
Speech/English	6	6
Humanities		
HUMN 330 Values and Ethics	3	3
Humanities elective (lower or upper level)	3	3
Social Sciences:		
ECON 210 Microeconomics	3	3
ECON 211 Macroeconomics	3	3
Physical and Life Science lower-level elective:		
Physics/Biology/Meteorology	6	6
Mathematics*:		
MATH 111 College Mathematics for Aviation I	3	3
MATH 112 College Mathematics for Aviation II	3	3
* MATH 320 may be substituted as the second course in the series.		
Computer Science:		
CSCI 109 Introduction to Computers and Applications	3	3
Total Credits	36	36

BSAB SUPPORT:

Course	Title	Credits	
MATH 211	Statistics with Aviation Applications	-OR-	
MATH 222	Business Statistics	0	3
BSAB 314	Human Resource Management	0	3
BSAB 371	Leadership	0	3
BSAB 390	Business Law	0	3
BSAB 436	Strategic Management	0	3
MGMT 201	Principles of Management	3	3
MGMT 203	Management for Aeronautical Science	3	3
MGMT 210	Financial Accounting	-OR-	
BSAB 312	Managerial Accounting	3	3
MGMT 221	Introduction to Management Information Systems	3	3
MGMT 321	Aviation/Aerospace Systems Analysis Methods	-OR-	
MGMT 422	Life Cycle Analysis for Systems and Programs in Aviation/Aerospace	0	3
MGMT 324	Aviation Labor Relations	0	3
MGMT 408	Airport Management	0	3
MGMT 411	Logistics Management for Aviation/Aerospace	0	3
MGMT 424	Project Management in Aviation Operations	0	3
RSCH 202	Introduction to Research Methods**	0	3
Total Credits		12	45

AVIATION MANAGEMENT CORE:

MGMT 410	Management of Air Cargo	0	3
MGMT 412	Airport Planning and Design	0	3
MGMT 415	Airline Management	0	3
MGMT 418	Airport Administration and Finance	0	3
MGMT 425	Trends and Current Problems in Air Transportation -OR-		
MGMT 426	International Aviation Management	0	3
MGMT 394	Information Security Management -OR-		
MGMT 494	Aviation Information Systems	0	3
MGMT 450	Airline/Airport Marketing	0	3
Total Credits		0	21

OPEN ELECTIVES (Lower or Upper Level) 12 18

May be used for Department of Business Administration or non Department of Business Administration Minors.

**RSCH 202 available July 2013.

TOTAL DEGREE REQUIREMENTS 60 120

TECHNICAL MANAGEMENT

Bachelor of Science or Associate in 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.

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 12) 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 a major and a minor in areas such as Project Management, Management Information Systems, Engineering Sciences, Logistics, Aviation Management, Information Security, or Occupational Safety and Health. Graduates may go on to managerial/supervisory careers in Aviation-related and Non-Aviation-related public and private fields alike.

DEGREE REQUIREMENTS

A.S. B.S.

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.

TECHNICAL MANAGEMENT

Bachelor of Science or Associate in Science
(Continued)

Communication Theory and Skills:

ENGL 123 English Composition	3	3
Speech/English	6	6

Humanities

HUMN 330 Values and Ethics	3	3
Humanities elective (lower or upper level)	3	3

Social Sciences:

ECON 210 Microeconomics	3	3
ECON 211 Macroeconomics	3	3

Physical and Life Science lower-level elective:

Physics/Biology/Meteorology	6	6
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Mathematics*:

MATH 111 College Mathematics for Aviation I	3	3
MATH 112 College Mathematics for Aviation II	3	3

* MATH 320 may be substituted as the second course in the series.

Computer Science:

CSCI 109 Introduction to Computers and Applications	3	3
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Total Credits **36** **36**

BSTM CORE:

Course	Title	Credits	
MATH 211	Statistics with Aviation Applications		
	-OR-		
MATH 222	Business Statistics	0	3
RSCH 202	Introduction to Research Methods**0		3
MGMT 201	Principles of Management	3	
	-OR-		
MGMT 203	Management for Aeronautical Science	3	3
MGMT 210	Financial Accounting	3	
	-OR-		
MGMT 312	Managerial Accounting	0	3
MGMT 221	Introduction to Management Information Systems	3	3
MGMT 311	Marketing	0	3
MGMT 314	Human Resource Management		
	-OR-		
MGMT 317	Organizational Behavior	0	3
MGMT 320	Business Information Systems	0	3

MGMT 325	Social Responsibility and Ethics in Management -OR-		
MGMT 335	International Business	0	3
MGMT 390	Business Law	0	3
MGMT 436	Strategic Management	0	3
Total Credits		12	33

TECHNICAL MANAGEMENT:

Course	Title	Credits	
MGMT 321	Aviation/Aerospace Systems Analysis Methods	0	3
MGMT 371	Leadership	0	3
MGMT 391	Introduction to Project Management	0	3
MGMT 394	Information Security Management	0	3
MGMT 420	Management of Production and Operations	0	3
MGMT 444	Principles of Supply Chain Management	0	3
MGMT 449	Strategic Marketing Management	0	3
Total Technical Management Credits		0	21

TECHNICAL SPECIALTY TRANSFER CREDIT OR DBA MINOR OR MGMT ELECTIVES: **9** **12**

If technical transfer credit is not applicable, the 12 hours can **ONLY be used** toward Department of Business Administration (DBA) minors. If no minor is chosen, then MGMT electives have to 200-300-400 level courses.

OPEN ELECTIVES (Lower or Upper Level): **3** **18** MAY BE USED FOR MINORS IN OTHER DEPARTMENTS

May be used for Department of Business Administration or non Department of Business Administration Minors.

**RSCH 202 available July 2013.

TOTAL DEGREE REQUIREMENTS **60** **120**

TECHNICAL MANAGEMENT MANAGEMENT OF INFORMATION SYSTEMS MAJOR

Bachelor of Science

As information systems become more advanced and increasingly global, the need for Information Systems specialists increases as well. The Management of Information

Systems (MIS) major 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 major 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. Graduates of this program may find new opportunities in aviation and non-aviation related fields alike.

INFORMATION SYSTEMS MAJOR:
Choose seven of the following courses

Course	Title	Credits
MGMT 321	Aviation/Aerospace Systems Analysis Methods	3
MGMT 392	Database Management	3
MGMT 393	Computer Networks	3
MGMT 395	Programming Concepts	3
MGMT 394	Information Security Management	3
MGMT 422	Life Cycle Analysis for Systems and Programs in Aviation/Aerospace	3
MGMT 444	Principles of Supply Chain Management	3
MGMT 492	Information Systems Project Management	3
MGMT 494	Aviation Information Systems	3
Total Credits		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 and Skills:

ENGL 123 English Composition	3
Speech/English	6

Humanities

HUMN 330 Values and Ethics	3
Humanities elective (lower or upper level)	3

Social Sciences:

ECON 210 Microeconomics	3
ECON 211 Macroeconomics	3

Physical and Life Science lower-level elective:

Physics/Biology/Meteorology	6
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Mathematics*:

MATH 111 College Mathematics for Aviation I	3
MATH 112 College Mathematics for Aviation II	3
* MATH 320 may be substituted as the second course in the series.	

Computer Science:

CSCI 109 Introduction to Computers and Applications	3
Total Credits	36

BSTM CORE:

Course	Title	Credits
MATH 211	Statistics with Aviation Applications	
-OR-		
MATH 222	Business Statistics	3
RSCH 202	Introduction to Research Methods**	3
MGMT 201	Principles of Management	
-OR-		
MGMT 203	Management for Aeronautical Science	3
MGMT 210	Financial Accounting	
-OR-		
MGMT 312	Managerial Accounting	3
MGMT 221	Introduction to Management Information Systems	3
MGMT 311	Marketing	3
MGMT 314	Human Resource Management	
-OR-		
MGMT 317	Organizational Behavior	3
MGMT 320	Business Information Systems	3
MGMT 325	Social Responsibility and Ethics in Management	
-OR-		
MGMT 335	International Business	3
MGMT 390	Business Law	3
MGMT 436	Strategic Management	3
Total Credits		33

TECHNICAL SPECIALTY TRANSFER CREDIT OR DBA MINOR OR MGMT ELECTIVES: 12

If technical transfer credit is not applicable, the 12 hours can **ONLY be used** toward Department of Business Administration (DBA) minors. If no minor is chosen, then MGMT electives have to 200-300-400 level courses.

OPEN ELECTIVES (Lower or Upper Level): 18
MAY BE USED FOR MINORS IN OTHER DEPARTMENTS

May be used for Department of Business Administration or non-Department of Business Administration Minors.

**RSCH 202 available July 2013.

TOTAL DEGREE REQUIREMENTS 120

**TECHNICAL MANAGEMENT
PROJECT MANAGEMENT MAJOR**

Bachelor of Science

Project managers who can deliver the desired results on time and on budget are a valuable business resource. This major combines theory and techniques used by professional project management practitioners in a digital global environment to allow students to develop the skills to effectively lead and manage complex projects.

Learners who choose this major are often interested in pursuing project manager, lead, or coordinator positions with aviation-related and non-aviation related organizations alike. The project management major teaches knowledge and skills to help participate in and lead the management of a variety of project types. The degree includes instruction on a variety of project management-related topics including the nine project management knowledge areas and the five processes designated by the Project Management Institute (PMI). The degree is also designed to foster critical thinking, analysis and communication skills.

PROJECT MANAGEMENT MAJOR:

Course	Title	Credits
MGMT 321	Aviation/Aerospace Systems Analysis Methods	3
MGMT 391	Introduction to Project Management	3
MGMT 394	Information Security Management	3
MGMT 424	Project Management in Aviation Operations	3
MGMT 427	Management of the Multicultural Workforce	3
MGMT 461	Global Project Management	3
MGMT 462	Project Management Advanced Concepts	3
Total Credits		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 and Skills:

ENGL 123	English Composition	3
	Speech/English	6

Humanities

HUMN 330	Values and Ethics	3
	Humanities elective (lower or upper level)	3

Social Sciences:

ECON 210	Microeconomics	3
ECON 211	Macroeconomics	3

Physical and Life Science lower-level elective:

	Physics/Biology/Meteorology	6
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Mathematics*:

MATH 111	College Mathematics for Aviation I	3
MATH 112	College Mathematics for Aviation II	3

* MATH 320 may be substituted as the second course in the series.

Computer Science:

CSCI 109	Introduction to Computers and Applications	3
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Total Credits 36

BSTM CORE:

Course	Title	Credits
MATH 211	Statistics with Aviation Applications	
	-OR-	
MATH 222	Business Statistics	3
RSCH 202	Introduction to Research Methods**	3
MGMT 201	Principles of Management	
	-OR-	
MGMT 203	Management for Aeronautical Science	3
MGMT 210	Financial Accounting	
	-OR-	
MGMT 312	Managerial Accounting	3
MGMT 221	Introduction to Management Information Systems	3
MGMT 311	Marketing	3
MGMT 314	Human Resource Management	
	-OR-	
MGMT 317	Organizational Behavior	3
MGMT 320	Business Information Systems	3
MGMT 325	Social Responsibility and Ethics in Management	
	-OR-	
MGMT 335	International Business	3
MGMT 390	Business Law	3
MGMT 436	Strategic Management	3
Total Credits		33

TECHNICAL SPECIALTY TRANSFER CREDIT OR DBA MINOR OR MGMT ELECTIVES: 12

If technical transfer credit is not applicable, the 12 hours can **ONLY be used** toward Department of Business Administration (DBA) minors. If no minor is chosen, then MGMT electives have to 200-300-400 level courses.

OPEN ELECTIVES (Lower or Upper Level): 18
MAY BE USED FOR MINORS IN OTHER DEPARTMENTS

May be used for Department of Business Administration or non Department of Business Administration Minors.

**RSCH 202 available July 2013.

TOTAL DEGREE REQUIREMENTS 120

**TECHNICAL MANAGEMENT
 INFORMATION SECURITY MAJOR**

Bachelor of Science

This major is designed for students interested in pursuing careers in Information Systems. The curriculum focuses on addressing these information security needs in the market place. Students completing this program can apply for a broad range of IT-related positions, such as security analyst, security auditor, security consultant, security risk assessor, security manager, information technology manager, information security officer, security trainer, and security systems designer. Similar to other BSTM majors, the requirements for this major will be 21 credit hours. This major will cover the following areas.

INFORMATION SECURITY MAJOR:

Course	Title	Credits
MGMT 386	Fundamentals of Information Systems Security	3
Select six courses from the list below:		
MGMT 387	Managing Risk in Information Systems	3
MGMT 388	System Forensics, Investigation, and Response	3
MGMT 389	Information Assurance and Information Quality	3
MGMT 401	Security Policies and Implementation Issues	3
MGMT 402	Legal Issues in Information Security	3
MGMT 403	Auditing IT Infrastructures for Compliance	3
MGMT 404	Business Continuity & Disaster Recovery Planning	3
Total Credits		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 and Skills:

ENGL 123 English Composition	3
Speech/English	6

Humanities

HUMN 330 Values and Ethics	3
Humanities elective (lower or upper level)	3

Social Sciences:

ECON 210 Microeconomics	3
ECON 211 Macroeconomics	3

Physical and Life Science lower-level elective:

Physics/Biology/Meteorology	6
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Mathematics*:

MATH 111 College Mathematics for Aviation I	3
MATH 112 College Mathematics for Aviation II	3

* MATH 320 may be substituted as the second course in the series.

Computer Science:

CSCI 109 Introduction to Computers and Applications	3
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Total Credits 36

BSTM CORE:

Course	Title	Credits
MATH 211	Statistics with Aviation Applications	
	-OR-	
MATH 222	Business Statistics	3
RSCH 202	Introduction to Research Methods**	3
MGMT 201	Principles of Management	
	-OR-	
MGMT 203	Management for Aeronautical Science	3
MGMT 210	Financial Accounting	
	-OR-	
MGMT 312	Managerial Accounting	3
MGMT 221	Introduction to Management Information Systems	3
MGMT 311	Marketing	3
MGMT 314	Human Resource Management	
	-OR-	
MGMT 317	Organizational Behavior	3
MGMT 320	Business Information Systems	3
MGMT 325	Social Responsibility and Ethics in Management	
	-OR-	
MGMT 335	International Business	3
MGMT 390	Business Law	3
MGMT 436	Strategic Management	3
Total Credits		33

TECHNICAL MANAGEMENT INFORMATION SECURITY MAJOR

Bachelor of Science
(Continued)

TECHNICAL SPECIALTY TRANSFER CREDIT OR DBA MINOR OR MGMT ELECTIVES: 12

If technical transfer credit is not applicable, the 12 hours can **ONLY be used** toward Department of Business Administration (DBA) minors. If no minor is chosen, then MGMT electives have to 200-300-400 level courses.

OPEN ELECTIVES (Lower or Upper Level): 18 MAY BE USED FOR MINORS IN OTHER DEPARTMENTS

May be used for Department of Business Administration or non Department of Business Administration Minors.

**RSCH 202 available July 2013.

TOTAL DEGREE REQUIREMENTS 120

TECHNICAL MANAGEMENT LOGISTICS MAJOR

Bachelor of Science

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

LOGISTICS MANAGEMENT MAJOR

Course	Title	Credits
MGMT 321	Aviation/Aerospace Systems Analysis Methods	3
MGMT 391	Introduction to Project Management	3
MGMT 331	Transportation Principles	3
MGMT 410	Management of Air Cargo	3

MGMT 411	Logistics Management for Aviation/Aerospace	3
MGMT 440	Advanced Professional Logistics	3
MGMT 444	Principles of Supply Chain Management	3
Total Credits		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 and Skills:

ENGL 123	English Composition	3
	Speech/English	6

Humanities

HUMN 330	Values and Ethics	3
	Humanities elective (lower or upper level)	3

Social Sciences:

ECON 210	Microeconomics	3
ECON 211	Macroeconomics	3

Physical and Life Science lower-level elective:

	Physics/Biology/Meteorology	6
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Mathematics*:

MATH 111	College Mathematics for Aviation I	3
MATH 112	College Mathematics for Aviation II	3

* MATH 320 may be substituted as the second course in the series.

Computer Science:

CSCI 109	Introduction to Computers and Applications	3
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Total Credits 36

BSTM CORE:

Course	Title	Credits
MATH 211	Statistics with Aviation Applications	
-OR-		
MATH 222	Business Statistics	3
RSCH 202	Introduction to Research Methods**	3
MGMT 201	Principles of Management	
-OR-		
MGMT 203	Management for Aeronautical Science	3
MGMT 210	Financial Accounting	
-OR-		
MGMT 312	Managerial Accounting	3
MGMT 221	Introduction to Management Information Systems	3

MGMT 311	Marketing	3
MGMT 314	Human Resource Management	
	-OR-	
MGMT 317	Organizational Behavior	3
MGMT 320	Business Information Systems	3
MGMT 325	Social Responsibility and Ethics in Management	
	-OR-	
MGMT 335	International Business	3
MGMT 390	Business Law	3
MGMT 436	Strategic Management	3
Total Credits		33

TECHNICAL SPECIALTY TRANSFER CREDIT OR DBA MINOR OR MGMT ELECTIVES: 12

If technical transfer credit is not applicable, the 12 hours can **ONLY be used** toward Department of Business Administration (DBA) minors. If no minor is chosen, then MGMT electives have to 200-300-400 level courses.

OPEN ELECTIVES (Lower or Upper Level): 18
MAY BE USED FOR MINORS IN OTHER DEPARTMENTS

May be used for Department of Business Administration or non Department of Business Administration Minors.

**RSCH 202 available July 2013.

TOTAL DEGREE REQUIREMENTS 120

**TECHNICAL MANAGEMENT
 OCCUPATIONAL SAFETY AND
 HEALTH MAJOR**

Bachelor of Science

Creating and maintaining a safe work environment and protecting workers from hazards have become a critical issue in nearly every industry. The Occupational Safety and Health Specialty was developed to prepare students for supervisory or management positions relating to occupational safety and health in environmental compliance, ergonomics, industrial hygiene and toxicology, construction, fire protection and systems design. This program is geared toward students who are seeking new opportunities in the public or private sector such as service or manufacturing industries, local, state, or federal agencies, and the military.

OCCUPATIONAL SAFETY AND HEALTH MAJOR:

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
Total Credits		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 and Skills:

ENGL 123 English Composition	3
Speech/English	6

Humanities

HUMN 330 Values and Ethics	3
Humanities elective (lower or upper level)	3

Social Sciences:

ECON 210 Microeconomics	3
ECON 211 Macroeconomics	3

Physical and Life Science lower-level elective:

Physics/Biology/Meteorology	6
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Mathematics*:

MATH 111 College Mathematics for Aviation I	3
MATH 112 College Mathematics for Aviation II	3

* MATH 320 may be substituted as the second course in the series.

