

# South Carolina Commission on Higher Education

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Interim Executive Director

CAAL  
11/10/2016  
Agenda Item 3

November 10, 2016

## MEMORANDUM

**TO:** Chair Terrye Seckinger, and Members, Committee on Academic Affairs and Licensing

**FROM:** John Lane, DMA, Director of Academic Affairs

### Consideration of Request for Amendment to Existing License to Add New Site Embry-Riddle Aeronautical University, New Site in North Charleston

Associate of Science degree in (1) Aeronautics, (2) Aviation Maintenance, and (3) Technical Management; the Bachelor of Science degree in (1) Aeronautics, (2) Aviation Maintenance, and (3) Technical Management; and the Master of Science degree in (1) Aeronautics, (2) Management, and (3) Project Management

#### Summary

Embry-Riddle Aeronautical University (ERAU) in Daytona Beach, FL ([www.embryriddle.edu](http://www.embryriddle.edu)) requests approval of an amendment to its license to offer at a new site in North Charleston currently licensed programs leading to the Associate of Science degree in (1) Aeronautics, (2) Aviation Maintenance, and (3) Technical Management; the Bachelor of Science degree in (1) Aeronautics, (2) Aviation Maintenance, and (3) Technical Management; and the Master of Science degree in (1) Aeronautics, (2) Management, and (3) Project Management. The programs will be delivered in traditional, distance, and hybrid formats. ERAU will implement the programs at its new site located at 7301 Rivers Avenue, Suite 120, North Charleston, SC 29406 upon approval of the Commission.

#### Background

Founded in 1926, ERAU is a private, not-for-profit institution that is the world's oldest and largest fully-accredited university specializing in aviation and aerospace. The University has residential campuses in Daytona Beach, Florida, and Prescott, Arizona, as well as Worldwide, Online and Asia Campuses that collectively have more than 125 locations.

The Commission licensed ERAU-Greenville in October 2006. The Greenville site is a branch of ERAU's Worldwide campus, which enrolled 13,740 full-time equivalency students for the Fall 2015 term. The Greenville campus

enrolled 50 students for the period of June 2014 through July 2015. ERAU officials predict enrolling 60 students into programs offered at the N. Charleston site during the first academic year.

The Southern Association of College and Schools Commission on Colleges (SACSCOC) has accredited ERAU since 1968. Current accreditation extends through 2022. The new site is not considered by SACSCOC to be a substantive change, therefore not requiring an application to SACSCOC; ERAU is only required to make notice to SACSCOC of its addition of the North Charleston branch. Additionally, ERAU is a member of the Independent Colleges and Universities of Florida association which includes 30 nonprofit institutions that are Florida-based, are SACSCOC accredited, and offer secular degrees.

**Tuition and Student Borrowing**

All tuition rates listed below are for civilians who are out-of-state (non-Florida residents).

Tuition for ERAU-Worldwide is charged per semester. The per-credit-hour rate for part-time status is \$365. The total of tuition and fees for students enrolling part-time in an associate degree program is approximately \$24,000-\$26,000. The total of tuition and fees for students enrolling part-time in a bachelor degree program is approximately \$50,000.

The graduate tuition rate is \$620 per credit hour. The total of tuition and fees for students enrolling in a master’s degree program is approximately \$21,000-\$25,000 (depending on program).

According to College Scorecard (<https://collegescorecard.ed.gov>), the estimated student loan debt for undergraduate borrowers who complete college at ERAU-Worldwide is \$24,411. ERAU officials have submitted a surety bond that adequately meets the Commission’s regulatory requirements.

The following information from the U.S. Department of Education (USDE) shows student loan default rates at ERAU (combined averages for all ERAU campuses).

OPE ID	School	Control	Programs		FY2013	FY2012	FY2011
001479	Embry-Riddle Aeronautical University	Private	Federal Family Education Loans and Federal Direct Loans (FFEL/FDL)	<b>Default Rate %</b>	4.8%	3.4%	4.6%
				<b>No. in Default</b>	147	99	127
				<b>No. in Repayment</b>	3,015	2,849	2,732
<b>Students enrolled at any time during the year</b>					30,285	32,413	2,732
<b>Percentage of borrowers entering repayment</b>					9.9%	8.7%	8.3%

To provide context for the Cohort Default Rate (CDR), USDE includes enrollment data (students enrolled at any time during the year) and a corresponding percentage (borrowers entering repayment divided by that enrollment figure). While there is no direct relationship between the timing of when a borrower entered repayment (October 1 through September 30) and any particular enrollment year, these data figures are for the academic year ending on the June 30 prior to the beginning of the cohort year (e.g., FY 2013 CDR Year uses 2011-2012 enrollment).

The USDE sanctions a school when the school's three most recent cohort default rates are 25 percent or higher or if a school's current default rate is greater than 40 percent. Except in the event of a successful adjustment or appeal, such a school will lose Federal Family Education Loan, Direct Loan, and Federal Pell Grant program eligibility for the remainder of the fiscal year in which the school is notified of its sanction and for the following two fiscal years.

### **Facilities and Learning Resources**

Institution officials have secured facilities in N. Charleston that will include classrooms, a break area, faculty and staff work areas, administrative facilities, and computer labs. Officials have provided the location lease agreement, diagram of facilities, insurance certificate and business license to Commission staff. Staff will conduct a site visit prior to issuing a license to ERAU for the N. Charleston location.

Through its online portal accessible by on-site facilities, ERAU makes available sufficient learning resources to support the courses and degrees offered. The Hunt Library, located on the Daytona Beach Campus, is the library for all Worldwide students, faculty and staff, regardless of location. 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 electronic library includes round-the-clock 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 over 100 online databases.

The Hunt Library is the researcher's primary resource provider. Again, regardless of their location, members of Embry-Riddle's Worldwide community 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, by chat, or by email. Research librarians provide detailed advice on research strategies, referrals to relevant reference sources, assistance with literature searches, and help navigating the library's website.

