

September 7, 2006

**MEMORANDUM**

**To:** Dr. Bettie Rose Horne, Chair, and Members, Committee on Academic Affairs and Licensing

**From:** Dr. R. Lynn Kelley, Acting Director, Academic Affairs and Licensing

**Consideration of Request for Initial License**

**Embry-Riddle Aeronautical University, Daytona Beach, FL, at Greenville to offer A.S. in (1) Professional Aeronautics, and (2) Technical Management; B.S. in (1) Aviation Maintenance Management, (2) Professional Aeronautics, and (3) Technical Management; Master of Aeronautical Science; M.S. in (1) Management, (2) Project Management, and (3) Technical Management**

**Summary**

Embry-Riddle Aeronautical University (ERAU) <[www.erau.edu](http://www.erau.edu)> requests approval of initial license to offer programs leading to the A.S. in (1) Professional Aeronautics and (2) Technical Management; B.S. in (1) Aviation Maintenance Management, (2) Professional Aeronautics, and (3) Technical Management; Master of Aeronautical Science; M.S. in (1) Management, (2) Project Management, and (3) Technical Management, to be offered in Greenville. With the approval of the Commission and sufficient enrollments, classes will begin in the January 2007.

Embry-Riddle is a non-profit, private university offering associate's, bachelor's, and master's degrees. In 1925 John Paul Riddle and T. Higbee Embry founded the Embry-Riddle Company at Lunken Airport in Cincinnati, Ohio. In 1926 the company opened the Embry-Riddle School of Aviation, which floundered through the Great Depression. In response to the demand for skilled aviators and mechanics created by World War II, Embry-Riddle opened several flight training centers in Florida. It trained some 25,000 pilots, mechanics, and aviation technicians during the war years, then expanded its programs to more than 30 degree programs. Its student body is more than 30,000 from all 50 states and more than 100 nations. ERAU offers programs at

residential campuses in Daytona Beach, Florida, and Prescott, Arizona, and more than 130 teaching centers in the United States and Europe or through distance learning. The primary mission of the Extended Campus is to offer educational opportunities to adult learners.

The Southern Association of Colleges and Schools (SACS) accredits the University.

ERAU offers programs in South Carolina, exempt from the oversight of CHE, under authority of the commanding officers of the military bases at Beaufort Marine Corps Air Station, Charleston Air Force Base, Shaw Air Force Base, and McEntire Air National Guard Base.

Greenville Technical College offers a program leading to the A.I.T. in Aircraft Maintenance Technology. Bob Jones University offers programs leading to the A.A.S. degree in Aircraft Maintenance and the B.S. degree in (1) Aviation Management, (2) Aircraft Maintenance, and (3) Business and Commercial Aviation. Clemson University and Southern Wesleyan University offer program leading to the M.S. degree in Management. Webster University offers at its Greenville location the M.A. degree in Management and Leadership.

ERAU makes available sufficient learning resources to support the courses and degrees offered. The Hunt Memorial Library is designed to be the primary information provider to all ERAU students and has concentrated especially on outreach to students who do not have access to the residential campus. Library resources at Extended Campuses are comparable to the physical library located at Daytona Beach. Any member of the ERAU community has access to the library's circulated materials, reference books, technological assistance, inter-library loan system, and library orientation/bibliographical instruction. Hunt Memorial Library has inter-lending agreements with institutions such as NOAA libraries, the NASA Ames Research Center Library, the NASA Johnson Space Center Library, and the U.S. Coast Guard Academy Library. The Library also has an agreement with the Independent College and Universities of Florida to share the costs of library products and services, as well as agreements to provide library services with a number of organizations such as the Southeaster Library Network, the Central Florida Library Cooperative, and the Distance Learning Library Initiative.

The University is negotiating to lease facilities to support the programs. Once a facility is obtained, a description of the facilities, a floor plan, a copy of the lease, and a list of equipment will be provided to the staff of the Commission.