Computer Science:

CSCI 109 Introduction to Computers and Applications	3
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Total Credits 36

BSTM CORE:

Course	Title	Credits
MATH 211	Statistics with Aviation Applications	
	-OR-	
MATH 222	Business Statistics	3
RSCH 202	Introduction to Research Methods**	3
MGMT 201	Principles of Management	
	-OR-	
MGMT 203	Management for Aeronautical Science	3
MGMT 210	Financial Accounting	
	-OR-	
MGMT 312	Managerial Accounting	3

**TECHNICAL MANAGEMENT
OCCUPATIONAL SAFETY AND
HEALTH MAJOR**

Bachelor of Science
(Continued)

MGMT 221	Introduction to Management Information Systems	3
MGMT 311	Marketing	3
MGMT 314	Human Resource Management	
	-OR-	
MGMT 317	Organizational Behavior	3
MGMT 320	Business Information Systems	3
MGMT 325	Social Responsibility and Ethics in Management	
	-OR-	
MGMT 335	International Business	3
MGMT 390	Business Law	3
MGMT 436	Strategic Management	3
Total Credits		33

TECHNICAL SPECIALTY TRANSFER CREDIT OR DBA MINOR OR MGMT ELECTIVES: 12

If technical transfer credit is not applicable, the 12 hours can **ONLY be used** toward Department of Business Administration (DBA) minors. If no minor is chosen, then MGMT electives have to 200-300-400 level courses.

**OPEN ELECTIVES (Lower or Upper Level): 18
MAY BE USED FOR MINORS IN OTHER DEPARTMENTS**

May be used for Department of Business Administration or non Department of Business Administration Minors.

**RSCH 202 available July 2013.

TOTAL DEGREE REQUIREMENTS 120

**TECHNICAL MANAGEMENT
ENGINEERING SCIENCES MAJOR**

Bachelor of Science

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

Course	Title	Credits
ESCI 105	Fundamentals of Engineering	3
ENGR 120	Graphical Communications	2
PHYS 250	Physics III for Engineers	3
MATH 253	Calculus and Analytic Geometry IV	3
MATH 345	Differential Equations and Matrix Methods	4

Take two of the following courses:

CESC 220	Digital Circuit Design	3
ESCI 201	Statics	3
ESCI 202	Solid Mechanics	3
ESCI 204	Dynamics	3
ESCI 206	Fluid Mechanics	3
Total Credits		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. Because of the mathematics concentration required for this major, MATH 142 (or equivalents) may be needed to satisfy prerequisite requirements; they are not part of the degree requirements for the Engineering Sciences major.

Communication Theory and Skills:

ENGL 123	English Composition	3
	Speech/English	6

Humanities

HUMN 330	Values and Ethics	3
	Humanities elective (lower or upper level)	3

Social Sciences:

ECON 210	Microeconomics	3
ECON 211	Macroeconomics	3

Physical and Life Science lower-level elective:

	Physics/Biology/Meteorology	6
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Mathematics*:

MATH 111	College Mathematics for Aviation I	3
MATH 112	College Mathematics for Aviation II	3

* MATH 320 may be substituted as the second course in the series.

Computer Science:

CSCI 109 Introduction to Computers and Applications	3
Total Credits	36

ENGINEERING SCIENCES SUPPORT:

PHYS 150 Physics I for Engineers	3
PHYS 160 Physics II for Engineers	3
MATH 250 Calculus and Analytic Geometry I	3
MATH 251 Calculus and Analytic Geometry II	3
MATH 252 Calculus and Analytic Geometry III	3
Total Credits	15

BSTM CORE:

Course	Title	Credits
MATH 211	Statistics with Aviation Applications	
	-OR-	
MATH 222	Business Statistics	3
RSCH 202	Introduction to Research Methods**	3
MGMT 201	Principles of Management	
	-OR-	
MGMT 203	Management for Aeronautical Science	3
MGMT 210	Financial Accounting	
	-OR-	
MGMT 312	Managerial Accounting	3
MGMT 221	Introduction to Management	
	Information Systems	3
MGMT 311	Marketing	3
MGMT 314	Human Resource Management	
	-OR-	
MGMT 317	Organizational Behavior	3
MGMT 320	Business Information Systems	3
MGMT 325	Social Responsibility and Ethics in Management	
	-OR-	
MGMT 335	International Business	3
MGMT 390	Business Law	3
MGMT 436	Strategic Management	3
Total Credits		33

OPEN ELECTIVES (Lower or Upper Level): 15**MAY BE USED FOR MINORS IN OTHER DEPARTMENTS**

May be used for Department of Business Administration or non
Department of Business Administration Minors.

TOTAL DEGREE REQUIREMENTS 120**GRADUATE DEGREE PROGRAMS****MASTER OF BUSINESS
ADMINISTRATION IN AVIATION****PROGRAM-SPECIFIC CRITERIA:****Prerequisite Knowledge:**

Subject knowledge for a specific graduate course must be satisfied before enrollment in that course is permitted. Students may enroll in graduate level courses only if they meet prerequisite knowledge requirements. Graduate level prerequisite courses taken with ERAU must be completed with a grade of B or better.

Applicants for admission to the Master of Business Administration in Aviation (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

MASTER OF BUSINESS ADMINISTRATION IN AVIATION

(Continued)

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 (MGMT 503 A through F) and receive at least the minimum recommended in each of the subject areas as required.

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, through academic transcripts, prerequisite knowledge in one of the following areas, will be required to register for those modules contained in MGMT 503 (A through F): management, quantitative methods, marketing, accounting, economics, finance, for which they do not have the prerequisite knowledge. 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 the specific prerequisite knowledge required.

DEGREE REQUIREMENTS

AVIATION BUSINESS CORE

Course	Title	Credits
MGMT 524	Management Science	3
MBAA 514	Strategic Marketing Management in Aviation	3
MBAA 517	Managerial Accounting for Decision Making	3
MBAA 518	Managerial Finance	3
MBAA 522	Business Research Methods	3
MBAA 523	Advanced Aviation Economics	3
MBAA 604	International Business Administration	3
MBAA 635	Business Capstone Course	3
Total Core Credits		24

AVIATION BUSINESS ELECTIVES

Complete a total of 12 credit hours from the following courses. For all Worldwide campuses, the recommended electives are those with the MBAA prefix. While these are recommended they are not mandatory.

Course	Title	Credits
MBAA 520	Organizational Behavior, Theory and Applications in Aviation	3
MBAA 521	Global Information and Technology Management	3
MBAA 607	Human Resource Development	3
MBAA 696	Graduate Internship in Aviation Business Administration	1-3
MBAA 699	Special Topics in Business Administration	1-3
MGMT 533	Federal Regulations, Ethics and the Legal System	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 Electives **12**

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. This program is available at selected ERAU Worldwide campuses and/or through partnerships as determined by specific articulation or contract agreement.

Students who have already completed the Master of Science in Management (MSM), Master of Science in Project Management (MSPM), or Master of Science in Technical Management (MSTM) may opt to complete the MBAA degree. The 36 hour degree requirement for MBAA will be fulfilled using 15 hours of transfer credit from the MSM, MSPM or MSTM programs plus an additional 21 hours of required additional core courses (9-12 hours) and MBAA electives (9-12 hours).

For MSM to MBAA**Transfer courses:**

TMGT 555 or MGMT 605 or TMGT 661 for MBAA 522 Business Research Methods	3
MGMT 524 Management Science (in both programs)	3
MGMT 533 Federal Regulations, Ethics and the Legal System (in both programs)	3
MBAA 517 Managerial Accounting for Decision Making (in both programs)	3
MGMT 535 Theory and Application of Managerial Communications (in both programs)	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 604	International Business Administration	3
MBAA 635	Business Capstone Course	3
Total Additional Core Courses		15

BUSINESS SPECIALIZATION ELECTIVES:

Complete 6 unduplicated credit hours from MBAA 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 Business Specialization Course Credits 6

For MSPM to MBAA:**Transfer courses:**

PMGT 501 for MGMT 652 Concepts and Practices of Project Management	3
MGMT 524 Management Science (in both programs)	3
MGMT 533 Federal Regulations, Ethics and the Legal System (in both programs)	3
MGMT 633 for MBAA 517 Managerial Accounting for Decision Making	3
PMGT 502 for MGMT 535 Theory and Application of Managerial Communications	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 604	International Business Administration	3
MBAA 522	Business Research Methods	3
MBAA 635	Business Capstone Course	3
Total Additional Core Courses		18

AVIATION BUSINESS SPECIALIZATION

Complete 3 unduplicated credit hours from MBAA 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 Business Specialization Course Credits 3

For MSTM to MBAA:**Transfer courses:**

TMGT 535 for MGMT 535 Theory and Application of Managerial Communications	3
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 MGMT 524 Management Science	3
TMGT 661 for MBAA 522 Business Research Methods	3
Total Transfer Credits	15

MASTER OF BUSINESS ADMINISTRATION IN AVIATION

(Continued)

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 604	International Business Administration	3
MBAA 635	Business Capstone Course	3
Total Additional Core Courses		15

AVIATION BUSINESS SPECIALIZATION

Complete 6 unduplicated credit hours from MBAA 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 MSTM program.

Total Business Specialization Course Credits **6**

MASTER OF SCIENCE IN LEADERSHIP

Many companies look the same from the outside. But, on the inside there are dramatic differences in culture and performance. It all starts with leadership. Good leaders develop high performing teams who consistently outperform their competition. These teams capitalize on their strengths, draw inspiration from diversity, and hold each other accountable to achieving their mission. Good leadership is not a fluke. Good leaders are systematically developed. The Master of Science in Leadership degree helps students develop the competencies that are essential for leading an organization effectively. Through this comprehensive curriculum, you will learn how to:

- Inspire the best from those around you
- Communicate powerfully and develop additional sources of influence
- Understand your leadership capacities and minimize your blind spots
- Coach and mentor others to achieve their potential
- Analyze and diagnose organizational issues that impact your team's performance
- Anticipate the need for organizational change and renewal
- Establish and foster a high-performing culture across your organization

In addition to grooming you for today's most challenging leadership positions, this degree will arm you with the skill and vision to become one of the architects of tomorrow.

DEGREE REQUIREMENTS

LEADERSHIP CORE:

Course	Title	Credits
MSLD 500	Leadership Foundations in Research	3
MSLD 510	Aviation and Aerospace Leadership	
	-OR-	
MSLD 511	Organizational Leadership	3
MSLD 520	Management Skills for Leaders	3
MSLD 521	Leadership Communication	3
MSLD 630	Organizational Change and Development	3
MSLD 631	Leading High Performance Teams	3
MSLD 632	Decision Making for Leaders	3
MSLD 633	Strategic Leadership	3
MSLD 634	Leadership Ethics and Corporate Social Responsibility	3
MSLD 690	Graduate Leadership Capstone	3
Total Core Credits		30

Electives: **6**

Select 6 credit hours from the following list of courses:

MBAA 520 -or- TMGT 605, MBAA 522, MBAA 604, MBAA 607, MGMT 524, MGMT 533, MGMT 535 or PMGT 502, MGMT 641, MGMT 652 or PMGT 501, MGMT 671, MGMT 672, PMGT 611, PMGT 612, PMGT 613, PMGT 614, MGMT 651, TMGT 661.

TOTAL DEGREE REQUIREMENTS **36**

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.

DEGREE REQUIREMENTS

Course	Title	Credits
LGMT 536	Purchasing 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 691	Logistics and Supply Chain Management Capstone	3
MGMT 524	Management Science	3
MGMT 533	Federal Regulations, Ethics and the Legal System	3
MGMT 535	Theory and Application of Managerial Communications	3

MBAA 522	Business Research Methods	3
MBAA 517	Managerial Accounting for Decision Making	3
TMGT 605	Organizational Theory in a Technical Environment	3

TOTAL DEGREE REQUIREMENTS

36

MASTER OF SCIENCE IN MANAGEMENT

PROGRAM-SPECIFIC CRITERIA:

Prerequisite Knowledge:

Subject knowledge for a specific graduate course must be satisfied before enrollment in that course is permitted. Students may enroll in graduate level courses only if they meet prerequisite knowledge requirements. Graduate level prerequisite courses taken with ERAU must be completed with a grade of B or better.

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

- Written Communications
- Quantitative Methods
- Communications

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.

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

MASTER OF SCIENCE IN MANAGEMENT

(Continued)

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: General Management or Technical Management.

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. Students must assume responsibility to see that all prerequisites are satisfied. Students, who cannot demonstrate, through academic transcripts, prerequisite knowledge in one of the following areas, will be required to register for those modules contained in MGMT 503 (A, B, C, D, and E): management, quantitative methods, marketing, accounting, economics, for which they do not have the prerequisite knowledge. 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

Course	Title	Credits
MGMT 524	Management Science	3
MGMT 532	Philosophy, Principles, and Practices in Management of Quality	3
MGMT 533	Federal Regulations, Ethics and the Legal System	3

MGMT 535	Theory and Application of Managerial Communications	3
MBAA 517	Managerial Accounting for Decision Making	3
TMGT 555	Applied Regression Analysis	3
TMGT 661	Project Development Techniques	
MGMT 690	Graduate Capstone Project	3
Core Credits		24

Specialization 1 or 2 Credits **12**

TOTAL DEGREE REQUIREMENTS **36**

AREA OF SPECIALIZATION

Choose one of the two specializations. Students wishing to complete multiple specializations must have “unduplicated” credit in each of the specializations.

- General Management
- Technical Management

Specialization 1

GENERAL MANAGEMENT

Course	Title	Credits
MBAA 514	Strategic Marketing Management in Aviation	3
MGMT 671	Entrepreneurship and Leadership	3
MGMT 672	Planning and Execution of Strategy	3
MGMT 673	Global Economic Analysis	3

Specialization 2

TECHNICAL MANAGEMENT

Course	Title	Credits
MBAA 521	Global Information and Technology Management	3
MGMT 651	Production and Procurement in the Aviation and Aerospace Industry	3
MGMT 652	Concepts and Practices of Project Management	3
TMGT 605	Organizational Theory in a Technical Environment	3

MASTER OF SCIENCE IN PROJECT MANAGEMENT

PROGRAM-SPECIFIC CRITERIA:

Prerequisite Knowledge:

Subject knowledge for a specific graduate course must be satisfied before enrollment in that course is permitted. Students may enroll in graduate level courses only if they meet prerequisite knowledge requirements. Graduate level prerequisite courses taken with

ERAU must be completed with a grade of B or better.

Applicants for admission to the **Master of Science in Project Management (MSPM)** 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.

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	Federal Regulations, Ethics and the Legal System	3
MBAA 517	Managerial Accounting for Decision Making	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

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.

AIRPORT MANAGEMENT

Minor

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 404, ASCI 412, MGMT 324, MGMT 331, MGMT 436, MGMT 410, MGMT 418, MGMT 425, MGMT 426, MGMT 499, SCTY 400, SCTY 488)

Total Credits 6

15

AVIATION MANAGEMENT

Minor

Only available to Worldwide undergraduate students enrolled in degree programs other than BS in Aviation Business Administration.

Course	Title	Credits
MGMT 418	Airport Administration and Finance	3
MGMT 425	Trends and Current Problems in Air Transportation	3
MGMT 426	International Aviation Management	3
MGMT 450	Airline/Airport Marketing	3
Total Credits		12

LOGISTICS MANAGEMENT

Minor

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 440	Advanced Professional Logistics	3
Total Credits		12

MANAGEMENT

Minor

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.

Total Credits 6

18

MANAGEMENT INFORMATION SYSTEMS

Minor

Course	Title	Credits
MGMT 392	Database 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
Total Credits		12

PROJECT MANAGEMENT

Minor

Course	Title	Credits
MGMT 424	Project Management in Aviation Operations	3
MGMT 427	Management of the Multicultural Workforce	3
MGMT 461	Global Project Management	3
MGMT 462	Project Management Advanced Concepts	3
Total Credits		12

TECHNICAL MANAGEMENT

Minor

Only available to Worldwide undergraduate students enrolled in degree programs other than BS in Technical Management

Course	Title	Credits
MGMT 321	Aviation/Aerospace Systems Analysis Methods	3
MGMT 394	Information Security Management	3
MGMT 418	Airport Administration and Finance	3
MGMT 420	Management of Production and Operations	3
Total Credits		12

UNDERGRADUATE CERTIFICATES OF COMPLETION

Undergraduate Certificates of Completion are focused academic programs in which students complete a series of courses .

Most 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 degree program. The cumulative GPA for the series of courses in the certificate program must be 2.8 or higher 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 404	Applications in Aviation/Aerospace Law	3
ASCI 412	Corporate and Business Aviation	3
MGMT 324	Aviation Labor Relations	3
MGMT 331	Transportation Principles	3
MGMT 436	Strategic Management	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 Program Management	3
SFTY 350	Aircraft Crash and Emergency Management	3
SFTY 409	Aviation Safety	3
Total Credits		18

INFORMATION ASSURANCE (NATIONAL SECURITY AGENCY)

Certificate of Completion

Embry-Riddle Aeronautical University Worldwide's National Security Agency Certificate of Completion presents a curriculum of three required courses, which address the core tenets of the National Security Agency, Committee on National Security Systems' Information Systems Security (INFOSEC) Professionals, NSTISSI 4011 requirements. After the successful completion of the required courses, students will receive an Information Assurance Certificate, granted by Embry-Riddle on behalf of the National Security Agency, noting the NSTISSI 4011 designation.

This Certificate of Completion will be beneficial for information systems professionals looking to gain a better understanding of information assurance (IA), computer systems, information management, and systems security. Students who complete this program will be welcome to utilize the IA (4011) designation.

The University awards a Certificate of Completion in Information Assurance to those who have completed the following courses with a CGPA of at least 2.8. The Information Assurance Certificate must be taken in conjunction with a bachelor's degree program.

REQUIRED COURSES:

Course	Title	Credits
CSCI 109	Introduction to Computers and Applications	3
	-OR- equivalent 3-credit introductory computer systems course recognized by ERAU.	
MGMT 221	Introduction to Management Information Systems	3
MGMT 320	Business Information Systems	3
Total Credits		9

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 2.8.