### **Administration and Faculty**

Each ERAU campus has an on-site campus director who reports to the executive director of campus operations at Worldwide headquarters. The campus director reports to the Vice Chancellor for Campus Operations of the Worldwide campus; the Vice Chancellor reports to the Chancellor who in turn reports to the president of ERAU. Personnel at each site also include an associate campus director, assistant campus director, administrative assistant and faculty.

Faculty at the ERAU branch in N. Charleston who teach general education courses must possess a master's degree with 18 hours in the teaching discipline or must hold a master's degree with a major in the teaching discipline. Faculty teaching upper-division core courses at the bachelor degree level must also hold a master's degree with at least 18 graduate semester hours in the teaching discipline or a master's degree with a major in the teaching discipline. Faculty teaching at the master's level must hold a terminal degree with at least 18 graduate semester hours in the teaching discipline. Each degree must be from an institution accredited by an accrediting agency recognized by the U.S. Department of Education.

## **Admissions**

Applicants for undergraduate admission must have a high school diploma or equivalent; write an essay of 300 to 500 words outlining his or her career goals and how ERAU will assist in attaining those goals; provide two letters of recommendation; and provide official transcripts from all postsecondary, accredited degree-granting institutions. ERAU also considers school counselor or teacher recommendations and work experience, and it strongly recommends submission of SAT scores of 1,000 or higher and ACT scores of 21 or higher. Transfer credits may be accepted by ERAU for courses of comparable content if the credits were completed with a grade of "C" or above at an institution accredited by a recognized accrediting agency.

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. Some programs may require prerequisite knowledge in certain areas. All applicants must submit official transcripts.

For the fiscal year 2016, ERAU's Greenville Campus graduated four students. Placement rates for ERAU are self-reported. For the most recent academic year there were four respondents to an employment survey showing a 100% placement rate. ERAU provided enrollment data pertaining to all SC enrollments, which is included as Attachment 1.

## **Program Descriptions and Need Justification**

The following are descriptions for each currently licensed program ERAU wishes to offer at its N. Charleston site. The Commission approved the curriculum for each program previously when it licensed the Greenville branch. Need justification documentation for each program is included as an attachment (Attachments 2-7), and letters of support from Boeing and the Pittsburgh Institution of Aeronautics (Attachments 8 and 9).

### **A.S., B.S., Aeronautics**

The Aeronautics programs open the door to new opportunities in the dynamic aviation/aerospace industry. The curriculum is closely mapped to the needs and demands of the aviation/aerospace industry and to general education guidelines. A student is exposed to a multidisciplinary program with courses of study in human factors, security, aviation safety, occupational safety and health, air traffic control, aircraft maintenance, unmanned vehicles, and aeronautical science. Within this broad base, electives and minors of study are available to allow students to tailor the degree to particular interests and career goals. Electives can be taken by students in aviation related disciplines: Aeronautical Science, Air Traffic Control, Safety, Security, Aviation History, Unmanned Vehicles, Transportation and Engineering.

These programs will prepare a student for employment in the aviation/aerospace industry with employers in the Charleston area such as Boeing Aircraft Company, Boeing suppliers, Charleston Airport Authority, Charleston Air Force Base, and Charleston Aviation Authority. Please see Attachment 2 for more information.

The program leading to the B.S. in Aeronautics is accredited by the Aviation Accreditation Board International (AABI).

### A.S., B.S., Aviation Maintenance

The Aviation Maintenance programs are focused on developing maintenance knowledge and critical-thinking skills that students will apply in the global aviation/aerospace maintenance environments.

The courses within these programs are aimed at developing an understanding of the strategic and global landscape of aviation maintenance with an emphasis on meeting current industry needs. Students choose from two specializations to gain the academic knowledge and develop the skills needed to succeed and lead in this dynamic industry:

**Management:** Provides students an integrated understanding of the theories, concepts, and practical applications of logistics, procurement, production, life cycle analysis, and project management.

**Safety:** Enables students 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.

Students in the Bachelor of Science in Aviation Management program also complete a solid core of courses in general education, which prepares graduates for success in any industry, not just aviation. The Aviation Maintenance Technology Part 65 Certificate may be completed while pursuing a degree program. Please see Attachment 3 for more information.

### A.S., B.S., Technical Management

The Technical Management degree is designed to prepare students for a variety of managerial/supervisory positions in today's business environment. The program will teach students how to think critically, and to employ applied research and problem-solving skills to evaluate, manage, and improve business processes. Over the course of this program, students learn to organize, plan, staff, and coordinate physical assets as well as personnel.

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, ERAU's Technical Management programs could be the key to gaining the experience and knowledge to make the transition to management.

The Technical Management degree combines courses in management, business information systems, and project management into one degree. Please see Attachment 4 for more information.

The program leading to the B.S. in Technical Management is accredited by the Accreditation Council for Business Schools and Programs (ACBSP).

### M.S., Aeronautics

The Master of Science in Aeronautics (MSA) is ERAU's blue-ribbon graduate degree. The MSA program was first taught in the late 1970s in the International Region and subsequently in what is now classified as the Worldwide campus. It has historically been ERAU's most successful master's degree and has accounted for approximately a fifth of all graduations in ERAU- Worldwide for the past 30 years.

Students appreciate the MSA program's solid core of classes, partnered with a range of specialties that are tailored to individual interests. Students will become experts of the tools needed in the development, manufacture, and operation of aircraft and spacecraft, and gain a comprehensive understanding of the infrastructure that supports industry. Please see Attachment 5 for more information.

### M.S., Management

The Master of Science in Management (MSM) degree program provides students with a greater focus on the theory and practice of management than a traditional MBA. Whether students are interested in promoting into management, transitioning from the military, or already have a management position, this program will introduce students to cutting-edge concepts at play in today's global marketplace.