To be admitted to an undergraduate program through the Extended Campus, applicants must possess a high school diploma or a GED. For admission into a graduate

degree program, applicants must have earned a baccalaureate degree for an accredited institution with a cumulative GPA of 2.5 or higher.

Transfer credit may be granted for courses with a grade of C or higher earned at degree-granting institutions accredited by an accrediting agency recognized by the Council for Higher Education Accreditation (CHEA). Undergraduate advanced standing credit may be awarded for prior learning for postsecondary education, work, and/or training experience, such as military learning experiences, credit by examination according to recommendations by the American Council on Education (ACE), and FAA certifications. After completion of a course in self assessment and portfolio preparation, undergraduate students who believe that their knowledge and prior learning experience qualify them for credit for a specific Embry-Riddle course may compile a portfolio for evaluation. Twenty-five percent of the undergraduate programs must be earned at ERAU and a minimum of 50 percent of the program hours must be on a senior college level.

Graduate applicants may transfer courses in which they earned a grade of B or better, a maximum of six credit hours into the program leading to the M.S. degree in Technical Management, or 12 credit hours into other master's level programs. Credit is accepted for courses that were completed within seven years immediately preceding the date Embry-Riddle receives the admissions application. All requirements for an Embry-Riddle master's degree must be completed within seven years from the date of initial enrollment.

Courses will be offered in five nine-week terms per academic year (July 1 to June 30). Beginning October 1, 2006, tuition at the undergraduate level will be \$579 for each three-semester-hour course for on-site and distance learning courses. Tuition at the graduate level will be \$957 for each three-semester-hour course; distance learning courses will be an additional \$147, for a total of \$1,104 per three-semester-course.

Faculty who teach in the programs must meet the South Carolina Commission on Higher Education licensing requirement that an appropriate number of undergraduate faculty members hold terminal degrees, usually an earned doctorate, and that all others must hold master's degrees with at least 18 graduate semester hours in the teaching discipline, or a master's degree with a major in the teaching discipline. At least 25 percent of the discipline course hours in each undergraduate major are taught by faculty members holding the terminal degree. Graduate faculty members must hold a terminal degree, usually an earned doctorate, in the field in which they teach. Students must have sufficient access to these faculty members to provide meaningful interaction. An institution must employ faculty members whose highest earned degree presented as the credential qualifying the faculty member to teach is from an institution accredited by an accrediting body recognized by the U.S. Department of Education.

ERAU will initially employ at the Greenville location a director of operations, an

assistant director of operations, and a faculty chair. These positions will be filled once the Commission approves the proposal and SACS has approved the Center.

<h1>Professional Aeronautics</h1>		
Associate of Science Bachelor of Science		
These technical aviation degrees provide a foundation of knowledge, understanding and experience needed for jobs with the airlines, aircraft manufacturers, aviation/aerospace related companies, airports, corporate aviation, the Federal Aviation Administration (FAA) or National Transportation Safety Board.		
Projected enrollment for the first year: 12 students	AS	BS
<b>Aviation Area of Concentration</b>	12-18	18-36
<b>Communication Theory &amp; Skills:</b> ENGL 122, *ENGL 143, or ENGL 221, or SPCH 219 (*Satisfies CT&S or HU elective)	9	9
<b>Humanities/Social Sciences:</b> Lower level Humanities elective Lower level Social Sciences (For BS degree one course must be ECON 211) Upper Level Humanities or Social Science elective	3 3	3 6 3
<b>Computer Science:</b> CSCI 109 Introduction to Computers	3	3
<b>Mathematics:</b> College Algebra or Higher MATH 222 Business Statistics	3 3	3 3
<b>Physical Sciences:</b> One course must be Physics (PHYS 102)	3	6
<b>Program Support:</b> ASCI 254 Aviation Legislation ASCI 405 Aviation Law MGMT 201 Principles of Management MGMT 210 Financial Accounting ECON 210 Microeconomics (Either ECON 210 or ECON 211 satisfies the requirement for the AS degree.)	3 3 3	3 3 3 3
<b>Professional Development Electives:</b> Select from Upper-level courses available in Aeronautical Science, Air Traffic Control, Management, Economics, and Safety		21
<b>Upper-Division Electives</b>		12
<b>Open Electives</b> (any discipline)	6-12	0-18
<b>Total Degree Requirements</b>	60	120