REQUIRED CORE COURSES:

12

Course	Title	Credits
MGMT 201	Principles of Management	3
MGMT 314	Human Resource 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

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

AVIATION MANAGEMENT

Certificate of Completion

REQUIRED COURSES:

Course	Title	Credits
MGMT 410	Management of Air Cargo	3
MGMT 412	Airport Planning and Design	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 450	Airline/Airport Marketing	3
Total Credits		18

LOGISTICS MANAGEMENT

Certificate of Completion

REQUIRED COURSES:

Course	Title	Credits
MGMT 321	Aviation/Aerospace Systems Analysis Methods	3
MGMT 331	Transportation Principles	3
MGMT 410	Management of Air Cargo	3

MGMT 411	Logistics Management for Aviation/Aerospace	3
MGMT 440	Advanced Professional Logistics	3
MGMT 444	Principles of Supply Chain Management	3

Total Credits

18

MANAGEMENT INFORMATION SYSTEMS

Certificate of Completion

REQUIRED COURSES:

Course	Title	Credits
MGMT 321	Aviation/Aerospace Systems Analysis Methods	3
MGMT 392	Database Management	3
MGMT 393	Computer Networks	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
Total Credits		18

PROJECT MANAGEMENT

Certificate of Completion

REQUIRED COURSES:

Course	Title	Credits
MGMT 391	Introduction to Project Management	3
MGMT 424	Aviation Project Management	3
MGMT 427	Management of the Multicultural Workforce	3
MGMT 461	Global Project Management	3
MGMT 462	Project Management Advanced Concepts	3
MGMT 492	Information Systems Project Management	3
Total Credits		18

TECHNICAL MANAGEMENT

Certificate of Completion

REQUIRED COURSES:

Course	Title	Credits
MGMT 321	Aviation/Aerospace Systems Analysis Methods	3
MGMT 391	Introduction to Project Management	3
MGMT 394	Information Security Management	3
MGMT 418	Airport Administration and Finance	3
MGMT 420	Management of Production and Operations	3
MGMT 444	Principles of Supply Chain Management	3
Total Credits		18

GRADUATE 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 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

INTEGRATED LOGISTICS MANAGEMENT

Certificate of Completion
(Continued)

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	Integrated Logistics Management	3
LGMT 683	Supply Chain Management	3
LGMT 685	Global Logistics and Supply Chain Management	3
LGMT 636	Transportation Management	3
Total Credits		18

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 6146	Modeling and Simulation Systems	3
IDS 6147	Perspectives on Modeling and Simulation	3

ERAU REQUIRED COURSES:

MGMT 524	Management Science	3
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ERAU ELECTIVE COURSES:

Take three of the following courses:

MGMT 532	Philosophy, Principles, and Practices in Management of Quality	3
MGMT 533	Federal Regulations, Ethics and the Legal System	3
MGMT 535	Theory and Applications of Managerial Communications	3
MBAA 517	Managerial Accounting for Decision Making	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
TMGT 605	Organizational Theory in a Technical Environment	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

“It’s good that I was at Embry-Riddle, because with everything that happened with my military service, I don’t think I could have finished this degree at a different school.”

Erik Ordoñez – Norfolk, VA
Bachelor of Science in Professional Aeronautics
Master of Aeronautical Science



Sergeant, United States Air Force
Husband
Father
Surfer

DEGREES

Bachelor of Science in Professional Aeronautics
 Master of Aeronautical Science

LEARNING MODES

Classroom: Langley Air Force Base, VA; Fort Eustis, VA; Naval Station Norfolk, VA; Naval Air Station Oceana, VA
 Online

DREAMS OF

The perfect wave
 Inspiring his daughter’s ambition

DEGREES

GRADUATE

Master of Systems Engineering

MINOR COURSES OF STUDY

Engineering Sciences

UNDERGRADUATE CERTIFICATES OF COMPLETION

Pre-Engineering Studies

DEPARTMENT OF ENGINEERING SCIENCES

The Master of Systems Engineering (MSE) degree program prepares and qualifies students to effectively manage the complex systems engineering projects that allow modern businesses to innovate, adapt, thrive and survive. Leaders who can effectively manage these efforts are in high demand across many industries. Through this focused curriculum, you will establish a solid foundation of fundamental systems engineering knowledge; learning how to apply a systems perspective to business and technology. The program is offered in two tracks: a Technical Track focused on system design, analysis, and implementation, and the Engineering Management Track focused on organization, process and management.

GRADUATE DEGREE PROGRAMS

MASTER OF SYSTEMS ENGINEERING

Complex engineering projects are at the heart of modern business. In order to innovate, adapt, thrive and survive, organizations must undertake efforts that require the coordination of different teams, the understanding of complex technology and tools, and the integration of interdepartmental work processes. Leaders who can effectively manage these efforts are in high demand across many industries. The Master of Systems Engineering (MSysE) degree program prepares and qualifies students to take on such a role.

Through this focused curriculum, students will establish a solid foundation of fundamental systems engineering knowledge, learning how to apply a systems perspective to business and technology. The program is offered in two tracks, allowing students to tailor their education to their career goals. The Technical track concentrates on system design, analysis, and implementation. The Engineering Management track concentrates on organization, process and management.

The MSysE delivers exceptional learning and an esteemed credential for systems engineers entering the field, engineers wishing to broaden their perspective or advance to management positions, and managers seeking the knowledge and skills necessary for engineering products and services from a systems perspective.

DEGREE REQUIREMENTS

Course	Title	Credits
SYS/SYSE 500	Introduction to Systems Engineering	3
SYS/SYSE 530	System Requirements Analysis and Modeling	3
SYS/SYSE 560	Introduction to Systems Engineering Management	3
SYS/SYSE 625	System Quality Assurance	3
SYS/SYSE 697	Systems Engineering Capstone Project	3

Technical Track

SYS/SYSE 610	System Architecture Design and Modeling	3
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or-

Engineering Management Track

SYS/SYSE 660	Organizational Systems Management	3
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Total Core Credits:		18
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Electives:

Electives will be chosen from existing Embry-Riddle Daytona Beach and Worldwide courses in other disciplines, and must be approved by the student’s advisor or program coordinator.

Total Electives Credits: 12

TOTAL DEGREE REQUIREMENTS 30

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.

ENGINEERING SCIENCES
 Minor
 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
<i>Take three of the following courses:</i> (ESCI 201, ESCI 202, ESCI 206, CESC 220)		9
Total Credits		21

UNDERGRADUATE CERTIFICATES OF COMPLETION

Undergraduate Certificates of Completion are focused academic programs in which students complete a series of courses .

Most 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 degree

program. The cumulative GPA for the series of courses in the certificate program must be 2.8 or higher on a 4.0 scale.

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
ESCI 201	Statics	3
ESCI 202	Solid Mechanics	3
ESCI 204	Dynamics	3
ESCI 206	Fluid Mechanics	3
Total Credits		31

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 12-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 60 credit hours beyond the master's degree, including course work, residency seminars, and dissertation courses.

Policies for the Doctor of Philosophy in Aviation program may differ from those in the catalog referencing undergraduate and graduate programs. Students should consult the appropriate academic department for degree program specific information.

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



PROFESSIONAL EDUCATION

CERTIFICATE PROGRAMS

BUSINESS, LAW, AND FINANCE SERIES

ACCOUNTING STUDIES CERTIFICATE

(Web-based/self-guided)

The Certificate in Accounting Studies is for anyone who desires to have a better understanding of basic accounting and accounting procedures or who desires to work in an accounting department. This certificate is particularly well suited for anyone who has recently assumed some accounting responsibilities; anyone who works in business and wants a foundation in accounting, or anyone who wants better understanding of the principles of accounting.

REQUIRED COURSES:

ALF-3001	Financial/Accounting Management
ALF-3047	An Introduction to Accounting: The Accounting Cycle
ALF-3048	Journals, Ledgers and Worksheets
ALF-3049	Payroll Accounting
ALF-3050	Accounting for Accounts Payable
ALF-3051	Accounting for Accounts Receivable

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

COMMUNICATION AND WRITING SKILLS CERTIFICATE

(Web-based/self-guided)

The Certificate in Communication and Writing Skills introduces you to the essentials of writing, grammar, and practices that develop more effective spoken and written communication skills.

REQUIRED COURSES:

ALF-3018	Negotiation Strategies
ALF-3069	Writing Effective Newsletters
ALF-3070	Persuasive Communication
ALF-3071	Effective Writing Skills
ALF-3072	Grammar Essentials
ALF-3073	Effective Communication

E-BUSINESS CERTIFICATE

(Web-based/self-guided)

The Certificate Program in e-Business is foundational for anyone who works in businesses that have an Internet presence as well as managers and entrepreneurs facing opportunities to build and grow businesses in an e-driven

E-BUSINESS CERTIFICATE(Web-based/self-guided)
(Continued)

economy. The Certificate Program has 6 required courses. There is a required textbook for this program; The Complete E-Commerce Book by Janice Reynolds.

REQUIRED COURSES:

ALF-3058	E-Business Management Strategies
ALF-3059	E-Business Marketing Strategies
ALF-3060	E-Business Technology
ALF-3061	E-Business Legal Issues
ALF-3062	E-Business Operations
ALF-3063	E-Commerce

INTRODUCTION TO GRANT RESEARCH AND WRITING CERTIFICATE

(Web-based/self-guided)

The Introduction to Grant Research and Writing Certificate is for anyone seeking to learn the essentials in learning about writing grants for private, public, or government use. You will learn how to create documents that use explanation, description and intentional direction in order to persuade or direct your readers.

REQUIRED COURSES:

ALF-3064	Introduction to Grant Research
ALF-3065	Introduction to Grant Writing
ALF-3066	Specialized Techniques for Grant Writing
ALF-3067	Technical Writing
ALF-3068	Advanced Grant Writing

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

SUPERVISORY AND MANAGERIAL SKILLS CERTIFICATE

(Web-based/self-guided)

This Certificate in Supervisory and Managerial Skills is for anyone that seeks or is currently in a supervisory and/or managerial role within an organization. Participants will be introduced to the fundamental skills required of new supervisors and/or managers as well as those with experience so as to position them for success in their supervisory or managerial positions. Participants will gain a breadth of exposure to many topics essential to the supervision and managerial process.

REQUIRED COURSES:

ALF-3007	High Performance Organizations
ALF-3018	Negotiation Strategies
ALF-3042	Management Essentials
ALF-3052	Developing Effective Leadership Skills
ALF-3053	Performance Management
ALF-3054	Decision Making and Time Management
ALF-3055	Developing Effective Interpersonal Communication and Assertion Skills
ALF-3056	Productivity and Benchmarking
ALF-3057	Project Management

OTHER 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.

REQUIRED COURSES:

CE 2111 Value Proposition Analysis for Corporate Aviation
 CE 2112 Flight Department Finance, Budgeting and Accounting
 CE 2113 Community Relations
 CE 2121 Strategic Vision and Planning
 CE 2122 Leadership and Motivation

CE 2123 Managerial Communications
 CE 2124 Professional Development
 CE 2125 Human Factors
 CE 2126 Applied Human Factors
 CE 2131 Standard Operating Procedures and Processes
 CE 2132 Scheduling and Dispatch
 CE 2133 Record-Keeping and Regulatory Compliance
 CE 2141 Workload Management and Staffing
 CE 2142 Employee Training Programs
 CE 2143 Staffing and Team Building
 CE 2144 Performance Reviews and Feedback Systems
 CE 2145 Compensation and Reward Programs
 CE 2146 HRM Laws and Ethics
 CE 2151 Aviation Safety Programs and Emergency Preparedness
 CE 2152 Aviation Maintenance Management
 CE 2153 Customer Service Programs
 CE 2154 Aviation Security
 CE 2155 Vendor Management

"Embry-Riddle was the best fit for me. I was able to transfer my military experience over as credits and the schedule and flexibility allowed me to fit a four-degree into my busy life."

Daniel Reece – Oceana, Norfolk
Bachelor of Science in Professional Aeronautics



**Maintenance Manager,
 Steverstall Steel Company**
Husband
History Buff
Cleveland Browns Fan

DEGREES

Bachelor of Science in Professional Aeronautics

LEARNING MODES

Classroom: Oceana, Norfolk
 Online

DREAMS OF

Traveling to Australia, Europe and the other United Kingdom with his wife

CERTIFICATE COURSE DESCRIPTIONS

BUSINESS, LAW, AND FINANCE

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 Successful 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.

ALF-3047 An Introduction to Accounting: The Accounting Cycle

This course introduces the student to basic accounting terminology as well as examines the fundamental principles of basic accounting and the accounting cycle.

ALF-3048 Journals, Ledgers and Worksheets

This course develops the practical skills necessary to record transactions in chronological order by using journals, and categorize them by account using ledgers. Introduction to Accounting: The Accounting Cycle is a prerequisite.

ALF-3049 Payroll Accounting

In this course you will be introduced to the standard requirements of the payroll process. It will cover payroll expenses, liabilities, taxes, forms, laws, and regulations as well as a variety of other payroll functions.

ALF-3050 Accounting for Accounts Payable

In this course you will be introduced to the proper accounting procedures for working with accounts payable.

ALF-3051 Accounting for Accounts Receivable

In this course you will be introduced to the proper accounting procedures for working with accounts receivable.

ALF 3052 Developing Effective Leadership Skills

Managers by virtue of their position are leaders. This workshop introduces participants to various leadership styles, performance issues, and methods for succeeding as effective leaders.

ALF 3053 Performance Management

The effectiveness of a performance management approach is dependent upon the clear articulation of performance indicators and objectives and the ability to manage the cascading process from department, to team, and to

individual level. The most successful organizations, however, take a systems approach to the performance management and measurement process. This course explores the concept of the organization and performance management in the context of systems thinking, provides practical techniques for re-vamping the performance management function and establishing systems to sustain organizational and employee performance through new thinking and methodologies.

ALF 3054 Decision Making and Time Management

This course emphasizes the importance of learning how to make effective decisions and focusing on building time management habits that will last a lifetime. Participants will learn about the various types of decisions, techniques for effectiveness, and strategies for success. Strategies will be developed to implement an energetic plan of attack to minimize time wasters as well as internal black holes.

ALF 3055 Developing Effective Interpersonal Communication and Assertion Skills

Effective communications enhances teamwork, productivity, and personal satisfaction. Participants must learn the essentials of speaking, writing and navigating within a variety of communication styles and contexts.

ALF 3056 Productivity and Benchmarking

Productivity and benchmarking is a critical tool for the evaluation of goal achievement. This course focuses on some of the fundamental aspects of how to establish meaningful metrics as well as implement plans that enhance overall productivity.

ALF 3057 Project Management

In this course students will learn the essentials of creating and developing a successful project plan to better understand the basic organization and structure necessary as they direct and orchestrate small or large scale projects.

ALF-3058 E-Business Management Strategies

This course focuses on management and leadership essentials as they pertain to the e-environment. Participants will learn techniques for effectively managing and working in an e-economy as well as how to utilize e-commerce to develop and grow a business. Participants will learn how to re-engineer business processes for competitive advantage, customer service, and return on investment.

ALF-3059 E-Business Marketing Strategies

This course will cover the essentials of marketing as they

pertain to reaching customers and promoting business through the Web. Participants will learn techniques and strategies that will enhance their organization's ability to utilize technologies effectively for e-marketing, e-mail campaigns, data mining, and other e-marketing tools to increase market, and promote branding and corporate image.

ALF-3060 E-Business Technology

This course explores some of the technologies that are necessary to support an e-business. Topics will include database management, building an infrastructure to support the operations of an ebusiness, website authoring tools and design, search engines, intranets, internet speed and access, servers, knowledge management, intellectual property, and security.

ALF-3061 E-Business Legal Issues

Legal considerations for the new economy is an intense study of legal issues surrounding Web business. It is designed for lawyers, executives, upper-level managers, entrepreneurs, sales/marketing professionals, software developers, engineers -- anyone interested in the legal ramifications of doing business on the Web. However, students of various backgrounds may choose to include this program as part of a broader study of e-commerce and e-business.

ALF-3062 E-Business Operations

The course explores the processes necessary to provide strategic support within the organization. Basic operational issues will be addressed as they relate to e-business. Issues related to e-business financial transactions, project evaluation, managing virtual offices and virtual employees, and other operational topics will be covered.

ALF-3063 E-Commerce

This course explores the special topics associated with e-commerce. Participants will focus on website issues related to e-commerce transactions, catalogs, shopping carts, and serving customers through various distribution channels. Operational strategies peculiar to the e-retailing environment will be explored in more detail.

ALF-3064 Introduction to Grant Research

This course covers the diverse types of grants that are available. It will cover corporate, non-profit, education, and government grants that are available. You will learn the basics on how to research for and find available grants as well as how to begin the grant process.

ALF-3065 Introduction to Grant Writing

This course equips students with the skills and tools necessary to enter the field of grant writing. It will cover the fundamental elements of a grant proposal such as the objectives, problems addressed, methodology, evaluation and assessments, budget and cover letter, as well as the members involved.

ALF-3066 Specialized Techniques for Grant Writing

In this course you will learn that technical writing is a form of communication. You will learn to use it as a type of conversation as well as an interactive process that involves writers and readers who respond to one another. You will learn how to create documents that use explanation, description and intentional direction in order to persuade or direct your readers. You will learn how to develop concise and direct communication with your readers.

ALF-3067 Technical Writing

This course is designed to cover the basic communication needs of students pursuing careers in a highly competitive world of Science, Education, Grant Writing as well as various other high communication based careers. The course covers the topics of style and purpose offering students focused practice with short writing assignments.

ALF-3068 Advanced Grant Writing

In this course you will learn how to develop successful and fundable grants. We will focus on the skills needed to prepare professional, competitive and compelling and successful grant proposals. The course includes a lesson on the "Potential Pitfalls" of Grant Writing.

ALF-3069 Writing Effective Newsletters

Many office and businesses use newsletters to communicate with employees, customers, and others as a means of business development. In this course participants will learn how to write newsletters that are interesting and add value to the business. This course is appropriate for anyone who wants to learn why newsletters are effective, how to write them effectively and how to develop a method for consistently creating them on a regular basis.

ALF-3070 Persuasive Communication

Persuasive communication is essential not only for selling the products or services of the business but for obtaining financing and running daily operations. 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-3071 Effective Writing Skills

In this course you are introduced to the fundamentals of effective writing techniques so as to strengthen writing skills for clear effective communication.

ALF-3072 Grammar Essentials

In this course you will be exposed to the fundamental elements of grammar. You will touch on a variety of grammar essentials as well as frequently misused grammar elements. You will learn how to write, evaluate, edit and format basic documents within a professional office environment.

ALF-3073 Effective Communication

Public speaking is not just for those who stand-up in front of an audience. Public speaking is speaking to a colleague or co-worker in the office, presenting an opportunity to your boss, or working with a customer or vendor. Speaking skills are another reflection of your professionalism and competency. Communication is a method of branding yourself, your office, and your employer. This course will provide practical techniques on how to make your message clear.

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.

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.

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/Jeppesen 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.

SEMINARS AND WORKSHOPS

The Office of Professional Education delivers a variety of seminars and workshops throughout the year. Some recurring 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 throughout the United States and abroad.

NBAA EVENTS

OPE teaches courses at various NBAA events each year.