ERAU's goal is to help position students for success by equipping them with both the technical skills and managerial skills to manage resources, lead teams, and apply solutions to organizational challenges. In addition to the core curriculum of MSM studies, students will also have the opportunity to specialize in Human Resources Management, Global Management, Leadership, Project Management or Operations Management. Please see Attachment 6 for more information.

The program leading to the Master's degree in Management is accredited by the Accreditation Council for Business Schools and Programs (ACBSP).

### M.S., Project Management

With the advanced knowledge and skill sets developed through the Master of Science in Project Management, the graduates of this degree will distinguish themselves as outstanding candidates for positions as project managers. This degree also focuses on the Project Management Institute (PMI) project knowledge areas and the corresponding 47 processes that enable graduates to skillfully address major challenges of managing projects in organizations and industry.

The degree provides professionals with a rich knowledge and experience base and the capability to manage projects and project teams, to identify trends, to analyze requirements, to develop strategies, to recommend solutions, and to clearly communicate all skills essential to the success of the project manager. The degree will be beneficial to students who desire to advance and achieve their career objectives and to be valued team members in a variety of industries. Please see Attachment 7 for more information.

The program leading to the M.S. in Project Management is accredited by the Project Management Institute Global Accreditation Center for Project Management Education Programs (GAC).

### Recommendation

The staff recommends that the Committee on Academic Affairs and Licensing commend favorably to the Commission an amendment to the existing license for Embry-Riddle Aeronautical University at Daytona Beach, Florida, to establish a branch of its Worldwide campus in North Charleston, to be implemented immediately upon approval, provided that no state funds be required or requested. Existing programs to be offered at its site in North Charleston are those leading to the Associate of Science degree in (1) Aeronautics, (2) Aviation Maintenance, and (3) Technical Management; the Bachelor of Science degree in (1) Aeronautics, (2) Aviation Maintenance, and (3) Technical Management; and the Master of Science degree in (1) Aeronautics, (2) Management, and (3) Project Management.

The staff also recommends that the Commission authorize staff to issue an amended license to ERAU after inspection by CHE staff of the facilities.

**Supporting Documentation**

[Attachment 1- Enrollment Data Pertaining to Students in South Carolina](#)

[Attachment 2- A.S., B.S. Aeronautics](#)

[Attachment 3- A.S., B.S. Aviation Maintenance](#)

[Attachment 4- A.S., B.S. Technical Management](#)

[Attachment 5- M.S.- Aeronautics](#)

[Attachment 6- M.S.- Management](#)

[Attachment 7- M.S.- Project Management](#)

[Attachment 8- Boeing Letter of Support](#)

[Attachment 9- Pittsburg Institute of Aeronautics Letter of Support](#)

**Attachment 1- Enrollment Data Pertaining to Students in South Carolina**

This data encompasses the students from the Greenville Campus, as well as our Military campuses on Beaufort Marine Corps Air Station, Charleston Air Force Base, and Shaw Air Force Base. Online students residing in South Carolina were also included in this statistical data to ensure that we are providing an accurate overview of all of the students that we serve in the state of South Carolina.

Time period 7/1/14 until 6/30/16

- 893 SC students submitted applications
- 149 SC students earned 161 degrees

Currently

- 870 SC students enrolled at ERAU in 34 degree programs

**Applications Submitted – Degree Programs**

Program	Total
BS Aeronautics	230
BS Technical Management	120
BS Engineering Technology	73
BS Aviation Maintenance	71
AS Aeronautics	38
MS Project Management	35
MS Aeronautics	33
BS Aviation Business Administration	32
AS Engineering Fundamentals	26
AS Aviation Maintenance	24
MS Logistics and Supply Chain Management	22
MBA-Aviation	21
BS Logistics and Supply Chain Management	16
AS Technical Management	15
MS Management	15
AS Aviation Business Administration	12
BS Emergency Services	12
Non-Degree Seeking	12
UG Undecided	9
Part 65 Aviation Maintenance Certificate	8
MS Occupational Safety Management	8
BS Unmanned Systems Applications	7
MS Engineering Management	7
MS Leadership	7
MS Unmanned Systems	7
BS Safety Management	6

MS Information Security and Assurance	6
MS Management Information Systems	5
MS Aviation Finance	3
MS Human Factors	3
BS Aviation Security	2
MS Cybersecurity Mgmt & Policy	2
MS Systems Engineering	2
AS Logistics and Supply Chain Management	1
BS Communication	1
MS Human Security and Resilience	1
GR Undecided	1

Degrees Earned – Degree Programs

Program	Total
BS Aeronautics	36
BS Technical Management	24
MS Aeronautics	20
AS Aeronautics	14
Information Assurance Certificate	13
MS Project Management	13
MS Management	8
AS Technical Management	7
AS Aviation Maintenance	5
MBA-Aviation	5
BS Aviation Maintenance	4
Part 65 Aviation Maintenance Certificate	3
MS Systems Engineering	2
AS Aviation Business Administration	1
BS Aviation Business Administration	1
Airport Planning, Design and Development Certificate	1
MS Leadership	1
MS Logistics and Supply Chain Management	1
MS Occupational Safety Management	1
MS Technical Management	1

SC Students (Current) – Degree Programs

Program	Total
BS Aeronautics	272

BS Technical Management	172
BS Aviation Maintenance	62
MS Aeronautics	60
BS Engineering Technology	44
MS Project Management	38
BS Aviation Business Administration	27
MBA-Aviation	25
MS Logistics and Supply Chain Management	21
AS Aeronautics	19
AS Engineering Fundamentals	17
MS Management	14
BS Logistics and Supply Chain Management	12
AS Aviation Maintenance	10
AS Technical Management	10
AS Aviation Business Administration	7
BS Safety Management	7
MS Engineering Management	7
BS Emergency Services	6
MS Leadership	6
MS Occupational Safety Management	6
BS Unmanned Systems Applications	4
MS Unmanned Systems	4
BS Aviation Security	3
MS Cybersecurity Mgmt & Policy	3
MS Human Factors	3
MS Management Information Systems	3
MS Information Security and Assurance	2
AS Logistics and Supply Chain Management	1
BS Interdisciplinary Studies	1
BS Project Management	1
MS Human Security and Resilience	1
MS Space Education	1
PhD in Aviation	1