# Technical Management

Associate of Science  
Bachelor of Science

Working adults with a background in a technical specialty are looking for opportunities to move into management/supervisory positions. While Technical Management degrees are naturally attractive to students with an aviation and/or technical background, individuals without aviation experience find these programs to be excellent stepping-stones for entering the fields of aviation or aerospace. Regardless of background, Technical Management students gain valuable skills, learning how to organize, plan, staff and coordinate the resources of any organization toward its goals and objectives.

Projected enrollment for the first year: 5 students	AS	BS
<b>Technical Specialty or Minor</b>	9	15
<b>Communication Theory &amp; Skills</b> ENGL 122, *ENGL 143, SPCH 219, ENGL 221 (* Satisfies CT&S or HU elective)	9	9
<b>Humanities/Social Sciences:</b>		
Lower Level Humanities	3	3
Lower Level Social Sciences	3	3
Lower Level ECON 210 Microeconomics	3	3
Upper Level Humanities or Social Science elective	0	3
ECON 211 Macroeconomics	3	3
<b>Mathematics:</b> College Algebra or Higher	3	6
MATH 211 Statistics with Aviation Applications or MATH 222 Business Statistics	3	3
<b>Computer Science:</b> CSCI 109 Introduction to Computers	3	3
<b>Physical and Life Sciences:</b>	6	6
<b>Total General Education Credits</b>	<b>36</b>	<b>42</b>
<b>Business Core:</b>		
MGMT 201 Principles of Management	3	3
MGMT 210 Financial Accounting	3	3
MGMT 221 Advanced Computer Based Systems	3	3
MGMT 311 Marketing	0	3
MGMT 312 Managerial Accounting	0	3
MGMT 314 Human Resource Management	0	3
MGMT 317 Organizational Behavior	0	3
MGMT 320 Business Information Systems	0	3
MGMT 325 Social Responsibility and Ethics in Management	0	3
MGMT 335 International Business	0	3
MGMT 390 Business Law	0	3
<b>Total Business Core Credits</b>	<b>9</b>	<b>33</b>
<b>Management Electives:</b> 300-400 Upper Level Management Courses	<b>0</b>	<b>12</b>
<b>Open Electives:</b> 300-400 Upper Level Courses	<b>0</b>	<b>9</b>
<b>Open Electives (Lower Level):</b>	<b>6</b>	<b>9</b>
<b>Total Degree Requirements</b>	<b>60</b>	<b>120</b>

# Aviation Maintenance Management

Bachelor of Science

Students who have AA Airframe and Powerplant Maintenance Certificate gain a comprehensive business foundation and the management skills needed to effectively manage aviation maintenance. Although the program is geared toward aviation and aerospace, the curriculum prepares graduates for success with companies in any industry.