OFFICE OF PROFESSIONAL EDUCATION

Embry-Riddle Aeronautical University - Worldwide
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Daytona Beach, FL 32114-3900
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Fax: 386-323-8692
Toll free: 866-574-9125
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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.

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 provided 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 (FAR 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 (FAR 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

This course provides the student with a background in the major aspects of space flight. Topics covered include the history of space flight; propulsion theory; orbital mechanics fundamentals; Space Shuttle operations; U.S. space policy; and present and future commercial, industrial, and military applications in space.

**ASCI 185
Basic Ground School (3,0)**

3 Credits

This 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.

**ASCI 202
Introduction to Aeronautical Science
(3,0)**

3 Credits

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

**ASCI 210
Space Transportation Systems (3,0)**

3 Credits

This course provides the student with 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 provides the student with a background in the major aspects of the International Space Station (ISS) and the Russian Mir spacecraft. Specific topics include commercial applications,

logistical support, maintenance, servicing, and design concepts.

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

This course examines 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, shielding and communication systems are reviewed along with their missions, space environment, and limitations.

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 and PHYS 102.

ASCI 310
Aircraft Performance (3,0)
 3 Credits

This course explores the performance of airplanes powered by reciprocating, turboprop, and/or jet turbine and turbofan engines. Topics studied include stability and control, weight and balance, and performance charts and graphs. 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 316
Operational and Business Aspects of Unmanned Aircraft Systems (3,0)
 3 Credits

This course will prepare the student to differentiate the applicable needs of civil aviation for UAS. It will examine each of the particular needs and address how to implement the UASs to fill that need within the constraints of the current national airspace and federal aviation regulation restrictions. Particular attention will be given to skill sets and tools used to mitigate restrictions and to create a flight operation that can successfully employ UASs..

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 318
Unmanned Aerial Systems Robotics (3,0)
 3 Credits

This course prepares students to

integrate robotic technology into the hardware and software regimes of unmanned aviation. It will include examinations of control and system programming in the context of specific missions through guided discussions, simulation and the operation of actual unmanned aircraft robotic systems.

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 explores aero-medical information. Topics include causes, symptoms, prevention, and treatment of flight environment disorders. 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
Environmental Helicopter Flight (3,0)

3 Credits

During this course, the student obtains the foundation for helicopter operations in terrain flight and in varying environmental conditions. The student will be introduced to aspects particular to helicopter flight as it pertains to adverse weather and 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, snow, desert and overwater operations. 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: ASCI 317 or FAA/military helicopter pilot certificate.

ASCI 388
Helicopter Flight Planning (3,0)

3 Credits

During this course, the student obtains the foundation for 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 external operations modes 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: ASCI 317 or FAA/military helicopter pilot certificate.

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 404
Applications in Aviation/Aerospace Law (3,0)

3 Credits

Applications in Aviation/Aerospace 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. Students will also examine the legal aspects of unmanned aerial systems and operations, as well as space commercialization.

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 410
Unmanned Sensing Systems (3,0)

3 Credits

This is the capstone course of the Unmanned Aviation minor, aimed at giving the students direct experience with the planning and effective conduct of complex missions involving the proper use of complex sensing systems on unmanned aircraft. Through guided discussion and team effort, students will address complex mission assignments by determining the proper sensing system to use, assessing alternate courses of action, selecting and / or designing appropriate unmanned aircraft equipped with the sensing system appropriate to the mission and by performing other tasks as required to achieve mission success.

ASCI 412
Corporate and Business Aviation (3,0)

3 Credits

The course is designed to provide the student with an understanding of the operation of a corporate flight department, 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 and ASCI 388 or FAA/military helicopter pilot certification.

ASCI 438
Advanced Helicopter Operations (3,0)

3 Credits

During this course, the student will obtain the foundation for advance and specialized commercial helicopter operations. The student will be introduced to specific areas of flight operations such as Long Line, EMS, Electronic News Gathering, Corporate, Off-Shore,

and Federal and Municipal Law Enforcement. Emphasis will be placed on developing a safe and competent pilot who is adequately prepared for flight operations in these areas, and can assume the duties of any managerial position. The student will receive training in standard operating, safety and training procedures, aircraft selection, operating and capital budgets, aircraft purchasing and leasing agreements, and an understanding of maintenance requirements to include maintenance tracking, spare parts inventory, 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 317, ASCI 388 and ASCI 378.

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. Topics discussed include biology and biochemistry, viruses bacteria and protista; aerobic respiration and photosynthesis, mitosis and meiosis; genetics and inheritance, hereditary disorders in humans, human tissues, organs and organ systems and infectious disease and immunity.

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 will increase their skills with the most popular computer applications such as word processing, spreadsheet, electronic mail, presentation software, and Internet. 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.

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 is an introduction to the economic principles of free enterprise supply and demand, private and social implications of revenue maximization, cost minimization, profit maximization, market structure, and resource markets. Current microeconomic issues in aviation (such as elasticity, pricing, taxes, subsidies, market implications, liability reform, evolution of airline completion, etc.) are discussed. Prerequisites: MATH 111 or equivalent and ENGL 123, 143 or equivalent.

ECON 211
Macroeconomics (3,0)
 3 Credits

This course is an introductory analysis of employment, inflation, recession, GDP economic growth, national income/output 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. This course emphasizes the quantitative and qualitative applications of economic principles to business analysis. Aviation related topics commonly discussed include airport privatization and employee ownership of airlines, forecasting passenger demand, airline production and cost analysis, optimal pricing and production decisions, sensitivity analysis, and capital budgeting. Prerequisite(s): ECON 210, MATH 211 or 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 Placement Examinations section of the Worldwide Catalog.

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. Prerequisite: Qualifying score on the ERAU English Placement Examination or GNED 104.

ENGL 123
English Composition (3,0)

3 Credits

This course focuses on the principles of using writing for thinking, as well as a tool for expressing ideas. It addresses the composing process, research and documentation, and rhetorical strategies for various audiences and purposes. Students develop their communicative, evaluative, critical thinking, and research writing abilities. Pre-requisite: Qualifying score on the ERAU English Placement Examination or ENGL 106.

ENGL 143
Studies in Rhetorical Theory (3,0)

3 Credits

This course is a broad survey of speculation concerning the nature

and techniques of persuasion, this course is a continuation of ENGL 123. This writing-intensive course will focus on enduring issues in the study of rhetoric: the value of such a study, the nature of audiences, the most effective techniques, and the continual re-framing of these issues to meet changing circumstances.

ENGL 221
Technical Report Writing (3,0)

3 Credits

This course introduces students to the preparation of formal and informal technical reports, abstracts, proposals, instructions, professional correspondence and other forms of technical communication. Major emphasis is placed on the long technical report and the acquisition of advanced writing skills.

ENGL 222
Business Communication (3,0)

3 Credits

This course is an introduction to effective business communication. Topics in oral, written, non-verbal and intercultural communications are covered. Research methods, effective speaking and the preparation of letters, memoranda and reports are emphasized.

ENGL 355
Creative Writing (3,0)

3 Credits

This course culminates the interpretive and expressive elements of communications classes. The study, practice and utilization 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

The purpose of this course is to provide the engineering student with

the ability to analyze static equilibrium problems in a logical manner. It is designed to provide assistance to the student for preparation in all solid mechanics courses. Emphasis is placed on an understanding of principles employed in the solution of problems rather than reliance on a rote process of substitution in numerous formulas.
 Prerequisite: PHYS 150.

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.

FIRE SCIENCE

FIRE 300
Fire-Related Human Behavior (3,0)
 3 Credits

This course examines human aspects of the fire problem, including research and analysis of the problem and related issues in residential properties, wildland fires, assisted living/group home situations, commercial/industrial settings, and multiuse high-rise buildings.

FIRE 301
Community Risk Reduction for the Fire and Emergency Services
 3 Credits

This course examines concepts of community sociology, the role of fire-related organizations within the community, and their impact on the local fire problem, including fire service relationships within the community and other agencies, developing a community inventory, shaping community policy, master planning, and shaping community perceptions about the local fire service. Prerequisite: PHYS 102.

FIRE 302
Fire Dynamics
 3 Credits

This course examines fire dynamics within the context of firefighting and its applications to fire situations, including combustion, flame spread, flashover, and smoke movement, as well as applications to building codes, large-loss fires, and fire modeling.

FIRE 303
Fire Protection Structures and Systems Design
 3 Credits
 This course examines design

principles involved in structural fire protection and automatic suppression systems, including fire resistance and endurance, flame spread evaluation, smoke control, alarm systems, sprinkler innovations, evaluation of sprinkler system designs, and specialized suppression systems.

FIRE 304

Fire Investigation and Analysis

3 Credits

This course examines technical, investigative, legal, and managerial approaches to the arson problem, including principles of incendiary fire analysis and detection, environmental and psychological factors of arson, gang-related arson, legal considerations and trial preparations, managing the fire investigation unit, intervention and mitigation strategies, and shaping the future. Prerequisite: PHYS 102.

FIRE 305

Fire Prevention Organization and Management

3 Credits

This course examines the factors that shape fire risk and the tools for fire prevention, including risk reduction education, codes and standards, inspection and plans review, fire investigation, research, master planning, various types of influences, and strategies.

FIRE 400

Analytical Approaches to Public Fire Protection

3 Credits

This course examines tools and techniques of rational decision-making in fire departments, including databases, statistics, probability, decision analysis, utility modeling, resource allocation, cost-benefit

analysis, and linear programming. Prerequisite: PHYS 102.

FIRE 401

Applications of Fire Research

3 Credits

This course examines the rationale for conducting fire research, various fire protection research activities, and research applications, including fire test standards and codes, structural fire safety, automatic detection and suppression, life safety, and firefighter health and safety.

FIRE 402

Advanced Fire Administration

3 Credits

This course examines organizational and leadership tools for fire service administrators, including community approaches to administration, core skills, planning and implementation, leading change, and community risk management. Prerequisite: FIRE 305.

FIRE 403

Disaster Planning and Control

3 Credits

This course examines concepts and principles of community risk assessment, planning, and response to fires and natural disasters, including the Incident Command System (ICS), mutual aid and automatic response, training and preparedness, communications, civil disturbances, natural disasters, hazardous materials planning, mass casualty disasters, earthquake preparedness, and disaster recovery. Prerequisite: PHYS 102.

FIRE 404

Managerial Issues in Hazardous Materials

3 Credits

This course examines regulatory issues, hazard analysis, multi-agency contingency planning, response

personnel, multi-agency response resources, agency policies, procedures and implementation, public education and emergency information systems, health and safety, command post dynamics, strategic and tactical considerations, recovery and termination procedures, and program evaluation.

FIRE 405

Personnel Management for the Fire and Emergency Services

3 Credits

This course examines relationships and issues in personnel administration and human resource development within the context of fire-related organizations, including personnel management, organizational development, productivity, recruitment and selection, performance management systems, discipline, and collective bargaining.

FIRE 406

Political and Legal Foundations of Fire Protection

3 Credits

This course examines the legal, political, and social aspects of government's role in public safety, including the American legal system, fire department operations, employment and personnel issues, fire officials' roles and legislative and political influence.

FIRE 410

Terrorism: Roots and Responses

3 Credits

This course is designed to develop the student's broad understanding of issues related to domestic and international terrorism, to familiarize the student with key terms and incidents, and to prepare the student's ability to develop practical plans for

providing emergency services before, during, and after a terroristic incident.

**FIRE 480
Advanced Principles in Fire and
Emergency Services Safety and
Survival**

3 Credits

Directed by a faculty member in the student's area of specialization, the student will participate in a course focusing on a topic of current interest and engage the topics through readings, writing and moderated online discussion. Topics will vary by term but be selected by the department faculty to apply multiple bodies of knowledge. Prerequisites: FIRE 301, FIRE 305, FIRE 403, FIRE 405.

**FIRE 299, 399, 499
Current Topics in Fire Science**

1-3 Credits

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

Prerequisites: CONSENT OF INSTRUCTOR, APPROVAL OF DEPARTMENT AND PROGRAM CHAIRS, AND 12 HOURS OF FIRE COURSES.

GENERAL EDUCATION

**GNE D 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.

**GNE D 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.

**GNE D 103
Basic 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.

**GNE D 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

This is a course in selected political-economic issues of national and international importance. It includes extensive use of journals, magazines and newspapers to supplement lectures and discussions.

GOVT 340
U.S. Foreign Policy (3,0)

3 Credits

A survey of the evolution of present American foreign policy, stressing 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 and implementation. Emphasis is on the period since World War II.

GOVT 363
Inter-American Relations (3,0)

3 Credits

This course explores the development of U.S. political and economic relations with Latin America from their beginnings in the 19th century to 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
Globalization and World Politics (3,0)

3 Credits

This course is a study of the contemporary debate on globalization and new world order. Key topics include but are not limited to problems of definition in globalization; transborder issues and the role of the state; multinational corporations; labor and the terms of international trade; issues of environmental degradation; international organizations and nongovernment organizations in global affairs; terrorism, global crime, and international security human rights, democracy and cultural nationalism; technology and global communication.

HIST 110
World History (3,0)

3 Credits

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

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

3 Credits

A survey of the history of America in the 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 traces the evolution of the Western Humanistic tradition from antiquity to the middle ages using examples from art, architecture, music, philosophy and literature with an emphasis on 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 Postmodernism

using examples from art, architecture, music, philosophy, literature and film with an emphasis on writing, reading and appreciation skills.

HUMN 142
Studies in Literature (3,0)

3 Credits

This course emphasizes writing, reading and appreciation skills, reading materials include selected novels, poems and plays.

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

This course provides a study of the major works and literary trends in world literature. Course content varies by instructor and is listed in the Schedule of Courses.

HUMN 310
American Literature (3,0)

3 Credits

This course is 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 film and explores the history of

the cinema. Topics may 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 multi-culturally 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 so as 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.

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 Placement Examinations section of the Worldwide Catalog.

MATH 106
Basic Algebra and Trigonometry (3,0)

3 Credits

The course includes a 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. Prerequisite: Qualifying score on the ERAU Mathematics Placement Examination or GNED 103.

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

3 Credits

This is a pre-calculus course designed for the student aviation. Topics include a review of the fundamentals of algebra; linear equations and inequalities, quadratic equations;

variation; polynomial, rational, exponential, logarithmic and trigonometric functions; radian measures; right triangle solutions, vectors and the laws of sines and cosines. Prerequisite: Qualifying score on the ERAU Mathematics Placement Examination or MATH 106.

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

3 Credits

This course presents basic calculus, designed for the student of aviation. Topics include differentiation and integration of algebraic functions; 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 and quadratic equations, inequalities, functions, graphing techniques, and complex numbers. It includes an introduction to function, curve sketching, elementary theory of equations, sequences and series, matrix algebra and systems of equations, linear, polynomial, logarithmic, exponential, inverse and composite functions, variation, and systems of equations. Prerequisite: Qualifying score on the ERAU Mathematics Placement Examination 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; solving elementary trigonometric equations, right and oblique triangles, law of sines and cosines; inverse trigonometric functions; vectors and trigonometric form of a complex number. Prerequisite: MATH 140.

MATH 211
Statistics with Aviation
Applications (3,0)

3 Credits

This course is a study of basic descriptive and inferential statistics. Topics include types of data, sampling techniques, measures of central tendency and dispersion, elementary probability, discrete and continuous probability distributions, sampling distributions, hypothesis testing, confidence intervals, and simple linear regression. Prerequisites: MATH 111 or MATH 140.

MATH 222
Business Statistics (3,0)

3 Credits

This course is a study of basic descriptive and inferential statistics. Topics include types of data, sampling techniques, measures of central tendency and dispersion, elementary probability, discrete and continuous probability distributions, sampling distributions, hypothesis testing, confidence intervals, and simple linear regression. Prerequisite: MATH 111 or MATH 140.

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

3 Credits

Introduction to 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

This course is a study of mathematical

concepts and applications in mathematical model building and problem solving. Included are mathematical areas which are basic to decision theory. Prerequisite: MATH 211 or MATH 222.

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

4 Credits

This course is a study of the treatment of ordinary differential equations to include principle types of first and second order equations; methods of substitution on simple higher order 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.

**MATH 412
Probability and Statistics (3,0)**

3 Credits

Finite sample spaces; conditional probability and Bayes' Theorem; discrete and continuous random variables and their functions; expected value, variance and standard deviation; systematic study of the major discrete and continuous distributions; moment generating functions; hypothesis testing and estimation. Prerequisite: MATH 252.

MANAGEMENT

**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 203
Management for Aeronautical
Science (3,0)**

3 Credits

An introductory course in aeronautics to provide students an orientation in aviation and other aerospace related topics appropriate to management degree programs. Subjects include: aviation careers; the science of flight; aviation safety managerial responsibilities; passenger and cargo security issues; safety and human factors issues; aircraft airworthiness certifications; aviation resources; the aviation environment; and meteorology.

**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 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 386
Fundamentals of Information
Systems Security (0,3)**

3 Credits

This course focuses on new risks, threats, and vulnerabilities in a digital world. The integration of the Internet and broadband communications into our everyday lives has created a need for information system security. Furthermore, compliance laws require organizations to protect and secure privacy data and reduce liability.

**MGMT 387
Managing Risk in Information
Systems (0,3)**

3 Credits

Managing Risk in Information Systems provides a unique, in-depth look at how to manage and reduce IT associated risks. This course provides a comprehensive explanation of the

Risk, Response, and Recovery Domain in addition to providing a thorough overview of risk management and its implications on IT infrastructures and compliance.

**MGMT 388
System Forensics, Investigation,
and Response (0,3)**

3 Credits

Computer crimes call for forensics specialists, people who know how to find and follow the evidence. System Forensics, Investigation, and Response begin by examining the fundamentals of system forensics; such as what forensics is, the role of computer forensics specialists, computer forensic evidence, and application of forensic analysis skills. It also gives an overview of computer crimes, forensic methods, and laboratories. It then addresses the tools, techniques, and methods used to perform computer forensics and investigation. Finally, it explores emerging technologies as well as future directions of this interesting and cutting-edge field.

**MGMT 389
Information Assurance and
Information Quality (0,3)**

3 Credits

This course provides an overarching model for information assurance for businesses, government agencies, and other enterprises needing to establish a comprehensive plan. All the components of security and how they relate are featured. Topics include asset identification, human factors, compliance with regulations, personnel security, risk assessment and ethical considerations, as well as computer and network security tools and methods.

**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 391
Introduction to Project
Management (3,0)**

3 Credits

This course is designed to provide a general yet concise introduction to Project Management. The course offers up-to-date information (based on the PMBOK Guide) on how good project, program, and portfolio management can help achieve organizational success. Learners are introduced to a chronological approach to project management, with detailed explanations and examples for initiating, planning, executing, monitoring and controlling, and closing projects.