## Attachment 2

### **Associate of Science in Aeronautics & Bachelor of Science in Aeronautics**

The Aeronautics program is a degree program that will take a student to new heights in the aerospace industry. The Associate and Bachelor of Science in Aeronautics opens the door to new opportunities in the dynamic aviation/aerospace industry. The curriculum is closely mapped to the needs and demands of the aviation/aerospace industry and to general education guidelines. A student is exposed to a multidisciplinary program with courses of study in human factors, security, aviation safety, occupational safety and health, air traffic control, aircraft maintenance, unmanned vehicles, and aeronautical science. Within this broad base, electives and minors of study are available to allow students to tailor the degree to particular interests and career goals. Electives can be taken by students in aviation related disciplines: Aeronautical Science, Air Traffic Control, Safety, Security, Aviation History, Unmanned Vehicles, Transportation and Engineering.

This degree program will prepare a student for the aviation/aerospace industry. The largest employers in the Charleston area that are a perfect fit for this degree program is as follows: Boeing Aircraft Company; Boeing suppliers; Charleston Airport Authority; Charleston Air Force Base; and Charleston Aviation Authority. See the following for more details.

Boeing South Carolina is home to the company's second 787 Dreamliner final assembly and delivery facility. The site also fabricates, assembles and installs systems for aft (rear) fuselage sections of the Boeing [787 Dreamliner](#) and joins and integrates midbody fuselage sections. Completed aft and midbody sections are delivered to final assembly in Everett, Wash., via Dreamlifter, or are moved across the campus to final assembly in North Charleston, S.C.

In 2011, Boeing opened the first of three facilities at the 141-acre north campus, 10 miles (16 km) from Boeing South Carolina's main campus. [At the Interiors Responsibility Center South Carolina](#), teammates manufacture 787 interior parts, including stow bins, closets, partitions, class dividers, floor-mounted stow bins used by flight attendants, overhead flight-crew rests, overhead flight attendant crew rests, video-control stations and attendant modules for 787s assembled in South Carolina. In 2014, the north campus expanded with the opening of the Boeing Research & Technology Center, which focuses on advanced manufacturing technology and composite fuselage manufacturing; and [Propulsion South Carolina](#), where the design and assembly of the 737 MAX engine nacelle inlet will be done. The Propulsion South Carolina team is also designing the 737 MAX engine nacelle fan cowl and the 777X nacelle.

The forecast for growth in the airline industry as predicted by Boeing shows a large increase in the need for aircraft. Economically, statistics show from 2016 to 2035 a growth, for the airline industry, this mean a growth in passenger and cargo requirements and this leads to a need for more aircraft. From Embry-Riddle University standpoint this demonstrate the need for more aerospace/aviation educated students. Below is the Long-Term Forecast from Boeing.

This program prepares graduates for a careers in the aviation, aerospace, and aeronautics fields. For any educational opportunity to truly serve a potential population, it is important to identify specific Jobs that the Degree Program is targeting for the prospective market. For our opportunities in SC, industry professionals work in the following areas:

- Air Crew functions
- Ground Crew functions
- Operations and Planning
- Engineering Design and Manufacturing
- Education and Training
- Research
- Accident Investigation/Prevention
- Airport Management
- Air Traffic Control
- Aviation Maintenance
- Aviation Safety
- Aircraft Manufacturing
- Avionics & Electronics
- Consulting
- Customer Service
- Education/Instruction/Training
- Ground Support Services
- Operations
- Pilot
- Management
- Sales and Marketing
- Technical Writing

Potential employers by discipline include the following:

- Aerospace Industry
- Air Services
- Aircraft Manufacturers
- Air Services
- Airlines
- Airports
- Consulting Firms
- Corporate Flight Departments
- Defense Contractors
- Federal Research Labs
- Fixed Base Operators
- Flight Schools
- Government Agencies
- Helicopter Manufacturers
- Insurance Companies
- Manufacturing Industry
- Multinational Corporations

Further justification for the need for this program in the Greenville and North Charleston areas. Depending on the chosen definition, transportation's share of GDP estimates cited can vary between 3% and more than 10%. South Carolina Employers share in the creation of the GDP:

Charleston Area [http://www.bls.gov/oes/current/oes\\_16700.htm](http://www.bls.gov/oes/current/oes_16700.htm)

JB Charleston

Boeing

Charleston International Airport

Atlantic Aviation CHS

Greenville Area [http://www.bls.gov/oes/current/oes\\_24860.htm](http://www.bls.gov/oes/current/oes_24860.htm)

Greenville-Spartanburg International Airport fedex jobs in

Donaldson Center Airport (economic impact study)

FedEx

Stevens Aviation

Lockheed Martin

Axon Hentzen Aerospace

Transportation production or supply measures estimate the for-hire transportation component as equal to 2.9% of GDP and the own-account component as at least an additional 2% of GDP for a combined total of nearly 5% of GDP. Air transportation is an important component of the overall transportation industry.

Other aeronautical companies shown interest in these types of degree programs. Embry Riddle has agreements with many companies in many different states where campuses reside. Boeing is just one example that also exists in South Carolina. Boeing in Washington state is a good example where 42% of our students work at Boeing facilities in the Seattle area. Thousands of our students are active duty and reserve military service members.