Projected enrollment for the first year: 21 students	
<b>Core Courses:</b> FAA Airframe & Powerplant Maintenance Certificate <b>- OR -</b> Type 65 Aviation Maintenance Technology Course Work AMNT 240 General Aeronautics and Applications AMNT 271 Airframe Systems and Applications AMNT 260 Aircraft Electrical Systems Theory AMNT 280 Powerplant Theory and Applications AMNT 270 Airframe Structures/Applications AMNT 281 Aircraft Propulsion Systems/Applications <b>Electives:</b> Aviation Maintenance, Aeronautical Science, or Management	<b>36</b>
<b>Communication Theory &amp; Skills</b> ENGL 122, *ENGL 143, SPCH 219, ENGL 221 (* Satisfies CT&S or HU elective)	9
<b>Humanities/Social Sciences:</b> Lower Level Humanities Lower Level Social Sciences (one course must include either ECON 210 or ECON 211) Upper Level Humanities or Social Science elective	3 6 3
<b>Mathematics:</b> MATH 222 Business Statistics MATH 320 Decision Math College Algebra or Higher	3 3 6
<b>Computer Science:</b> CSCI 109 Introduction to Computers	3
<b>Physical and Life Sciences</b>	6
<b>Total General Education Credits</b>	<b>42</b>
<b>Business Core:</b> MGMT 201 Principles of Management MGMT 210 Financial Accounting MGMT 212 Advanced Financial Accounting MGMT 221 Advanced Computer Based Systems MGMT 311 Marketing MGMT 312 Managerial Accounting MGMT 314 Human Resources Management OR MGMT 317 Organizational Behavior MGMT 320 Business Information Systems MGMT 324 Aviation Labor Relations MGMT 325 Social Responsibility and Ethics in Management MGMT 332 Corporate Finance I MGMT 390 Business Law ASCI 419 or MGMT 419 Aviation Maintenance Management MGMT 420 Management of Production and Operations MGMT 422 Life Cycle Analysis for Systems and Programs in Aviation/Aerospace ECON 315 Managerial Economics	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
<b>Total Business Core Credits</b>	<b>48</b>
<b>Total Degree Requirements</b>	<b>126</b>

# Master of Aeronautical Science

This program enables aviation/aerospace professionals to study the application of concepts, methods, and tools used in the development, manufacture, and operations of aircraft and spacecraft, as well as the public and business infrastructure that support them. The curriculum gives air traffic control personnel, aviation educators, flight crewmembers, flight operations specialists, and industry technical representatives an opportunity to enhance their knowledge.

Projected enrollment in first year: 9

Course:	Title:	Credits:
ASCI 602	The Air Transportation System	3
ASCI 603	Aircraft and Spacecraft Development	3
ASCI 604	Human Factors in the Aviation/Aerospace Industry	3
GCPP 605	Methods and Procedures for the Graduate Capstone Project	3
ASCI 690	Graduate Capstone Project	3
ASCI / MGMT	Electives (500-600 level)	9
	Choose at least one 12-credit-hour specialization. Master of Aeronautical Science (MAS) students may complete courses leading to multiple specializations. Students wishing to complete multiple specializations must have 12 unduplicated credits in each of the specializations. Students must submit an evaluation request form to declare the desired specializations. For Specialization 1-7, the degree requirements are 36 semester hours. For Dual Specialization or Specialization 8, the degree requirements are 39 semester hours. Specialization 1 Aeronautics Specialization 2 Aviation/Aerospace Education Technology Specialization 3 Aviation/Aerospace Management Specialization 4 Aviation/Aerospace Operations Specialization 5 Aviation/Aerospace Safety Systems Specialization 6 Human Factors in Aviation Systems Specialization 7 Space Studies Specialization 8 Space Operations Management	12
	<b>Total Degree Requirements</b>	36-39

## Master of Science in Management

The target for this degree is students who need and desire a focused management degree but are looking for a degree with a more operational approach than the traditional MBA. The curriculum is designed to develop leadership, project management skills, supervisory skills, creativity, strategic planning skills, global industry knowledge, critical thinking, and analytical skills.