**MGMT 392
Database Management (3,0)**

3 Credits

Database systems are powerful, complex facilities for managing data. The advent of database management systems for personal computers in the 1980s moved database management into the hands of everyday users from all segments of the population. This course presents the fundamental concepts of database management. It covers key topics related to any database management system, including database models, database design

and implementation, database management systems functions, and database management approaches.

MGMT 393
Computer Networks (3,0)

3 Credits

Computer networks is a rapidly evolving field. This course presents an introduction to fundamental concepts in the design and implementation of computer communication networks, their protocols, and applications. Topics to be covered include: network architecture, fundamentals of data transmission, LAN technology and data link protocols, and network security.

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 395
Programming Concepts(3,0)

3 Credits

This course presents a language-independent introduction to programming concepts in design and

implementation. Topics covered include data types, control structures, arrays, files, functions, top-down modules design, and data validation. The course discusses the design issues of the various languages construct, examining the design choices for these constructs in some of the most common programming languages, and critically comparing design alternatives

MGMT 401
Security Policies and Implementation Issues (0,3)

3 Credits

This course offers a comprehensive, end-to-end view of information security policies and frameworks from the raw organizational mechanics of building to the psychology of implementation. It presents an effective balance between technical knowledge and soft skills, and introduces many different concepts of information security in clear simple terms such as governance, regulator mandates, business drivers, legal considerations, and much more.

MGMT 402
Legal Issues in Information Security (0,3)

3 Credits

This course addresses the area where law and information security concerns intersect. Information systems security and legal compliance are now required to protect critical governmental and corporate infrastructure, intellectual property created by individuals and organizations alike, and information that individuals believe should be protected from unreasonable intrusion. Organizations must build numerous information security and

privacy responses into their daily operations to protect the business itself, fully meet legal requirements, and to meet the expectations of employees and customers.

MGMT 403
Auditing IT Infrastructures for Compliance (0,3)

3 Credits

This course discusses how to audit an IT infrastructure for compliance based on the laws and the need to protect and secure business and consumer privacy data. Information systems and IT infrastructures are no longer exempt from governance and compliance given recent U.S.-based compliancy laws. As a result of these laws, both public sector and private sector verticals must have proper security controls in place. This course identifies and explains what each of these compliancy laws requires.

MGMT 404
Business Continuity & Disaster Recovery Planning (0,3)

3 Credits

This course addresses the operational and day-to-day security management requirements of business stability and disaster recovery planning. Every year, nearly one in five businesses suffers a major disruption to its data or voice networks or communications systems. The advent of the Internet has even made it more important for companies to implement a plan for disaster recovery.

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 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 461
Global Project Management (3,0)**

3 Credits

This course is designed to assist learners gain an understanding of the increasingly challenging task of working within global corporations and with distant and diverse work teams. The course describes how project managers can help organization and your projects adapt to thrive in this Global Project Management environment. The learner is introduced to collaborative tools, best practices on cross-cultural team management and global communication, and recommended organizational changes and project structures for the global environment.

**MGMT 462
Project Management Concepts (3,0)**

3 Credits

This course is designed to assist learners gain an understanding of a wide range of topics that relate to project management. Knowledge of these topics is essential to successful project management. Some of these topics include human factors, technical factors, and organizational factors.

**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

Survey course in elementary physics. Stress will be placed on basic concepts, principles and history of the development of physics. Presentation will include selected topics in mechanics, heat, light, sound, electricity and magnetism, and modern physics. (Cannot be used for credit in physics toward degrees in Aerospace or Electrical Engineering, Space Physics, Aircraft Engineering Technology, Aeronautical Science, or Avionics Technology.). Prerequisite(s): MATH 106, MATH 111 or MATH 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 course explores vectors and scalar quantities, kinematics, Newton's Law of Motion, work, work-energy, conversion of energy, conversion of

momentum, center of mass and its motion, torque, equilibrium and orbital motion. Prerequisite: Calculus or MATH 112.

PHYS 160

Physics II for Engineers (3,0)

3 Credits

This is a calculus-based study of the fundamental principles of classical mechanics and topics include, rotational motion, simple harmonic motion, waves, fluid, heat, kinetic energy, and thermodynamics.

Prerequisite: PHYS 150 Corequisite: MATH 252.

PHYS 250

Physics III for Engineers (3,0)

3 Credits

This course is a calculus-based study of the fundamental principles of classical mechanics. It is the third 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. Topics of discussion include; electric forces, electric field, Gauss's law, Ohm's law Ampere's law, Faraday's law, Lenz's law, Kirchhoff's law and Maxwell's equations; electric potential and electrostatic potential energy; capacitance; simple DC circuit theory; magnetic force, magnetic field; inductance; electromagnetic oscillations and wave propagation; Linear accelerators, cyclotrons. Prerequisite: 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

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. Students will 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 will introduce the student to the field of psychology, and is a survey of the bio-psychosocial continuum and the intra-psychic, 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, motivation, emotion, 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

A study of 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

This course is intended to provide students with an introduction to the interactional forces between groups and

the individual in society. Topics include the following: introduction to social psychology, group influence, the self in a social world, prejudice-disliking others, social beliefs and judgments, attraction and intimacy, genes, culture and gender, altruism-helping others, conformity, and persuasion.

PSYC 400 **Introduction to Cognitive Science (3,0)** 3 Credits

This course is 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?

RESEARCH

RSCH 202 **Introduction to Research Methods (3,0)** 3 Credits

This course is a general introduction to research intended to equip first and second year undergraduate students with the skills needed in their studies. Topics covered include the purposes of research, defining research and research problems, defining a hypothesis, problem solving and knowledge discovery, methods of

quantitative and qualitative research, conducting literature reviews, designing appropriate methodologies, evaluating outcomes, analysis and communicating the results. Prerequisite(s): ENGL 123 or ENGL 221 and MATH 211 or MATH 222.

SECURITY SCIENCE

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

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 Collection and Analysis (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

This course examines 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 material activities.

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

This course examines the influence that design, manufacturing, metallurgy, and maintenance have on aircraft accidents. A detailed analysis of the failure process will be conducted. Additional topics of discussion 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

This course is a study of the principles of the development and management of an effective safety program. 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 safety manager.

SFTY 350
Aircraft Crash and Emergency
Management (3,0)

3 Credits

Theory, practices and techniques utilized 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

This course focuses on the evaluation of principles associated with industrial hygiene. Topics include recognition, evaluation and control of hazards related to noise, vibration, ionizing and non-ionizing 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 for reducing or eliminating health hazards in the workplace. 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. Primary emphasis will be on transportation related fire hazards and the regulatory requirements associated with air, rail, marine, and highway modes of transportation. (Cannot be used for credit toward degrees in Fire Science.) Prerequisites: PHYS 102, SFTY 311.

SFTY 375
Propulsion Plant Investigation (3,0)

3 Credits

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. On site field investigation as well as engine teardown/disassembly procedures are presented.

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.

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

3 Credits

This course addresses the application of scientific and engineering principles as well as 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

This course provides an in-depth analysis of the accident environment,

with particular emphasis on the protection of the occupants. 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. Prerequisites: MATH 106.

SFTY 440
System Safety Management (3,0)

3 Credits

This course reviews the development and implementation of the system safety discipline in technical industries, including aviation. "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, including the scope and level of their authority.

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 air age 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

This course is a survey of selected theories of human nature and functioning from the beginnings of modern Psychology to present developments, including psychodynamic, cognitive, behavioral, biological, humanistic and other types. Various concepts of personality and the associated methodologies for gathering validating knowledge are explored. Theories are applied to normal issues in personal, professional and relational life, and theory-related skills are taught for self-awareness, problem-solving, habit change, and emotional and interpersonal competence.

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, with an

emphasis 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.

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 modal 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 dirigibles 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.

US MILITARY SCIENCE

USMS 101
Basic Military Science I (1,0)
 1 Credit

A study of the defense establishment and the organization and development of the U.S. Army. A study of the roles that active Army forces, Army Reserve forces, and the Army National Guard play in our nation's defense. A study of military courtesy, customs, and traditions of the service. A historical perspective of the role of the different branches of the U.S. Army and the role they have played in the freedom of our nation. An introduction to physical readiness training. Course includes lectures and laboratory. Field training exercises normally include

M16- A1 rifle firing, rappelling training, and airmobile helicopter operations. Corequisite: USMS 101L.

USMS 101L
Basic Military Science Laboratory
(0,3)

0 Credit

Training on basic soldier tasks and skills, such as land navigation, basic rifle marksmanship and movement as a member of a fire team and rifle squad. Practical application of field craft and soldier skills in a tactical environment.

USMS 102
Basic Military Science II (1,0)

1 Credit

Continued emphasis on physical readiness training. Course includes lecture and laboratory. Field training exercises normally include M16-A1 rifle firing, rappelling training, and airmobile helicopter operations. Corequisite: USMS 102L.

USMS 102L
Basic Military Science II Laboratory
(0,3)

0 Credit

Leadership laboratory with emphasis on military leadership and small unit tactics. Students develop leadership abilities through hands-on practical experiences. Training continues the leader development process while remaining introductory in scope and develops basic operations and tactics and land navigation skills acquired in USMS 101 Laboratory. Practical training exercises continue cadet field orientation with the focus on individual training. Special topics, including stream-crossing techniques, field survival skills, and bivouac techniques, are covered. The Army Physical Fitness Test (APFT) is administered to assess the state of physical development.

USMS 201**Basic Military Leadership I (2,0)**

2 Credits

A review of the customs and traditions of the service. The fundamentals of leadership development and the importance of understanding the principles that are important to effective leadership. This includes focus on goal setting, communication, problem solving, decision making, and group process. The course requires mandatory physical training and includes lecture and laboratory. Corequisite: USMS 201L.

USMS 201L**Basic Military Leadership I Laboratory (0,3)**

0 Credit

Builds on the topics covered in 101L and 102L. Further in-depth training on basic soldier tasks and skills, such as land navigation, basic rifle marksmanship and movement as a member of a fire team and rifle squad. Practical application of field craft and soldier skills in a tactical environment.

USMS 202**Basic Military Leadership II (2,0)**

2 Credits

The fundamentals of military geography and their application in the use of navigational aids for the military forces. A study of preventive medicine countermeasures and first-aid techniques that every leader must know. The course requires mandatory physical training and includes both lecture and leadership laboratory. Two weekend training exercises normally include M16-A1 rifle firing, rappelling training, and airmobile helicopter operations. Corequisite: USMS 202L.

USMS 202L**Basic Military Leadership II Laboratory (0,3)**

0 Credit

This is a continuation course building on the experience and tactics of USMS 201L.

USMS 301**Adaptive Tactical Leadership (3,0)**

3 Credits

Cadets are challenged to study, practice, and evaluate adaptive leadership skills as they are presented with challenging scenarios related to squad tactical operations. Cadets receive systematic and specific feedback on their leadership attributes and actions.

Prerequisite: Complete basic military science (or given constructive credit) and be a contracted Army ROTC cadet. Corequisite: USMS 301L

USMS 301L**Adaptive Tactical Leadership Laboratory (0,3)**

0 Credit

Planning, coordination, execution and evaluation of training and activities with basic course students and ROTC program. Students develop and refine leadership skills in position of responsibility.

USMS 302**Adaptive Tactical Leadership II (3,0)**

3 Credits

Cadets receive increasingly intense situational leadership challenges to build awareness and skills in leading tactical operations. Cadets review aspects of combat, stability, and support operations in preparation for the Leadership Development and Assessment Course.

Prerequisite: USMS 301.

Corequisite: USMS 302L.

USMS 302L**Adaptive Tactical Leadership II Laboratory (0,3)**

0 Credit

Practice and refinement of leadership skills. Different roles assigned for students at different levels in the program. Planning, coordination, execution and evaluation of training and activities with basic course students and ROTC program.

USMS 401**Developing Adaptive Leaders (3,0)**

3 Credits

A course to develop proficiency in planning, executing, and assessing complex operations, functioning as a member of a staff, and providing performance feedback to subordinates. Cadets assess risk, make ethical decisions, and lead fellow cadets.

Prerequisites: USMS 301, USMS301L, USMS 302, USMS L. Corequisite: USMS 401L

USMS 401L**Developing Adaptive Leaders Laboratory (0,3)**

0 Credit

Different roles assigned for students at different levels in the program. Practice and refinement of leadership skills. Planning coordination, execution and evaluation of training and activities with basic course students and ROTC program.

USMS 402**Leadership in a Complex World (3,0)**

3 Credits

A course in exploring the dynamics of leading in the complex situations of current military operations, examining customs and courtesies, military law, principles of war, and rules of engagement in the face of

international terrorism.
 Prerequisite: USMS 401 and USMS 401L. Corequisite: USMS 402L.

USMS 402L
Leadership in a Complex World Laboratory (0,3)

0 Credit
 Different roles assigned for students at different levels in the program. Practice and refinement of leadership skills. Planning, coordination, execution and evaluation of training and activities with basic course students and ROTC program.

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.

"The good thing was, everywhere I went, Embry-Riddle had a satellite campus, which was wonderful."

Jennifer Newsome – New Market, AL
Bachelor of Science in Professional Aeronautics



Assistant Product Manager, United States Army Program Executive Office for Aviation (PEO Aviation)
Soldier
Watch Collector
Beach Walker

DEGREES
 Master of Aeronautical Science

LEARNING MODES
 Classroom: Hunter Army Airfield, GA; Fort Campbell, KY; Huntsville, AL

DREAMS OF
 Becoming a Program Executive for Army Aviation (General Officer Level)

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-

olving 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, implementing 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 623
Aircraft Design and Development
 3 Credits

This course is an overview of aircraft design and development. Included are vehicle mission, the requirements directed by economics, commercial operator requirements and requests, military and defense considerations, and research and developmental processes needed to meet vehicle requirements. Aviation and aerospace manufacturing organizations and techniques are addressed to include 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 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 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 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: MGMT 524.

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 course 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: MGMT 524.

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 MGMT 524.

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 691
Logistics and Supply Chain Management Capstone

3 Credits

This course is designed to provide students with the opportunity to apply and demonstrate knowledge gained throughout the program. This will be accomplished utilizing a logistics and supply chain management portfolio. Demonstration of understanding of the full spectrum of logistics and supply chain management will include the following topics: sourcing, procurement, contracting, warehousing, inventory management, transportation, integrated logistics and supply chain management, logistics and supply chain security, global logistics and supply chain management, and ethics.

Prerequisites: This course is a part is part of an integrated program. Each course builds on knowledge and skills developed in previous courses. These courses are not stand-alone courses and the degree is not just an assemblage of independent courses. Prerequisites must be enforced. The students must have completed all the required core courses in the MSLSCM program prior to attempting this course.

BUSINESS ADMINISTRATION

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 Course MGMT 503 C 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 Course

MGMT 503 E 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 Course MGMT 503F 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 Course MGMT 503A 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: None

MBAA 522
Business Research Methods

3 Credits

Students are introduced to the art and science of solving 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 Course MGMT 503D 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 Course MGMT 503 B or permission of the Graduate Program Chair.

MBAA 604
International Business Administration

3 Credits

This course addresses international business through the examination of major issues challenging those managers operating in the international business environment. Ways to enter foreign markets and the forces work for and against that entry are examined. Financial issues, to include foreign currency exchange, hedging techniques, and the International Monetary Fund are examined. Structuring organizations within the economy are analyzed. Human resources issues are also examined, to include culture, the labor force, communications, effective teamwork, and ethics. Strategic planning is reviewed in terms of the various components that contribute to the successful conduct international

business. Trade theory, tariffs, the theory of absolute and comparative advantage, and trade barriers, are also discussed and examined in terms of global operations. Prerequisites: Satisfactory completion of the Business Foundation Course MGMT 503 A 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 Course MGMT 503A or permission of the Graduate Program Chair.

MBAA 635
Business Capstone Course

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 research and analysis in the field of Strategic Management. Applications of the concepts are applied to the domestic and international activities of airlines, airports, manufacturing, service, merchandising and

government organizations to sustain a competitive advantage. Prerequisite: None, but the completion of all MBAA core courses is recommended.

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: 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 bases analytical methodologies, interpreting quantitative results, and communicating conclusions. Prerequisites: Satisfactory completion of Business Foundation Course MGMT 503D or permission of the Graduate Program Chair.

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. Prerequisites: Satisfactory completion of Business Foundation Course MGMT 503A and MGMT 503D or permission of the Graduate Program Chair.

MGMT 533
Federal 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. 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.

Prerequisites: Satisfactory completion of Business Foundation Course MGMT 503A or permission of the Graduate Program Chair.

MGMT 535
Theory and Application of Managerial Communications

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 preparing technical reports and use of APA Style manual.

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 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

This course examines Production Operations from a systems perspective, and demonstrates how dynamic interchanges between the constituent parts of the system affect the operations and maximize efficiency and effectiveness. This course relates to the management of product and process design, operations, and supply chains. Areas of emphasis are quality management, scheduling, inventory management, purchasing, material management, JIT and manufacturing strategy. 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. Prerequisites: Satisfactory completion of Business Foundation Course MGMT 503D or permission of the Graduate Program Chair.

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. Prerequisites: Satisfactory completion of Business Foundation Course MGMT 503D or permission of the Graduate Program Chair.

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. Prerequisites: Satisfactory completion of Business Foundation Course MGMT 503A or permission of the Graduate Program Chair.

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.

Prerequisites: Satisfactory completion of Business Foundation Course MGMT 503A or permission of the Graduate Program Chair.

MGMT 673
Global Economic Analysis

3 Credits

Managers in any industry, and particularly those employed by aerospace firms conducting business worldwide, can benefit from a foundation in applied international economics. This course builds three economic models for markets in real goods and services, credit, and foreign exchange. These qualitative models are then integrated into a single analytical framework that students use to understand the effects of government economic policy initiatives and external shocks on an economy. This analysis provides the basis for recommending actions a firm can use to benefit from or mitigate the adverse effect of evolving global economic forces. No previous economic background is required, but students should welcome an analytic approach to problem solving.

Prerequisites: Satisfactory completion of Business Foundation Course MGMT 503B or permission of the Graduate Program Chair.

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.

LEADERSHIP

MSLD 500
Leadership Foundations in Research

3 Credits

Students are introduced to the art and science of solving 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. Students are also introduced to the requirements for the Graduate Capstone Portfolio.

MSLD 510
Aviation and Aerospace Leadership

3 Credits

This course is designed for students to explore leadership in aviation and/or aerospace organizations. The course provides students with knowledge and a review of organizational leadership theory and research. It also examines the effects of internal and external

organizational factors on aviation and/or aerospace leadership outcomes. Topics covered are the approaches and models of leadership, to include the nature of leadership, effective leadership behavior, strategic leadership by executives, leadership and organization change, group and team leadership strategies, and the associated ethical, gender based, cross-cultural and diversity oriented aspects of leadership.