As a way to extend and justify a hierarchy of degree offerings, there is a need for justifying how a Bachelor's degree supports the need for Graduate degrees. This happens in the following manner:

- Earning Potential. Advanced degrees offer more to the beneficiary as well as to the company
- BLS Statistics on educational attainment for workers 25 years and older by detailed occupation. This identifies industry jobs and the level of education in those jobs as a partial validation of industry standards.
- Some vocations show some level of advanced degrees as lower percentages than at the Bachelor level, however, these are supporting management level positions



<b>Airline pilots, copilots, and flight engineers{</b>	<b>0.5%</b>	<b>4.8%</b>	<b>13.7%</b>	<b>6.8%</b>	<b>60.8%</b>	<b>11.2%</b>	<b>2.3%</b>
<b>Aerospace engineers</b>	<b>0.1</b>	<b>2.3</b>	<b>6.5</b>	<b>5.2</b>	<b>48.1</b>	<b>32.7</b>	<b>5.1</b>
<b>Aerospace engineering and operations technicians</b>	<b>4.0</b>	<b>22.6</b>	<b>33.5</b>	<b>21.6</b>	<b>15.2</b>	<b>2.6</b>	<b>0.5</b>
<b>Aircraft mechanics and service technicians</b>	<b>2.7</b>	<b>27.2</b>	<b>39.6</b>	<b>20.4</b>	<b>8.7</b>	<b>1.2</b>	<b>0.2</b>
<b>Aircraft structure, surfaces, rigging, and systems assemblers</b>	<b>11.8</b>	<b>38.0</b>	<b>40.0</b>	<b>6.2</b>	<b>3.3</b>	<b>0.7</b>	<b>0.0</b>
<b>Aircraft cargo handling supervisors</b>	<b>8.5</b>	<b>34.4</b>	<b>29.8</b>	<b>9.7</b>	<b>15.2</b>	<b>2.2</b>	<b>0.3</b>
<b>Commercial pilots</b>	<b>0.5</b>	<b>4.8</b>	<b>13.7</b>	<b>6.8</b>	<b>60.8</b>	<b>11.2</b>	<b>2.3</b>
<b>Air traffic controllers</b>	<b>0.3</b>	<b>13.2</b>	<b>33.4</b>	<b>16.2</b>	<b>32.2</b>	<b>4.5</b>	<b>0.3</b>

<b>Airfield operations specialists</b>	<b>0.3</b>	<b>13.2</b>	<b>33.4</b>	<b>16.2</b>	<b>32.2</b>	<b>4.5</b>	<b>0.3</b>
<b>Flight attendants</b>	<b>0.5</b>	<b>14.2</b>	<b>33.9</b>	<b>13.4</b>	<b>33.5</b>	<b>3.8</b>	<b>0.7</b>

### **Attachment 3**

#### **Associate of Science in Aviation Maintenance (ASAvM) & Bachelor of Science in Aviation Maintenance (BSAvM)**

The Associate of Science in Aviation Maintenance (ASAvM) and Bachelor of Science in Aviation Maintenance (BSAvM) degrees are focused on developing maintenance knowledge and critical-thinking skills that students will apply in the global aviation/aerospace maintenance environments.

The courses within these programs are aimed at developing an understanding of the strategic and global landscape of aviation maintenance with an emphasis on meeting current industry needs. Students choose from two specializations to gain the academic knowledge and develop the skills needed to succeed and lead in this dynamic industry:

**Management:** Provides students an integrated understanding of the theories, concepts, and practical applications of logistics, procurement, production, life cycle analysis, and project management.

**Safety:** Enables students 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.

Students in the BSAvM program also complete a solid core of courses in general education, which prepares graduates for success in any industry, not just aviation.

The Aviation Maintenance Technology Part 65 Certificate may be completed while pursuing a degree program. For students who already satisfy experience requirements established by the FAA to qualify for license testing, the Certificate in Aviation Maintenance Technology will help to strengthen skills for the written, oral, and practical examination for the Airframe and Powerplant License.

The Aviation Maintenance Technology Certificate provides broad knowledge of general aeronautics, airframe systems, and powerplant systems. The curriculum consist of six courses taken in-residence or online. The six courses consist of: AMNT 240 General Aeronautics and Applications; AMNT 260 Aircraft Electrical Systems Theory; AMNT 270 Airframe Structures and Applications; AMNT 271 Airframe Systems and Applications; AMNT 280 Powerplant Theory and Applications; and AMNT 281 Aircraft Propulsion Systems and Applications.

With a BSAvM or ASAvM degree there are many career opportunities that are available to graduates. Graduates are well-prepared to take management positions mapped to the needs and demands of the aviation/aerospace maintenance industry. Aviation maintenance technicians find employment worldwide at operating equipment manufacturers (OEM), airlines in maintenance and engineering, maintenance repair and overhaul (MRO) organizations, commuter airlines, airfreight operators, air taxi operators, corporate flight departments, private aircraft owners, and many other specialized aviation services.

Graduates are employed by companies in the following areas:

Hydraulic Components and System Designing; Manufacturing Engineering; Technical Writing; Aerospace Products and Parts Manufacturing; Aerospace Systems Development; Air Transportation Maintenance; Gas Turbine Industry; Electromagnetic Technology; Aircraft & Powerplant (A&P) Mechanics/Aircraft Technicians/Aircraft Maintenance Engineer; Avionics and Electronics Technicians; Maintenance

Directors; Maintenance Technicians; Quality Assurance/Quality Control Inspectors; Aircraft manufacturing; Fixed Base Operator (FBO) technicians/supervisors; and Surveillance Technology.

The BSAvM and ASAvM prepare graduates in the following career fields:

Director of GE Flight Test; Military Commanders; CEO's; Project Managers; Program Directors; Flight Test Engineers; Directors of Maintenance; Maintenance Superintendents; Maintenance Supervisors; Corporate Legal Counsel; Former Deputy Commandant of the Marine; Corps for Aviation; Former NASA official leading the Shuttle/MIR program and Tethered Space; Flight Program; and Certified Consulting Meteorologist and "Hurricane Hunter".