Projected enrollment for the first year: 9 students

Course:	Title:	Credits:
GCPP 605	Methods and Procedures for the Graduate Capstone Project	3
MGMT 531	Structure and Application of Analytical Decision Processes I	3
MGMT 532	Philosophy, Principles, and Practices in Management of Quality	3
MGMT 533	Legal, Ethical, and Regulatory Bases of Management Practices	3
MGMT 534	Anatomy of Work Organizations	3
MGMT 535	Theory and Application of Managerial Communications	3
MGMT 631	Structure and Application of Analytical Decision Processes II	3
MGMT 633	Principles and Practices of Financial Accounting and Control for Managers	3
	Areas of Specialization: -Air Transportation Management -Aviation/Aerospace Industrial Management -Aviation Enterprises in the Global Environment -Management of Integrated Logistics -General Management Option	12
	<b>Total Degree requirements</b>	<b>36</b>

## Master of Science in Project Management

The program is designed to teach working professionals master's level knowledge and experience in planning and executing complex projects to enable them to undertake leadership and management of projects. It incorporates practical application and use of project management software tools. The program is designed to prepare graduates for the Project Management Institute-Project Management Professional (PMI-PMP) and the American Society for Quality (ASQ) Certified Manager of Quality/Organizational Excellence (CMQ/OE) examinations.

Projected enrollment for the first year: 8 students

Course:	Title:	Credits:
MGMT 531	Structure and Applications of Analytical Decision Processes for Managers I	3
MGMT 533	Legal, Ethical, and Regulatory Bases of Management Practices	3
MGMT 532	Philosophy, Principles, and Practices in Management of Quality	3
MGMT 631	Structure and Application of Analytical Decision Processes for Managers II	3
MGMT 633	Principles and Practices of Financial Accounting and Control for Managers	3
PMGT 501	Fundamentals of Project Management	3
PMGT 502	Effective Communication for Managing Projects	3
PMGT 611	Anatomy of Project Organization	3
PMGT 612	Leading Projects Across Cultural, Corporate, and Internal Boundaries	3
PMGT 613	Assessing and Managing Project risk	3
PMGT 614	Planning, Directing, and Controlling Projects	3
PMGT 690	Project Management Capstone	3
	<b>Total Degree Requirements</b>	<b>36</b>

**Master of Science in Technical Management**

The MSTM program is designed to prepare technically-trained employees for advancement within their companies and for larger managerial responsibilities. The program builds on three foundation courses that teach students how to use computers as decision-making tools, communicate conclusions concisely and persuasively, and use quantitative methods to make business decisions.

Projected enrollment for the first year: 18 students

<b>Course</b>	<b>Title</b>	<b>Credits</b>
TMGT 501*	Computer Skills for a Technical Environment	3
TMGT 502*	Communication Skills in a Technical Environment	3
TMGT 503*	Quantitative Methods and Statistics	3
TMGT 605	Organization Theory in a Technical Environment	3
TMGT 610	Managing Effective Technical Work Teams	3
TMGT 616	Production Operations Management	3
TMGT 621	Regulations, Ethics, and the Legal System	3
TMGT 625	Marketing in the Technical Environment	3
TMGT 630	Technical Management Information Systems	3
TMGT 635	Financial and Managerial Accounting and Control for Technical Managers	3
TMGT 641	Project Management: Concepts and Practices	3
TMGT 646	Operations Research and Management Science	3
TMGT 651	Quality Management and Quality Control	3
TMGT 660	Project Development Techniques	2
TMGT 660L	Technical Management Capstone Project	1
	<b>TOTAL DEGREE REQUIREMENTS</b>	<b>42</b>

In summary, the staff find that the proposed programs and the institution meet the requirements of the licensing statute and regulations.

**Recommendation**

The staff recommends that the Committee on Academic Affairs and Licensing commend favorably to the Commission initial licensure for five years to Embry-Riddle Aeronautical University to offer in Greenville the programs leading to the A.S. in (1) Professional Aeronautics and (2) Technical Management; B.S. in (1) Aviation Maintenance Management, (2) Professional Aeronautics, and (3) Technical Management; Master of Aeronautical Science; M.S. in (1) Management, (2) Project Management, and (3) Technical Management, to be implemented in January 2007. Further, that the Commission authorize the staff to issue the license after development, review, and inspection of the facilities.