MSLD 511
Organizational Leadership

3 Credits

This course is designed for students to explore leadership in organizations. The course provides students with knowledge and a review of organizational leadership theory and research. It also examines the effects of internal and external organizational factors on leadership outcomes. Topics covered are the approaches and models of leadership, to include the nature of leadership, effective leadership behavior, strategic leadership by executives, leadership and organization change, group and team leadership strategies, and the associated ethical, gender based, cross-cultural and diversity oriented aspects of leadership.

MSLD 520
Management Skills for Leaders

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.

MSLD 521
Leadership Communication

3 Credits

This course is designed to explore the role of communication in leading 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 leaders 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.

MSLD 630
Organizational Change and Development

3 Credits

In a constantly changing environment, leaders will need to become change architects for their organizations. This course focuses on leadership elements necessary to introduce planned change through an understanding of theories and concepts related to organizational intervention. The student will develop the skills necessary to anticipate the need for change; champion change agendas; diagnose organizational issues; develop change action plans,

strategies, and techniques; and assess, monitor, and stabilize changed organizations.

MSLD 631
Leading High Performance Teams

3 Credits

High Performance Teams are an essential component of successful 21st Century organizations. This course focuses on the development, implementation, and leadership of High Performance Teams in the global environment. Throughout the course, the student will develop methods and models for assessing current organizational climate, resolving interpersonal issues, and developing strategies for planned organizational change through the use of high performance systems. Prerequisite: MSLD 630

MSLD 632
Decision Making for Leaders

3 Credits

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. Decision-making techniques will be explored in the context of successful leadership styles. Students learn frameworks for approaching decisions and for representing real-world problems using models that can be analyzed to gain insight and understanding.

MSLD 633
Strategic Leadership

3 Credits

In constantly changing environments, leaders routinely create and revise strategies. This course explores the role of leaders in developing unity,

focus, credibility, and direction within organizations. Students will be exposed to several strategic frameworks and develop an understanding of which models might be useful in certain situations. Students also learn how to scan the environment; develop and deploy coalitions; identify critical success factors and barriers to implementation, and create viable actions plans.

MSLD 634
Leadership Ethics and Corporate Social Responsibility

3 Credits

Several high visibility failures in contemporary leadership have highlighted the need for higher standards of ethical and moral conduct. In this course, students explore a variety of ethical models and case studies within the context of their own leadership philosophies and values. Students learn about the critical role of corporate social responsibility in shaping corporate strategies and behaviors. Students also explore the positive relationship between corporate social responsibility and enhanced organizational performance.

MSLD 690
Graduate Leadership Capstone

3 Credits

In the Graduate Leadership Capstone course, the student reviews and assimilates the materials and lessons from the Master of Leadership Program. The capstone course has the following outcomes:

- A reflective paper that develops significant themes, frameworks, and program outcomes within the context of the student's leadership learning.
- A leadership action plan to propel

and guide the student into future phases of personal mastery and growth as a leader.

- A leadership portfolio of significant program artifacts. The portfolio will demonstrate the student's mastery of program outcomes and provide significant documentation to provide current or prospective employers.
- Prerequisite: Completion of all Leadership Program Courses.

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 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 of 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.

RESEARCH

RSCH 665**Statistical Analysis**

3 Credits

The review, design, planning, analysis and statistical interpretation of data to support research studies and industrial applications. Students will build on statistical theory and learn advanced techniques that can be applied to problem solving, research analysis and numerical interpretation of data. 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.

RSCH 670**Research Methods**

3 Credits

This course is designed to equip

students with the theoretical techniques and skills to identify and apply for solving qualitative and quantitative 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 on qualitative data is covered to result in significance solutions and recommendations.

SAFETY SCIENCE

SFTY 510 Industrial Hygiene and Toxicology 3 Credits

This course addresses the technical concepts and application of industrial hygiene and toxicology as it pertains to preventing occupational illnesses. Topics include the recognition of occupational health hazards, hazard evaluation through screening and sampling, and the prevention and control of occupational health hazards in order to mitigate occupational illnesses. The course also prepares the student to select, interpret and apply federal and state occupational health and safety laws and regulations.

SFTY 530 Safety, Health and Environmental Legislation, Litigation & Compliance 3 Credits

This course is a survey of the complex regulatory and legal settings surrounding occupational safety, health and environmental management. Occupational safety,

health and environmental regulations, and how they affect industry, legal responsibility, and accountability; ethical considerations in and external to the organization; and the international environment and how it may affect projects are all examined.

SFTY 540 Disaster Preparedness and Emergency Response 3 Credits

This course is designed to increase the student's knowledge of disaster preparedness and emergency response procedures, safety and health hazards and controls, and enforcement issues. Topics include elements of an emergency response plan, training requirements, the incident command system, medical surveillance, and post-emergency recovery. Major elements involved in disasters and emergencies, systems use, and attention to essential human services are covered.

SFTY 570 Fire Safety Management 3 Credits

This course is designed to teach the essentials of fire protection in the context of safety, health and environmental management. The course will provide an introduction to fire behavior and combustion to include fire chemistry, fire dynamics and concepts related to the development and spread of fire. The course will also address fire prevention methods, fire detection systems and fire protection including control systems, fire suppression and extinguishment. Lastly, the development of fire safety programs will be addressed, along with emergency action plans and response.

SFTY 580 Environmental Protection for the Safety, Health and Environmental Manager 3 Credits

This course is designed to equip students with the knowledge, skills and techniques used by the safety, health and environmental manager to protect workers, the community and the environment from environmental hazards; to facilitate a strategic approach to environmental conservation and sustainable business practices; and, to comply with EPA, OSHA and state and local regulations. Prevention and mitigation of environmental problems will be paramount in the course, but management techniques and programs focused on containment and clean-up of spills and releases will also be addressed.

SFTY 590 Hazard Control Methods in Occupational Safety and Health 3 Credits

This course focuses on the application of scientific, engineering and technical principles and methods used to identify, evaluate and control workplace safety and health hazards. Hazard elimination and engineering controls are emphasized in the course. General industry topics, such as the following, are addressed: job safety analysis; inspections and audits; facility design, layout and maintenance; machine safeguarding; walking and working surfaces; materials handling; production operations; and, occupational health hazards and controls.

SFTY 600
Occupational Safety and Health Management

3 Credits

This course provides a broad overview of occupational safety. It begins with an exploration of the history of the subject, moves through the OSH Act, workers' compensation, safety program development and management, and finally addresses hazards and controls. The application of safety and health management principles to the management of complex technical industries is covered.

SFTY 619
Human Factors and Ergonomics

3 Credits

This course emphasizes the role of human factors in workplace and work task design with emphasis on complex technical industries. Topics include traditional material such as anthropometry, control/display design, visual and auditory acuity and their importance in work design, circadian rhythms and their implications for work design and shift work, psychomotor skills, and learning and memory. Also included are concepts of physiological aspects in ergonomics and the anthropometric principles in workspace and equipment design.

SFTY 630
System Safety Programs

3 Credits

This course emphasizes the specialized integration of systems engineering and sound management practices into all phases of a system's life cycle, to achieve acceptable risk, given the confines of operational effectiveness and fiscal responsibility. Hazard recognition, assessment and risk

mitigation strategies and resources are applied to systems from conception and design phases to operational and disposal phases, as a means to minimize legal risk and maximize safety and health.

SFTY 691
Graduate Capstone Course

3 Credits

The Master of Science in Occupational Safety Management Graduate Capstone Course is the culminating effort of the student's entire learning experience. The student will complete a project or comprehensive examination that provides significant evidence of experience in occupational safety management studies. Students will work with designated faculty to formulate, develop, and complete the occupational safety management project or examination. 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.

SYSTEM ENGINEERING

SYSE 500
Introduction to System Engineering

3 Credits

This course provides the student with a broad introduction to the fundamental principles, processes, and practices associated with the application of Systems Engineering across the system life cycle. The student will develop an understanding of the skills necessary to translate needs and priorities into

system requirements, and develop derived requirements, forming the starting point for engineering of complex systems. Key topics include methods and standards; concept definition; interface definition; requirements development and management; system baseline definition and management; system architecture development; integrated schedule management and analysis; risk assessment; systems integration, verification and validation; mathematical and graphical tools for system analysis and control, testing and evaluation of system and technology alternatives; reliability and maintainability; design trade-offs and trade off models. The course will cover the integrative nature of systems engineering and the breadth and depth of the knowledge that the systems engineer must acquire concerning the characteristics of the diverse components that constitute the total system.

SYSE 530
System Requirements Analysis and Modeling

3 Credits

This course is concerned with the development, definition, and management of requirements for system or product. Topics include the system requirements process, requirements elicitation techniques, alternative requirements analysis techniques, requirements specification, requirements verification and validation, requirements management, and requirements standards and tools. Issues such as stakeholder identification, risk analysis, trade off analysis as it relates to the requirements will be covered.

SYSE 560
Introduction to Systems Engineering Management
 3 Credits

This course addresses the fundamental principles of engineering management in the context of systems engineering and explores issues related to effective technical planning, scheduling and assessment of technical progress, and identifying the unique challenges of the technical aspects of complex systems and systems of systems and ability to control them. Topics will include techniques for life cycle costing, performance measurement, modern methods of effective engineering management, quality tools, quality management, configuration management, concurrent engineering, risk management, functional analysis, conceptual and detail design assessment, test evaluation, and systems engineering planning and organization, communication and SE management tools and techniques. The course covers an examination of processes and methods to identify, control, audit, and track the evolution of system characteristics throughout the system life cycle. The course includes the development of a Systems Engineering Management Plan, Integrated Master Schedule and/or Integrated Master Plan.

SYSE 610
System Architecture Design and Modeling
 3 Credits

This course is focused on concepts and techniques for architecting systems and the process of developing and evaluating architectures. The course includes generating a functional, physical and operational architecture from a top level operations concept for the allocation and derivation of component-level requirements. Variety

of modeling and analysis approaches will be discussed as well as the generation of analyzable architecture models for evaluating the behavior and performance of candidate system concepts. Additional topics include interface design; architecture frameworks; enterprise engineering; design for reliability, maintainability, usability, supportability, producibility, disposability, and life cycle costs; validation and verification of systems architecture; the analysis of complexity; methods of decomposition and re-integration; trade-offs between optimality and reusability; the effective application of COTS; and practical heuristics for developing good architectures. Specialized areas of design and architecture may be addressed, such as spacecraft design, design of net centric systems, or smart engineering systems architecture.

SYSE 625
System Quality Assurance
 3 Credits

This course presents the managerial and mathematical principles and techniques of planning, organizing, controlling and improving the quality, safety, reliability and supportability of a system throughout the system life cycle. The course focuses on the importance of structuring and controlling integration and test activities. Topics include establishing a baseline control during the integration and test phases; cognitive systems engineering and the human-systems integration in complex systems environments; establishment of criteria for planning tests; the determination of test methods; subsystem and system test requirements; formal methodologies for measuring test coverage; sufficiency for test completeness; and development

of formal test plans to demonstrate compliance. Also covered are methods of developing acceptance test procedures for evaluating supplier products. The quality related topics including fitness for use, quality costs, quality planning, statistical quality control, experimental design for quality improvement, concurrent engineering, continuous improvement and quality programs such as ISO 9001:2000, ISO 14001, CMMI, Malcolm Baldrige and TQM. Reliability related topics covered include reliability prediction using discrete and continuous distribution models. Supportability related topics include system supportability engineering methods, tools, and metrics and the development and optimization of specific elements of logistic support. Quality and safety is a key theme throughout the course.

SYSE 660
Organizational Systems Management
 3 Credits

This course introduces concepts of organizational management and leadership, which are approached from a systems and complex systems perspective to explain the behavior of systems. Focus areas will include strategic management, organizational transformation, and organizational environments. Models will be drawn from a variety of areas including marketing, finance, organizational behavior, and strategic and operational management.

SYSE 697
Systems Engineering Capstone Project
 3 Credits

This course consists of a project in systems engineering that the student

“Attending Embry-Riddle was the icing on the cake and EagleVision Home was my tool for success. I learned so much by having contact with other students around the globe. It’s impressive.”

Jacob Guarino
– Brunswick and Norfolk
Bachelor of Science in
Professional Aeronautics



U.S. Navy Reservist
Husband
Father
Former Military Brat

DEGREES
Bachelor of Science in
Professional Aeronautics

LEARNING MODES
Classroom: Brunswick and
Norfolk
EagleVision Home

DREAMS OF
Flying a C130

will undertake at the conclusion of the academic coursework for this program. It will culminate in a written document on a project chosen and carried out by the student under the guidance of the student’s Capstone Project Committee. The project will be expected to demonstrate the student’s mastery of his topic, and must be of a quality suitable for publication.

TECHNICAL MANAGEMENT

TMGT 555 **Applied Regression Analysis** 3 Credits

Students are challenged in the application of regression analysis – diagnosing practical problems, deciding upon the appropriate regression model and knowing which inferential technique will answer the practical question. Topics covered include Multiple Regression Models, Model Building, Variable Screening Methods, Regression Pitfalls, Residual Analysis and Special Topics in Regression. Prerequisites: Satisfactory completion of Business Foundation Course MGMT 503D or permission of the Graduate Program Chair.

TMGT 605 **Organizational Theory in a Technical Environment** 3 Credits

In this course the students review organizational theory and learn how the organizational design impacts organizational effectiveness and productivity. 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, organizational planning,

leadership versus management, conflict between functional management, matrix versus hierarchical organizations, organizational alternatives, and human response in the organization. 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, 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. Prerequisites: Satisfactory completion of Business Foundation Course MGMT 503A or permission of the Graduate Program Chair.

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 on-line databases, design and use of data-gathering instruments, formulation of a research model and plan, and appropriate statistical data analysis. The DBA 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: MGMT 524.

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

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 Online Campus.

Embry-Riddle Asia Students

Students participating in academic programs offered through Embry-Riddle Asia may be subject to variations in academic

program content or university regulations, as appropriate to individual locations. Please consult with the Director of Enrollment Management-Asia, for any specifics regarding ERAU Asia.

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 Online Campus.

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 Executive Director of Online Learning or the Registrar.

EAGLET ONLINE WRITING LAB

EAGLET (Electronic Access to Grammar, Language, and Essay Tutoring) is an online writing lab for Embry-Riddle students. It provides writing help, usually via short, 2-5 minute videos. It covers all aspects of the writing process, from brainstorming through organizing and drafting, to editing and proofreading. It also contains advice on avoiding common grammar and punctuation problems, tips and guidance on researching and documentation for APA style use. EAGLET is accessed via the Student Services tab in ERNIE.

SERVICEMEMBERS OPPORTUNITY COLLEGES (SOC)

As a long-term member of SOC, Embry-Riddle employs practices reflecting the criteria governing transfer credit, academic residency requirements, credit for prior learning from military training and experience, and credit for extra-institutional learning that SOC has established to guide member institutions.

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 Studies Network
 - Bachelor of Science in Aeronautics
 - Bachelor of Science in Aviation Maintenance
- Technical Management Network
 - Bachelor of Science in Technical Management
- Other Career Related Network
 - Bachelor of Science in Transportation (Army only, classroom-based instruction only)

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, from approved programs, completed at other schools in the same network to satisfy most curriculum requirements. Students are obligated to follow current 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. After initial matriculation, students may not earn more than a total of 18 semester credit hours, or that equivalent, at other institutions. It is required that the last 30 credits of a bachelor's degree, or the last 15 credits of an associate's degree, will be completed in residence with ERAU.

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. It is the student's responsibility 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. Undergraduate academic credit is generally 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.

Consideration for transfer credit is available only to degree seeking students. Certificate-only or non-degree seeking students are not eligible for transfer credit.

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. The number of credits accepted via exam (including CLEP, DANTEs, etc.) is limited by ERAU to 15 credit hours.
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.

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 non-degree graduate work or as part of another (completed or incomplete) Embry-Riddle graduate degree program. Only relevant coursework will be applied to an applicant's graduate degree program at Embry-Riddle. The content of the applicable course or other program will 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.

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. Specifics regarding transferring from a completed Embry-Riddle master's program to the MBAA program are detailed in the Graduate Academic Programs section of the catalog.

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. Exceptions to this policy are not permitted. 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.

Graduate students who believe their knowledge and prior learning experience qualify them for credit for a specific Embry-Riddle graduate course may submit the Petition for Award of Validated Advanced Placement (VAP). To be eligible for an award of VAP credit, students must be admitted to an ERAU graduate 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 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.

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 Executive Director of Online Learning.

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 Executive Director of Online Learning. 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. All course attempts are recorded on the University transcript.

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 30 days 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 30 days 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, via ERAU email. Students who are enrolled at a full-time status and earn a GPA of 3.500-4.00 for a term and maintain a minimum 2.0 cumulative GPA, will be named to the Dean's List. Students who are enrolled at a full-time status and earn a GPA of 3.200-3.499 for a term and maintain a minimum 2.0 cumulative GPA, will be named to the Honor Roll.

ACADEMIC WARNING, PROBATION, UNDERGRADUATE SUSPENSION AND GRADUATE DISMISSAL

Undergraduate

Warning: A Worldwide Campus student whose cumulative GPA falls between 1.00 - <2.00 for a term will be placed on academic warning.

Probation: If the cumulative GPA remains between 1.00 - <2.00 after an additional term, 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 term will be suspended from the University. Any student whose term or cumulative GPA falls below 1.00 may be suspended from the University. A student on conditional admission status who fails to satisfy the conditions of his/her admission may be suspended.

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 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 term of graduate work.

Dismissal: Students may 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 term of graduate work.
5. Student earns less than a 2.500 CGPA.
6. Student whose term GPA falls below 1.00.

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 permitted 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. Reuse or resubmission of a student’s own coursework, if previously used or submitted in another course, is considered self-plagiarism, and is also not allowed under University policy.
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, or for online students, Online Advising, to determine how they will be affected.

TRANSFER BETWEEN GRADUATE DEGREE PROGRAMS

Only relevant coursework will be applied to an applicant’s graduate degree program at Embry-Riddle. The content of the applicable course or other program will 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.

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. Specifics regarding transferring from a completed Embry-Riddle master's program to the MBAA program are detailed in the Graduate Academic Programs section of the catalog.

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.

Students may not simultaneously pursue degrees of different levels (ex. bachelor's and master's) at the university.

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. Specifics regarding transferring from a completed Embry-Riddle master's program to the MBAA program are detailed in the Graduate Academic Programs section of the catalog.

MATRICULATION

Matriculation is the process by which an applicant becomes an Embry-Riddle student. This 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 within that year, he/she will need to reapply for admission. Students are eligible for an Embry-Riddle transcript showing credit awarded from other sources toward their degree, after they have matriculated.