Examples of employers include:

Military – Uniformed and DoD Civilian (South Carolina features several military installations important to the aerospace industry: Charleston Air Force Base, Marine Corps Air Station Beaufort, SC, McEntire Joint National Guard Base, Eastover, S.C. Army National Guard Aviation Support Facility, Greenville, Shaw Air Force Base, Sumter, Fort Jackson, Columbia, SPAWAR Systems Center Atlantic, and Marine Corps Recruit Depot, Parris Island, SC.); Government – FAA (South Carolina has six international airports that serve over 6 million passengers per year that employ in excess of 5,000 FAA staff. In addition there are almost 40 domestic airports with over 1,500 employees), Dept. of Agriculture (Forestry), Dept. of Interior; Airlines – American, Delta, United; Maintenance, Repair and Overhaul (MRO) providers – AAR Corporation, TIMCO, L-3 Communications, ST Aerospace, Lufthansa Technik; Aircraft Manufacturers – Bombardier, Gulfstream, Boeing, Lockheed Martin, General Atomics, Hawker-Beechcraft, Northrop-Grumman, Sikorsky; Component Manufacturers/Service Providers – BAE Systems, Honeywell International, SAIC; and FBOs – Signature, Landmark, Million Air.

Examples of jobs that are currently available for graduates with this degree are:

- A&P Mechanic, Air Wisconsin Airlines
- King Air A&P Mechanic, HSGI
- A&P Mechanic, Air T Mountain Air Cargo
- Hydraulics Technician 4, Lockheed Martin
- A&P Mechanic, APA Services
- A&P Mobile Maintenance Mechanic, Stevens Aviation
- Mechanic A&P Sr., Lockheed Martin
- Maintenance Shift Supervisor, Air Wisconsin Airlines

Information from Payscale, Inc.

Aircraft and Powerplant (A&P) Mechanic	~ \$44,000	Medium	~ \$72,200	Low
Aircraft Maintenance Supervisor	~ \$69,800	Medium	~ \$69,800	Medium
Avionics Technician	~ \$40,800	Medium	~ \$61,900	Medium
Electronics Technician	~ \$40,200	High	~ \$51,500	High
Maintenance Director	~ \$42,600	Medium	~ \$73,100	Medium
Maintenance Technician	~ \$30,200	High	~ \$42,400	Medium
Mechanic Aircraft	~ \$43,300	Medium	~ \$61,500	Medium
Quality Assurance (QA) / Quality Control (QC) Insp..	~ \$36,100	High	~ \$53,900	High

Depending on the chosen definition, transportation's share of GDP estimates cited can vary between 3% and more than 10%. South Carolina employers share in the creation of the GDP:

Charleston Area: [http://www.bls.gov/oes/current/oes\\_16700.htm](http://www.bls.gov/oes/current/oes_16700.htm) - JB Charleston; [Boeing](#); [Charleston International Airport](#); and Atlantic Aviation CHS.

Greenville Area: [http://www.bls.gov/oes/current/oes\\_24860.htm](http://www.bls.gov/oes/current/oes_24860.htm) - [Greenville-Spartanburg International Airport](#); fedex jobs in [Donaldson Center Airport \(economic impact study\)](#); FedEx; Stevens Aviation; Lockheed Martin; and Axon Hentzen Aerospace.

Transportation production or supply measures estimate the for-hire transportation component as equal to 2.9% of GDP and the own-account component as at least an additional 2% of GDP for a combined total of nearly 5% of GDP.

Air transportation is an important component of the overall transportation industry.

Embry Riddle has agreements with many companies in many different states where campuses reside. Boeing is just one example that also exists in South Carolina. Boeing in Washington State is a good example where 42% of our students work at Boeing facilities in the Seattle area. Thousands of our students are active duty and reserve military service members. Additionally, many MROs (e.g. Pratt and Whitney and United Airlines) have requested professional MRO education.

ERAU-Worldwide has been linked to serving the demands of the aviation industry for many decades through the military and commercial aviation businesses. South Carolina has all five branches of the military represented and these are traditional student recruitment opportunities. Commercial, in particular Boeing, Lockheed Martin and commercial airports are also demands for aviation maintenance job opportunities. The ASAvM and BSAvM degrees will serve the traditional opportunities and those particular to South Carolina. Both degrees and the Aviation Maintenance Technology Certificate is in demand and relevant to South Carolina's future needs.



## Attachment 4

### **Associate of Science in Technical Management & Bachelor of Science in Technical Management**

The ASTM/BSTM programs within the Worldwide College of Business are a growing educational endeavor. Based on data from the most current academic year (2015-2016), the current number of students in both programs is 3,282. This past year more than 500 students received degrees in these programs.

#### **ASTM/BSTM Student Data (Based on 2015-2016 Academic Year Figures)**

- Student Registrations- 7,331
- Student Headcount- 3,282
- Student Prospects- 984
- Students Applied- 1,693
- Students Admitted- 1,220
- New Students- 746
- Returning Students- 189
- Continuing Students- 2,347
- Degrees Awarded- 513
- Source: ERAU, WW, Dashboard, September 2016
- 

The BSTM Program currently has nine majors, which are listed below. Two of these majors, Human Resources Management and Aviation Management were added within the year in response to the career needs of our students. In addition, another major, Homeland Security Management, is currently being developed. The BSTM Program will continue to stay in the forefront of today and tomorrow's educational opportunities for our students.

There are nine minors available to BSTM students. This allows students to expand their educational interests.