CONTINUOUS 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.

Students remain in continuing 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 academic provisions of 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. Revisions to university policies, rules and regulations are in immediate effect for all students with the publication of each new catalog and/or addendum.

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 (FERPA)

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, verified by University personnel or a notary. 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. Students may grant online access to select individuals via the student information system.

Directory information consists of: student name; permanent or local mailing addresses and telephone numbers*; ERAU e-mail or box address; non-ERAU email addresses or account information*; date of birth*; major courses of study and areas of specialization; dates admitted, attended, and graduated; enrollment and class status; campus, school or college attended; degrees sought or earned and dates received or anticipated; awards, honors, and special programs or recognitions; most recent previous school attended; for student athletes and scholarship recipients the ERAU ID and photograph; information from public sources.

**Though directory information may be released without student consent, information of this nature is only released for compelling reasons.*

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 for requests including academic transcripts; 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 indicators below are used on grade reports and transcripts.

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

Graduate indicators below are used on grade reports and transcripts.

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

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. Students may grant online access to selected individuals if they desire via the student information system. Written 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 Executive Director of Online Learning, for online students. The Director of Academics will then follow the applicable University policy to render a final decision.

GRADUATION REQUIREMENTS

Graduate students are required to complete all graduate course work with ERAU with a maximum of 12 credit hours of transfer work permitted.

For undergraduate degree completion, at least 25 percent of semester credit hours must be earned through ERAU instruction.

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 student information system, and follow up by completing a Graduation Information Sheet in ERNIE. A qualified student will not be graduated by ERAU until a graduation application and information sheet have been received and processed by the University, and the graduation fee has been remitted.

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. Diplomas are not distributed at the graduation ceremony.

GRADUATION CEREMONY

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

Eligible students may also choose to attend the formal graduation ceremony held at the Prescott, AZ, 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.

The cost of regalia for any Worldwide student who attends a

Worldwide graduation ceremony in Daytona Beach, Prescott or at an individual campus is paid through the Worldwide Registrar's Office. The Worldwide student ceremony, held in Daytona Beach, is generally about a week prior to the Daytona Beach residential campus student ceremony. Please consult ERNIE for graduation ceremony schedules. Students who wish to participate in the Prescott student ceremony must notify the Worldwide Registrar's office of their intent via the graduation application and must work with the Prescott campus bookstore to obtain appropriate graduation regalia. Worldwide students are not permitted to participate in the Daytona Beach residential campus student ceremony.

Graduation ceremony deadline dates are:

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

CAREER SERVICES

Worldwide Career Services provides self-directed career resources 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, and links to valuable websites. In addition, exclusive resources, co-op/internship opportunities and current job listings can be found in our career management system, known as the EagleHire Network.

Industry/Career Expos are held in the fall at both the Daytona Beach, FL and Prescott, AZ campuses. More than 100 companies visit these campuses to recruit students for both full-time and cooperative education/internship positions, and to provide information on industry. Additionally, the Virtual Hiring Event is held every spring 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.

Worldwide Career Services provides a plethora of self-directed resources, along with resume critique assistance. Students are encouraged to begin utilizing these resources

early in their education to explore career options and develop a successful job search strategy.

For more information, visit the Career Services website at worldwide.erau.edu/career.

CLASSROOM FACILITIES

Classes are held at a variety of locations on military installations and at civilian sites. You should confirm where your class will be held when registering for the course. The class location should also be listed on your course syllabus.

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 military installations and at most civilian sites, the general rule is no eating, drinking, or tobacco use in the classroom. Please abide by rules posted in the classroom, conveyed by the instructor, or communicated by your local campus staff.

CLASSROOM SECURITY

Because classroom security conditions vary from location to location, students should be aware of their surroundings at all times. Please check with your local campus staff for any known security issues in the area. All security or safety issues and/or incidents should be reported immediately to your instructor or the campus location staff. Worldwide Emergency Preparedness Plans are posted on the Embry-Riddle Aeronautical University Risk Management website in ERNIE.

TEXTBOOK PURCHASE

Please consult your Director of Academic Support or Admissions and Student Affairs Office advisor for information on ordering textbooks. Online, EagleVision Home and certain classroom books may be purchased through the Worldwide bookstore online site.

Students may order new books or purchase and sell used books with other students through the Worldwide online bookstore site. Log into your ERNIE account to access the bookstore site located on the Student Services tab.

IDENTIFICATION CARDS

Student identification cards are available through the website at daytonabeach.erau.edu/campus-services/eaglecard/eaglecard.html. 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 New Student Orientation provides students with an abundance of information regarding the campus as well as immediate access to student support services. This orientation helps students understand 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. The New Student Orientation is available online for increased flexibility at worldwideorientation.erau.edu.

1. Facilitate in the transition of new students into the campus taking into consideration their status as First Year, Transfer or Graduate students.
2. Guide new students in a review of academic policies and procedures.

3. Inform students of our academic programs and five flexible learning modalities.
4. Increase student awareness about funding options.
5. Initiate new students into the intellectual and cultural climate of the campus.
6. Prepare newly admitted students for their first enrollment.

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) 822-6787 or by e-mail at 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 their advisor in the Online Campus. 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 Executive 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 Code of Conduct

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.
8. Any other just cause including behavior deemed unethical.

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 Code of Conduct. All disciplinary sanctions are noted in the student's non-academic student file and may be kept indefinitely, including those of suspended or dismissed students.

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: Membership in Alumni Chapters and Groups is a great way for alumni to stay connected to their alma mater and fellow alumni. Chapters and groups are led by alumni volunteers, and form the grass-roots level of support for Embry-Riddle by promoting the welfare and interests of the University and its alumni in local communities across the nation and around the globe. Chapters and groups gather for community and professional networking activities and social events, and mentor students and other alumni, all in the name of Embry-Riddle.

Alumni Benefits: All Embry-Riddle Alumni are eligible to receive a "Forever an Eagle" membership card. Card-carrying alumni enjoy exclusive benefits such as free parking on campus for up to 30 days; access to recreational facilities; and a 10 percent discount on selected

items in the Embry-Riddle Bookstore. Embry-Riddle Alumni can also benefit from several vendor relationships, which can be viewed online at www.eraualumni.org.

Homecoming: Alumni reconnect with friends and their alma mater each year at Homecoming and OctoberWest activities, held at the Daytona Beach and Prescott campuses. Highlights at both events include a golf tournament, dinner/social gathering, EagleNight Alumni Celebration, parade and athletic events. Every other year, the Daytona Beach Campus hosts Homecoming in conjunction with the Wings and Waves Air Show. Performances include a jet team, Embry-Riddle's aerobatic pilot Matt Chapman, the Embry-Riddle Jet Dragster, and civilian and military demonstrations. Alumni are encouraged to attend any and all Homecoming/OctoberWest activities, regardless of their campus affiliation.

Air Shows and Conferences: The Alumni Association, in partnership with the University, is involved in several national and international air shows and conferences throughout the year. Special alumni receptions are held at each event. Air shows in which the Alumni Association regularly participates include: Aircraft Owners and Pilots Association, EAA AirVenture at Oshkosh, Farnborough Air Show in England, Heli-Expo, National Business Aviation Association, Paris Air Show in France, Singapore Air Show, Sun n' Fun in Lakeland, Fla., Women in Aviation and the Dubai Air Show in United Arab Emirates. Alumni can RSVP to attend an alumni reception by visiting eaglesNEST www.eraualumni.org.

Support for Next Generation Eagles: Embry-Riddle Alumni are among the most loyal University contributors to student scholarships. Sons and daughters of Embry-Riddle graduates are eligible to receive a \$1,500 award, which can be renewed annually, when attending Embry-Riddle on a full-time basis. The scholarship can be applied for during the application process by checking "Parents attend ERAU." Current students can also benefit from a newly endowed fund, the Alumni Association Scholarship. In honor of Embry-Riddle's milestone achievement—reaching 100,000 Alumni in May 2011, alumni from all over the country and globe are contributing to this fund to assist current and future students with the costs associated with an Embry-Riddle

education. Alumni can join in this effort and support the next generation of Eagles by visiting www.alumnifidelity.com/ERAU100KStrong.

Career Opportunities: Embry-Riddle alumni have a host of career services available to them. These include resume assistance, networking and mentoring opportunities, access to online job search tools via CareerShift and the EagleHire Network, and an annual Industry/Career Expo. To learn more about the career services and resources, visit www.eraualumni.org/career.

Alumni Connections: The eaglesNEST www.eraualumni.org is the Embry-Riddle Alumni information and networking hub. Alumni can view photos and current and past alumni publications; read alumni and University news; review and register for upcoming events; and browse the official University archives—all via the eaglesNEST. The exclusive password-protected section of eaglesNEST allows alumni to create a personal profile, search for and network with former classmates and peers in their profession, and sign up for the alumni mentor program. The eagleNEWS electronic newsletter keeps alumni in the “Embry-Riddle Loop” on a monthly basis; “Lift,” the alumni magazine, which includes in-depth articles on alumni, the University and the aerospace industry, is published twice annually and posted on eaglesNEST at www.eraualumni.org/lift. Alumni can also follow the Alumni Association on Facebook, Twitter, YouTube and LinkedIn.

Student Alumni Association: The Student Alumni Association (SAA) is a student-run organization that operates within the Embry-Riddle Alumni Association. SAA fosters school spirit, tradition and pride throughout the University, and prepares students for future success. Student participants have the opportunity to network with alumni, attend exciting social/professional events, develop leadership skills and gain real-world experience. SAA members also serve as Ambassadors for the Embry-Riddle Alumni Association. Membership is open to all undergraduate and graduate Embry-Riddle students.

Mentor Program: The Alumni Mentor program is provided to all Embry-Riddle alumni who are registered members of eaglesNEST www.eraualumni.org, the Embry-Riddle Alumni website community. It is a free

service that benefits alumni who want to network with peers working in their current profession, local area or in a different career field. Mentors can also share their expertise with students interested in their profession.

Governance: The Alumni Association is guided by an Alumni Advisory Council whose mission is to create and sustain the vision that serves as the cornerstone for the Association in engaging, cultivating and serving Embry-Riddle graduates. Council members guide and support the Alumni Association staff; they volunteer to serve two-year terms.

Embry-Riddle Legacy: Alumni can browse the University Archives, the official repository for the historical records and artifacts for all three Embry-Riddle campuses and its predecessor bodies, by visiting the eaglesNEST www.eraualumni.org. The holdings document the history of Embry-Riddle from its origins to the present.

Recognizing Excellence: The Embry-Riddle Alumni Awards program recognizes alumni achievements and accomplishments in their careers, through their service to the University, or in the fields of aviation and aerospace. A formal awards ceremony is held annually at each residential campus’ homecoming celebration. Worldwide Campus Alumni Award recipients can attend the ceremony at Daytona Beach or at Prescott. Alumni can nominate a fellow Eagle for a number of awards. Visit the eaglesNEST www.eraualumni.org to view the various awards and to make a nomination.

Participation: The excellence of any educational institution depends heavily on the quality, interest and participation of its alumni. Embry-Riddle’s alumni serve as guest speakers and on advisory councils; act as media experts; promote and recruit prospective students to Embry-Riddle; and are active in many other activities. They provide role models for current students to emulate and continually build the outstanding reputation of the University through their accomplishments and association with their alma mater. The Alumni Association values the active participation and feedback of our alumni. To get involved, contact the Alumni Association at (800) 727-3728 or email: eralumni@erau.edu.

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/admissions/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
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 California, Georgia, Indiana, Kentucky, Nevada, North Dakota, Oregon, and Tennessee, 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).

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.

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

Students who are requesting to defer payment have the option of signing up for a Tuition Payment Plan. The plan offered requires a \$20 set-up fee and one-third of the term's tuition at

the time of enrollment. The next 1/3 payment will be automatically debited in 30 days from the pay method the student entered at the time of enrollment. The final 1/3 payment will be automatically debited 30 days later. The Payment Plan agreement can be accessed online by logging into ERNIE>STUDENT SERVICES>CAMPUS SOLUTIONS STUDENT CENTER. Once on the student home page scroll down to finances and select 'My Student Account'. Payment for the cost of books, course materials, and shipping fees may not be deferred. Students are encouraged to contact Worldwide Campus or Worldwide Admissions and Student Affairs, and Worldwide Student Accounting 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 admitted into 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.

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 the Online Campus and Worldwide international campus locations should contact the Worldwide Veterans Affairs Office in Daytona Beach, Florida.

Worldwide Veterans Affairs
Embry-Riddle Aeronautical University
600 S. Clyde Morris Blvd.
Daytona Beach, FL 32114-3900
Telephone: 1-855-785-0001
Email: wwva@erau.edu

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: BRINGING THE LIBRARY TO YOU

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 EAGLEsearch which allows researchers to search much of Hunt Library's collection simultaneously as well as the Library's online catalog, Voyager, and a multitude of online databases (which include many full-text resources).

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. Research Librarians are also available via telephone (800) 678-9428 or (386) 226-7656 or chat (8 a.m. - 5 p.m. Eastern) or by e-mailing us at library@erau.edu. Research Librarians will provide detailed advice on research strategies, referrals to relevant reference sources, assistance with literature searches, and help navigating the library's website. An overview of the Hunt Library's help features is available from library.erau.edu/worldwide/help.

HOW TO CONTACT THE HUNT LIBRARY

Phone: (800) 678-9428 or (386) 226-7656 (8 am-5 pm ET)
E-mail: library@erau.edu
Internet: library.erau.edu/worldwide

CONTACT/INFORMATION SOURCES

WORLDWIDE CAMPUS

GENERAL INFORMATION

Phone: (800) 522-6787
OR (800) 359-3728
E-mail: worldwide@erau.edu

WORLDWIDE ADMISSIONS AND STUDENT AFFAIRS OFFICE

600 S. Clyde Morris Blvd.
Daytona Beach, FL 32114-3900
Phone: (800) 522-6787
Fax: (386) 226-6984

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

MARKETING AND ENROLLMENT MANAGEMENT OFFICE

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

Admissions

(800) 522-6787 or (386) 226-6397
E-mail: wwadmissions@erau.edu

Worldwide Financial Aid

(866) 567-7202
E-mail: wwfinaid@erau.edu

Registrar

(866) 393-9046
E-mail: worldwide.registrar@erau.edu

Disability Support Services

(386) 226-4911
E-mail: wwdss@erau.edu

DEPARTMENT OF ONLINE LEARNING

Online Campus Advising

(800) 359-3728 or (386) 226-6397
E-mail: wwadvise@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
E-mail: worldwide.erau.edu/career

VETERANS AFFAIRS

Embry-Riddle Aeronautical University
600 S. Clyde Morris Blvd.
Daytona Beach, FL 32114-3900
Phone: (386) 226-6350

WORLDWIDE LOCATIONS

STATE	PHYSICAL LOCATION	LOCATION NAME	TELEPHONE
Alabama	Fort Rucker	Fort Rucker	(334) 598-6232
	Mobile	Mobile	(251) 441-6737
	Redstone Arsenal	Huntsville	(256) 876-9763
Alaska	Eielson AFB	Eielson AFB	(907) 377-2977
	Elmendorf AFB	Anchorage	(907) 753-9367
	Fort Richardson	Fort Richardson	(907) 333-1311
	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	Phoenix-Sky Harbor	(602) 275-5533
	Davis-Monthan AFB	Davis-Monthan	(520) 747-5540
	Tucson	Tucson	(520) 512-5785
Arkansas	Jacksonville	Little Rock	(501) 985-0511
California	Beale AFB	Beale	(530) 788-0900
	Camarillo	Channel Island	(805) 271-9691
	Camp Pendleton	Camp Pendleton	(760) 385-4423
	Coronado	North Island	(619) 435-6673
	Edwards AFB	High Desert-Edwards	(661) 258-1264
	El Segundo	Northrop Grumman El Segundo	(562) 627-5870
	Long Beach	Los Angeles	(562) 627-5870
	March ARB	Inland Empire	(951) 653-4074
	Mather	Mather	(916) 362-5253
	NAS Lemoore	Lemoore	(559) 998-6026
	Oakland	Oakland	(510) 636-2424
	Oceanside	Oceanside	(760) 385-4423
	Palmdale	High Desert-Palmdale	(661) 947-4025
	Point Mugu	Ventura	(805) 271-9691
	Redondo	Northrop Grumman Space Park	(562) 627-5870
	Ridgecrest	China Lake	(760) 939-4557
	Riverside	Riverside Municipal Airport	(951) 653-4074
	San Diego	San Diego	(858) 576-4375
	Travis AFB	Travis	(707) 437-5464
	Vandenberg AFB	Vandenberg	(805) 734-4076
Victorville	High Desert-Victorville	(760) 530-0875	
Colorado	Denver	Buckley	(719) 576-6858
	Fort Carson	Colorado Springs	(719) 576-6858
	Greeley	Aims Community College	(307) 634-9693
	Schriever AFB	Schriever	(719) 576-6858
	East Hartford	Hartford	(860) 565-0464
Connecticut	Clearwater	Coast Guard Air Station	(813) 828-3772
	Clearwater	EPI Center	(813) 828-3772
	Crestview	Crestview	(850) 306-1088
	Eglin AFB	Fort Walton Beach	(850) 678-3137

STATE	PHYSICAL LOCATION	LOCATION NAME	TELEPHONE
	Ft. Walton Beach/Crestview	Aviation Institute	(850) 833-3614 x626
	Ft. Walton Beach	Choctawatchee High School	(850) 678-3137
	Ft. Lauderdale	Ft. Lauderdale	(954) 497-3774
	Hurlburt Field	Hurlburt Field	(850) 581-2106
	NAS Jacksonville	Jacksonville	(904) 645-0333
	NAS Mayport	Mayport	(904) 249-6700
	MacDill AFB	Tampa	(813) 828-3772
	Melbourne	Perimeter	(321) 783-5020
	Miami	Miami	(305) 871-3855
	Milton	Whiting Field	(850) 623-7438
	Jacksonville	NAS Jacksonville	(904) 779-0246
	NAS Pensacola	Pensacola	(850) 458-1098
	Altamonte Springs	Orlando	(407) 352-7575
	Patrick AFB	Space Coast	(321) 783-5020
	St. Augustine	Northrop Grumman St. Augustine	(904) 779-0246
	Tampa	St. Petersburg	(813) 282-0902
	Tallahassee	Tallahassee	(850) 201-8330
	Tyndall AFB	Tyndall	(850) 283-4557
Georgia	Marietta	Atlanta Area	(770) 426-9990
	Atlanta	Atlanta Delta	(770) 426-9990
	Columbus	Columbus	(706) 568-5485
	Hunter AAF	Hunter AAF	(912) 355-0644
	Moody AFB	Moody	(229) 244-9400
	Robins AFB	Robins	(478) 926-1727
	Pooler	Savannah Area	(912) 450-0073
Hawaii	Camp H M Smith	Camp Smith	(808) 254-2106
	Hickam AFB	Honolulu	(808) 422-0835
	Honolulu	Sand Island	(808) 422-0835
	Kapolei	Barbers Point Coast Guard Station	(808) 624-2334
	MCBH Kaneohe Bay	Kaneohe	(808) 254-2106
	Schofield Barracks	Schofield Barracks	(808) 624-2334
Idaho	Boise	Gowen	(208) 832-2222
	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	Hebron	CVG Airport	(513) 733-3728
	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
Maryland	Andrews AFB	Andrews	(301) 735-6340
	Lexington Park	Patuxent River	(301) 863-8776
Mississippi	Biloxi	Keesler	(228) 432-5312
	Columbus AFB	Columbus AFB	(662) 434-8262
Montana	Helena	Helena	(406) 727-9901
	Malmstrom AFB	Great Falls	(406) 727-9901
	Montana Air National Guard	Mang	(406) 727-9901
Nebraska	Offutt AFB	Offutt	(402) 292-6655
Nevada	Nellis AFB	Las Vegas	(702) 643-0762
	NAS Fallon	Fallon	(775) 423-4018
	North Las Vegas	Cheyenne Air	(702) 643-0762
New Jersey	McGuire AFB	McGuire	(609) 723-1337