#### **ASTM/BSTM Majors and Minors for Potential Students Living and Working in South Carolina**

- Majors-
  - Technical Management
  - Project Management
  - Management of Information Systems
  - Information Security
  - Occupational Safety and Health
  - Engineering Sciences
  - Facilities and Construction
  - Human Resources Management
  - Aviation Management
  - Homeland Security Management (being currently developed)
- Minors-

- Aviation Management
- Human resources
- Logistics Management
- Management
- Management Information Systems
- Marketing
- Project Management
- Technical Management
- Airport Management

Source: ERAU, WW Catalog, 2016-2017

The ASTM/BSTM Programs are focused on assisting our students fill both the current and future career needs of business. The South Carolina job market is expanding based on statistics developed by the South Carolina Department of Commerce (see below). With employment in South Carolina increasing by 2.6% over last year, it imperative that ERAU and its programs, such as the ASTM/BSTM programs, furnish the state with students with the right educational skills.

One of the largest growing firms in South Carolina is Boeing. Besides ERAU being an aviation/aerospace-based university, many of the courses within the ASTM/BSTM Programs concentrate on such topics as aviation management, airport management, and aviation information systems.

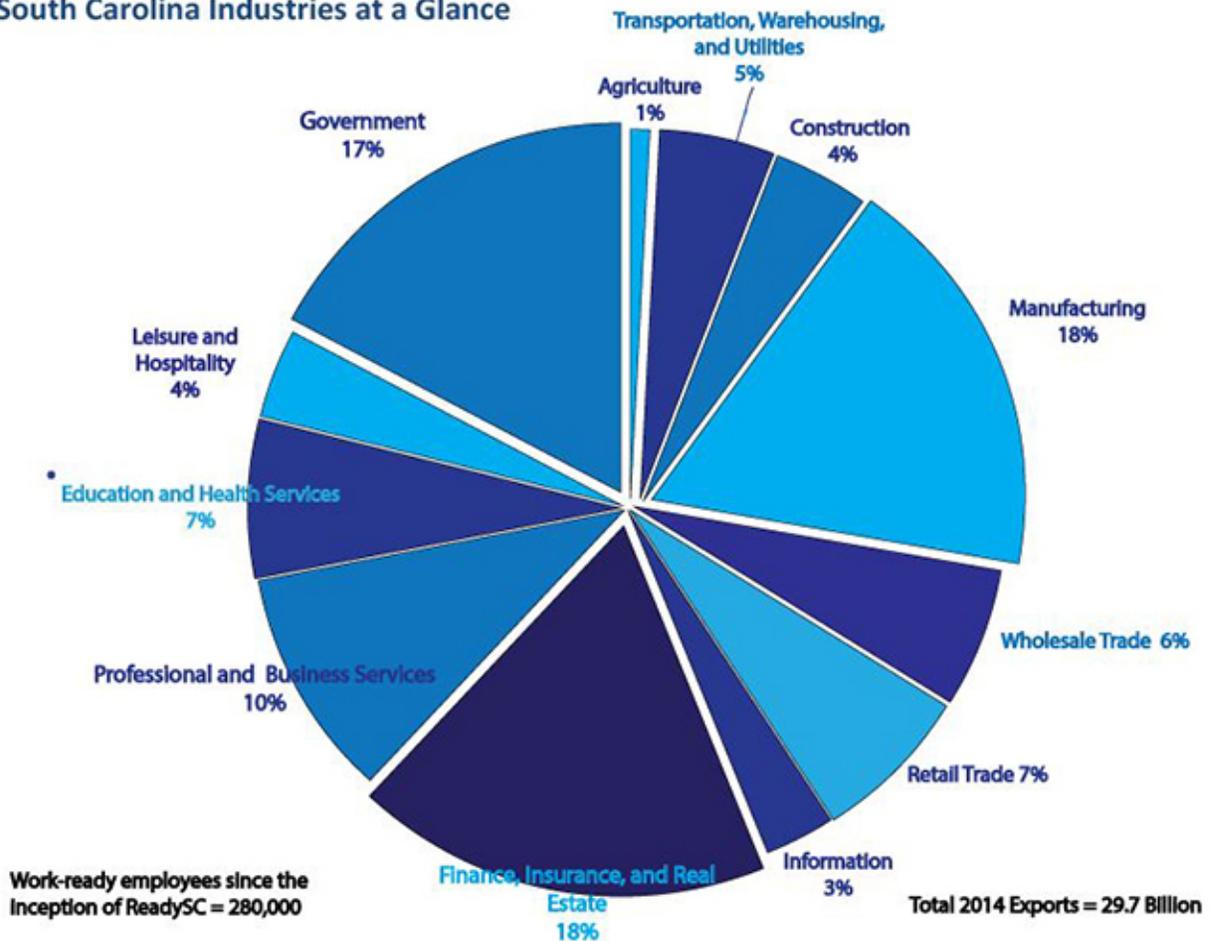
The ASTM/BSTM programs also offer a diverse number of courses in a number of fields, such as information systems, facilities and construction, technical management, and project management. The ASTM/BSTM courses, majors, and minors match up quite well with the various key industries within South Carolina, as stated below.

### **Local or Regional Employment Opportunities**

- August 2016 Labor Force Numbers-
  - Total Labor Force- 2,297,874 (August 2015- 2,252,788)
  - Employed- 2,180,876 (August 2015- 2,126,323)
  - Unemployed- 116,998 (August 2016- 126,465)
  - Unemployment Rate- 5.1% (August of 2015- 5.6%)
  - Annual Increase in Employment +2.6%
  - Source: South Carolina Works on Line, September 2016
- Leading Employers in South Carolina-
  - Boeing
    - Jobs in South Carolina- 8,074
    - Key Project- Construction of 787 Dreamliner
    - Current available related job positions and departments- Project Management Specialist, Transportation Manager and Management; Information Technology Center and Research & Technology Center.
    - Source: Boeing website, September 2016
  - Aviation Industry (outside of Boeing)
    - Jobs in South Carolina- 25,000