STATE	PHYSICAL LOCATION	LOCATION NAME	TELEPHONE	
New Mexico	Albuquerque	Albuquerque	(505) 846-8946	
	Cannon AFB	Cannon	(575) 784-8763	
	Clovis	Clovis	(575) 218-3690	
N. Carolina	Holloman AFB	Holloman	(575) 479-6892	
	CG Elizabeth City	Elizabeth City	(252) 331-2225	
	Ft. Bragg	Ft. Bragg	(336) 605-3030	
	Greensboro	Greensboro	(336) 605-3030	
N. Dakota	Seymour Johnson AFB	Seymour Johnson	(919) 734-9211	
	Minot AFB	Minot	(701) 727-9007	
Ohio	Cincinnati	Cincinnati	(513) 733-3728	
	Fairborn	Dayton Area	(937) 878-3728	
	Wright Patterson AFB	Wright Patterson	(937) 878-3728	
Oklahoma	Altus AFB	Altus	(580) 481-5991	
	Oklahoma City	Oklahoma City	(405) 739-0397	
Oregon	Vance AFB	Vance	(580) 213-7320	
	Portland	Portland	(503) 288-8690	
	Portland	Portland Community College	(503) 288-8690	
S. Carolina	Warrenton	Astoria	(503) 288-8690	
	Charleston AFB	Charleston	(843) 767-8912	
	Greenville	Greenville	(864) 233-5288	
	MCAS Beaufort	Beaufort	(843) 228-7585	
S. Dakota	Rock Hill	Rock Hill	(803) 909-7077	
	Shaw AFB	Shaw	(803) 666-7401	
	Ellsworth AFB	Ellsworth	(605) 923-6291	
	Memphis	Memphis	(901) 507-9969	
	Texas	Amarillo	Amarillo-Bell Helicopter	(940) 851-6458
Tennessee	Dyess AFB	Dyess	(325) 692-2007	
	Fort Worth	Fort Worth	(817) 737-8180	
	Fort Worth	Fort Worth-Alliance	(817) 737-8180	
	Houston	Houston	(281) 461-3728	
	Randolph AFB	San Antonio	(210) 659-0801	
	Corpus Christi	Corpus Christi	(361) 937-4951	
	Fort Bliss	El Paso	(915) 564-5945	
	Laughlin AFB	Laughlin	(830) 422-2957	
	Sheppard AFB	Sheppard AFB	(940) 851-6458	
	Utah	Clearfield Town Square	Clearfield	(801) 777-0952
		Hill AFB	Northern Utah	(801) 777-0952
	Virginia	Fort Eustis	Fort Eustis	(757) 887-0980
Langley AFB		Langley	(757) 764-2662	
NAS Norfolk		Norfolk	(757) 440-5078	
NAS Oceana		Oceana	(757) 437-8061	
Washington	Everett	Everett	(425) 514-0220	
	Fairchild AFB	Spokane	(509) 244-3832	
	Lewis-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	

EUROPEAN LOCATIONS:

Embry-Riddle Aeronautical University – Worldwide
 European Regional Office
 CMR 429
 APO, AE 09054-0429
 Phone: 011-49-631-303-27811
 E-mail: Europe.rdo@erau.edu
 FAX: 011-49-631-303-27810

Embry-Riddle Aeronautical University – Worldwide
 European Regional Office
 Europaallee 6
 67657 Kaiserslautern
 Germany

COUNTRY	PHYSICAL LOCATION	LOCATION NAME	TELEPHONE
Afghanistan	Bagram Airfield	Afghanistan	DSN 318-431-3100
Germany	Berlin	Berlin	011-49-3053-063549
	Kaiserslautern	Kapaun	011-49-6371-475755
	Katterbach Kaserne	Katterbach	011-49-9802-832379
	Coleman Barracks-Mannheim	Mannheim	011-49-621-7794117
	Ramstein AB	Ramstein	011-49-6371-5959339
	Spangdahlem AB	Spangdahlem	011-49-6565-617553
	NATO Geilenkirchen	Geilenkirchen	011-49-2451-632246
Italy	Wiesbaden Army Airfield	Wiesbaden	011-49-611-7057469
	Aviano AB	Aviano	011-39-0434-305140
Kuwait	NAS Sigonella	Sigonella	011-39-095-564550
	Camp Arifjan	Kuwait	DSN 318-430-1326
Portugal	Lajes Field	Lajes Field	011-351-295-573375
Spain	NS Rota	Rota	011-34-956-822984
Turkey	Incirlik AB	Incirlik	011-90-322-3161098
United Kingdom	RAF Lakenheath	Lakenheath	011-44-1638-522464
	RAF Mildenhall	Mildenhall	011-44-1638-542916

ASIA LOCATIONS:

Embry-Riddle Aeronautical University – Asia
 75 Bukit Timah Road, #02-01/02 Boon Siew Building
 Republic of Singapore 229833
 Phone: +65-6933-9580
 Email: Asia@erau.edu

COUNTRY	PHYSICAL LOCATION	LOCATION NAME	TELEPHONE
Singapore	Singapore Aviation Academy	Singapore Aviation Academy	+65-6540-6316
Singapore	Singapore Institute of Management (SIM)	SIM Global Education	+65-6248-9746
Singapore	Singapore Institute of Management (SIM)	SIM University	+65-6248-9777

FACULTY AND ADMINISTRATION

OFFICIALS OF THE UNIVERSITY

Johnson, John P.

President; Professor, College of Arts and Sciences
B.A. and M.S., Florida State University;
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INDEX

A		
Academic Advisement	141	
Academic Affairs	141	
Academic Integrity	148	
Accreditation, Worldwide	12	
Administration, Academic Affairs	169	
Administration, Worldwide	169	
Admissions	14	
Admissions, Placement Examinations	19	
Admissions, Computer Use	18	
Admissions, Conditional (Graduate)	16	
Admissions, Conditional (Undergraduate)	15	
Admissions, Disclosure of Criminal Convictions	18	
Admissions, ERAU Student E-mail Account	18	
Admissions, Former Embry-Riddle Graduate Students	16	
Admissions, Former Embry-Riddle Students	15	
Admissions, Graduate	15	
Admissions, High School Graduates Age 20 and Over	14	
Admissions, High School Graduates Under the Age of 20	14	
Admissions, International Students	16	
Admissions, Non-Degree Seeking and Transient Graduate Students	16	
Admissions, Non-Degree Seeking and Transient Students	15	
Admissions, Students Seeking Graduate Certificates of Completion	16	
Admissions, Students Seeking Undergraduate Certificates of Completion	15	
Admissions, Transfer Student Applicants	14	
Admissions, Undergraduate	14	
Admissions, Worldwide Campus	14	
Advanced Standing Credit	143	
Advanced Standing Credit, Transcribing Transfer and	144	
Aeronautical Science, Graduate Courses	120	
Aeronautical Science, Master of	28	
Aeronautical Science, Undergraduate Courses	87	
Aeronautics, Associate/Bachelor of Science	23	
Aeronautics, Department of	22	
Air Force Aerospace Studies, Undergraduate Courses	116	
Airport Management, Certificate	59	
Airport Planning Design and Development, Certificate	62	
Air Traffic Control, Undergraduate Courses	91	
Air Transportation Management, Certificate	62	
Alumni, Services and Opportunities Available to	158	
Application Process, Financial Aid	161	
Arts and Sciences, Department of	38	
Articulations and Educational Partnership Agreements	145	
Asia Students, Embry-Riddle	141	
Assessment for Prior Credit	142	
Undergraduate	142	
Graduate	143	
Associations, Worldwide	12	
Attendance, Class	154	
Auditing a Course (AU)	146	
Aviation/Aerospace Industrial Management, Certificate	63	
Aviation/Aerospace Safety, Certificate	37	
Aviation and Embry-Riddle: The Lifelong Partnership, Embry-Riddle at a Glance	4	
Aviation Business Administration, Associate/Bachelor in Science	42	
Aviation Enterprises in the Global Environment, Certificate	63	
Aviation Maintenance, Associate/Bachelor of Science	25	
Aviation Maintenance Technology Part 65, Certificate	34	
Aviation Maintenance Technology, Undergraduate Courses	86	
Aviation Safety, Certificate	34	
Aviation Safety, Minor in	33	
B		
Board of Trustees	174	
Business Administration, Department of	41	
Business Administration in Aviation, Masters of	51	
Business Administration, Graduate Courses	128	
Business Administration, Undergraduate Courses	92	
C		
Campuses, Worldwide Locations	165	
Asia Locations	168	
European Locations	168	
United States	165	
Career Services	153, 164	
Catalog Applicability	150	
Chairman Emeritus	174	
Chancellor Emeritus	174	
Change of Degree Program	148	
Chaplain Emeritus	174	
Class Attendance	154	
Classification of Undergraduate Students	146	
Classroom Facilities	154	
Classroom Instruction, Flexible	154	

Classroom Rules	154		
Classroom Security	154		
Communication Theory and Skills, Undergraduate Courses	94		
Computer Engineering, Undergraduate Courses	93		
Computer Science, Undergraduate Courses	93		
Computer Use, Admissions	18		
Concurrent Second Undergraduate Degree or Minor, Declaration of a	149		
Conditional Admission, Graduate	16		
Conditional Admission, Undergraduate	15		
Conduct, Student	156		
Contact/Information Sources	164		
Continuous Student Status	149		
Cooperative Education, Aeronautical Science Undergraduate Courses	91		
Cooperative Education, Management Undergraduate Courses	107		
Course Descriptions			
Graduate Courses	120		
Undergraduate Courses	86		
Course Equivalency Challenge Exams	143		
Course Load	145		
Credit Cards	162		
Criminal Convictions and Violations	157		
D			
Dean Emeritus	174		
Dean's List and Honor Roll, Undergraduate	147		
Declaration of a Concurrent Second Undergraduate Degree or Minor	149		
Degree Completion Time Limit	145		
Department Chairs	170		
Diplomas	153		
Disability Support Services	155,164		
Disclosure of Criminal Convictions, Admissions	18		
Dismissal (graduate), Suspension (undergraduate), Warning, Probation-Academic	147		
Dropping a Course	146		
E			
EAGLET, Online Writing Lab	142		
Economics, Undergraduate Courses	93		
Eligibility Requirements, Financial Aid	161		
Embry-Riddle At-A-Glance	4		
Engineering Sciences, Department of	66		
Engineering Sciences, Minor in	67		
Engineering Science, Undergraduate Courses	95		
Engineering, Undergraduate Courses	95		
Executive Vice Presidents	169		
Executive Vice President's Welcome	10		
Extended Payments, Financial Aid	162		
F			
Faculty	170		
Faculty and Administration	169		
FERPA, Privacy of Student Records	151		
Financial Aid	161		
Financial Assistance	162		
Financial Services, Student	160		
Fire Science, Bachelor of Science	38		
Five Ways to Learn	11		
Flexible Classroom Instruction	154		
G			
General Education Competencies, Worldwide	21		
General Education Requirements	20		
General Education Requirements, Associate Degree	21		
General Education, Undergraduate Courses	97		
Grades	152		
Grade Appeals	152		
Grading System	151		
Graduate Admissions	15		
Graduate Degrees, Additional	149		
Graduation Ceremony	153		
Graduation Honors	152		
Graduation Requirements	152		
Grants	161		
Grievance, Student	156		
H			
Helicopter Operations and Safety, Certificate	35		
Helicopter Operations and Safety, Minor	33		
Help, Research/Library Support	163		
Honor Roll, Dean's List	147		
Humanities, Undergraduate Courses	98		
Hunt Library, How to Contact the	163		
Hunt Library, Bringing the Library to You	163		
I			
Identification Cards	154		
Incomplete Grades	146		
Instructional System Design, Certificate	37		
Integrated Logistics Management, Certificate	63		
Integrity, Academic	148		
International Relations, Minor in	40		
International Students, Admissions	16		
International Student Services	155		
L			
Leadership, Master of Science	54		

Library, Hunt: How to Contact	163	Mission Statement, Worldwide	11
Life Science, Undergraduate Courses	92	Modeling and Simulation Management, Certificate	64
Loans	161	N	
Logistics Management, Certificate	61	Nevada Course Requirement, State of	21
Logistics Management, Minor in	58	O	
Logistics and Supply Chain Management, Graduate Courses	127	Occupational Safety and Health, Certificate	35
Logistics and Supply Chain Management, Master of Science in	54	Occupational Safety and Health, Minor in Occupational Safety Management, Master of Science in	31
M		Officials of the University	169
Management, Certificate	60	Ombudsman, Student	156
Management, Graduate Courses	130	Online Catalog	3
Management, Master of Science in	55	Oregon State Authorization	13
Management, Minor in	58	P	
Management, Undergraduate Courses	101	Payment Plan	162
Marketing and Enrollment Management Office	164	Ph.D in Aviation	68
Mathematics, Undergraduate Courses	99	Physical Science, Undergraduate Courses	108
Master of Aeronautical Science	28	Placement Examinations, Admissions	19
Master of Business Administration in Aviation	51	Pre-Engineering Studies, Certificate	67
Master of Science in Leadership	54	President Emeritus	174
Master of Science in Logistics and and Supply Chain Management	54	President's Welcome	6
Master of Science in Occupational Safety Management	31	Privacy of Student Records (FERPA)	151
Master of Science in Management	55	Probation, Warning, Suspension (undegraduate) and Dismissal (graduate)–Academic	147
Master of Science in Project Management	56	Professional Education, Office of	12, 85, 164
Master of Science in Space Education	32	Professional Education Certificate Programs	69
Master in Systems Engineering	66	Professors Emeriti	174
Matriculation	149	Program-Specific Criteria, Graduate Academic Programs	51, 55, 56
Meteorology, Undergraduate Courses	119	Project Management, Certificate	61
Military Degree Completion Program for Active-Duty Personnel	144	Project Management, Graduate Courses	135
Minnesota Office of Higher Education Registration Disclosure Statement	13	Project Management, Master of Science in	56
Minor in Airport Management	58	R	
Minor in Aviation Management	58	Regional Manager Emeritus	174
Minor in Aviation Safety	33	Registrar	164
Minor in Engineering Sciences	67	Registration	141
Minor in Fire Science	40	Repeating a Course	146
Minor in Helicopter Operations and Safety	33	Research/Library Support	163
Minor in International Relations	40	Rules, Classroom	154
Minor in Logistics Management	58	S	
Minor in Management	58	Safety Science, Undergraduate Courses	111
Minor in Management Information Systems	58	Sanctions	157
Minor in Occupational Safety and Health	33		
Minor in Project Management	59		
Minor in Security and Intelligence	34		
Minor in Technical Management	59		
Minor in Transportation	34		
Minor in Unmanned Aerial Systems	34		
Mission Statement, The University	7		

Scholarships	161	Transportation, Certificate of Completion	37
Security, Classroom	154	Transportation, Minor Course of Study	34
Security and Intelligence, Certificate	36	Transportation, Undergraduate Courses	114
Security and Intelligence, Minor in	34	Trustee Emeriti	174
Security Science, Undergraduate Courses	109	Tuition and Fees	160
Servicemembers Opportunity Colleges (SOC)	142	Two Degrees of the Same Rank	150
Social Sciences, Undergraduate Courses	97, 109, 114	U	
South Carolina Commission on Higher Education	13	Undergraduate Admissions	14
Space Education, Master of Science	32	Unit of Credit	145
Space Studies, Certificate	36	University General Education Competencies	21
Speech, Undergraduate Course	114	University Information	8
Student Affairs	155	Unmanned Aerial Systems, Minor in	34
Student Conduct	156	User Fees	160
Student E-mail Account, ERAU	18	US Military Science, Undergraduate Courses	117
Student Financial Services	160	V	
Student Grievance	156	Veterans Affairs	162, 164
Student Life	155	Veterans Education Benefits	162
Student Responsibilities	141	Veterans Transfer Credit	144
Student Services	141	W	
Student Services, Contact/Information Services	164	Warning, Probation, Undergraduate Suspension, and Graduate Dismissal – Academic	147
Supply Chain Management, Certificate	60	Washington State HEC Board Addendum	13
Surveys	160	Withdrawal from a Course (W)	146
Suspension and Dismissal for Cause	148	Withdrawal/Refund Schedule, University	160
Suspension (undergraduate), Warning, Probation, Dismissal (graduate) – Academic	147	Worldwide Administration	169
Systems Engineering, Master of	66	Worldwide Associations	12
T		Worldwide Campus Locations	11
Table of Contents	2	Worldwide, Five Ways to Learn	11
Technical Management, Associate/Bachelor of Science	42	Worldwide General Education Competencies	21
Technical Management – Engineering Sciences, Bachelor of Science	50	Worldwide Locations, United States	165
Technical Management – Information Security, Bachelor of Science	47	Worldwide Locations, European	168
Technical Management, Graduate Courses	140	Worldwide Locations, Asia	168
Technical Management – Logistics, Bachelor of Science	48	Worldwide Mission Statement	11
Technical Management – Management of Information Systems, Bachelor of Science	44		
Technical Management – Occupational Safety and Health Specialty, Bachelor of Science	49		
Technical Management – Project Management Specialty, Bachelor of Science	46		
Testimonials	23, 40, 65, 73, 119, 140, 173		
Textbook Purchase	154		
Transcribing Transfer and Advanced Standing Credit	144		
Transcript Requests	150		
Transfer Between Graduate Degree Programs	148		
Transfer Student Applicants	14		
Transportation, Bachelor of Science	27		