- Associated Firms- Lockheed Martin, BAE Systems, Champion Aerospace, and others.
- Source: South Carolina Department of Commerce Website
- BMW
  - Jobs in South Carolina- 8,000
  - 297,326 vehicles manufactured in SC plants in 2013
  - Source: South Carolina Department of Commerce Website
- Automobile Industry (outside of BMW)
  - Jobs on South Carolina- 46,700
  - 250 firms
  - Noted automobile firms doing business in South Carolina- Daimler AG, Michelin, Bosch, Bridgestone Tire
  - Source: South Carolina Department of Commerce Website

### South Carolina Industries at a Glance



Source: South Carolina Department of Commerce Website, September 2016

Examples of jobs that are currently available for graduates of this program are:

- Program Coordinator I, State of South Carolina

- Manufacturing Production Supervisor, Columbia SC
- First Line Supervisor, Invista
- Program Assistant, SC Department of Health & Environmental Control
- Manager of Programs, Richland County Government

As a sample, ASTM-BSTM Graduates would find career positions in the following South Carolina industries:

- Finance, Insurance and Real Estate (18% of the total SC industries)- BSTM Majors- Technical Management, Project Management, Management of information Systems, and Information Security.
- Government (17% of the total SC industries)- All BSTM Majors
- Professional and Business Services (10% of the total SC industries)- All BSTM Majors
- Educational and Health Services (7% of the total of SC industries)- All BSTM Majors
- Construction (4% of the total SC industries)- BSTM Major- Facilities and Construction
- Information (3% of the total SC industries)- BSTM Majors- Management of Information Systems and Information Security
- Source- South Carolina Department of Commerce Website, September 2016.

The ASTM/BSTM Programs would seem well suited for today and tomorrow's South Carolina students and for fulfilling the job needs in many of the industries functioning within the state.

## Attachment 5

### **Master of Science in Aeronautics (MSA)**

The MSA has been our Blue-Ribbon graduate degree that was first taught in the late 1970s in the International Region and subsequently in what is now classified as Worldwide. It has historically been our most successful master's degree that has accounted for approximately a fifth of all graduations in Embry Riddle Worldwide for 30 years. Initially, the majority of students were military, both Officers and Enlisted; in the past 15 years this has shifted so that almost half of graduates are not employed by the military. The MSA is the largest individual aeronautical degree by registration with an average of over 3,000 students registered over the past 5 years.

The MSA degree has 9 specializations that have been added to support the industries' developing needs. All specializations have been as a result of our close work with an Industry Advisory Board (IAB) that ensure the needs of students are matched to those that are demanded. The Embry-Riddle Aeronautical University Worldwide Industry Advisory Board was created in June 2008. The primary role of the Board is to provide advice and guidance to Embry-Riddle Worldwide on course content and programs, ensuring they are relevant and meet the needs of today's aerospace leaders and business professionals.

Due to the nature and mission of Embry-Riddle Worldwide, meetings are held at various locations around the country. Meetings have been held at Atlanta, Georgia Airport Authority; Boeing's facility in Long Beach, Calif.; Federal Express's headquarters in Memphis, Tenn.; Lockheed-Martin's manufacturing facility in Fort Worth, Texas; the Metropolitan Nashville (Tenn.) Airport Authority; NetJets' corporate headquarters in Columbus, Ohio; United's headquarters in Chicago; Nellis Air Force Base in Nevada; and ERAU's Worldwide Headquarters in Daytona Beach, Fla.

Thus, the developments of the MSA has ideally developed a Master's Degree directly suitable for the State of South Carolina.

With an MSA degree there are many career opportunities that are available to graduates. The uniqueness of this degree is that it is general enough to incorporate principal aspects of the industry from pilots to maintainers, engineers to managers.

This list below is comprehensive not exhaustive:

Air Crew functions; Ground Crew functions; Operations and Planning; Operations and Planning; management; Engineering Design and Manufacturing & Management; Maintenance Management; Education and Training; Research; Accident Investigation/Prevention; Airport Management; Air Traffic Control; Aviation Maintenance; Aviation Safety; Aircraft Manufacturing; Avionics & Electronics; Consulting; Customer Service; Education/Instruction/Training; Ground Support Services; Operations; Pilot; Management  
Sales and Marketing; Technical Writing; Aviation Project Management; Both A&P and EASA licenses.

Students that are considering studying this course come from a various background. Given the specializations available the prerequisite degrees are varied and numerous. For example, mechanical

engineering, mathematics, project management, all sciences. The degree builds on knowledge and with its core courses taken at the start equips all to succeed.

South Carolina ([www.scaerospace.com](http://www.scaerospace.com)) has the following military bases:

South Carolina features several military installations important to the aerospace industry: Charleston Air Force Base, Marine Corps Air Station Beaufort, SC, McEntire Joint National Guard Base, Eastover, S.C. Army National Guard Aviation Support Facility, Greenville, Shaw Air Force Base, Sumter, Fort Jackson, Columbia, SPAWAR Systems Center Atlantic, and Marine Corps Recruit Depot, Parris Island, SC.

The Military in all 5 branches has studied this degree and we expect this to continue as normal across the military as it has been for a long time. The success in the military has been three-fold, to enable enlisted to be promoted to NCO or Officer Rank, equip the Veterans develop their resume for life after the military. In the State of South Carolina there are reported to be 50,426 active military ([www.governing.com](http://www.governing.com)). Many Veterans complete their tours of duty in their home state and this offers those an excellent opportunity to complete their education.

South Carolina has 6 international Airports that serve over 6 million passengers per year, they employ in excess of 5000 staff (FAA) with more than 20% being potential careers for MSA graduates. In addition there are almost 40 domestic airports with over 1500 employees.

Commercially, there is a long list of Aviation companies in South Carolina, from Boeing to Lockheed Martin. ERAU graduates are employed in all major aviation, aviation related and support companies in the USA. The growth over the last few years has been enormous, 2014 an increase of \$2 Billion to \$19 Billion ([www.scaerospace.com](http://www.scaerospace.com)). The councils study showed that for every 10 jobs created in component companies there are 13 in the wider community for the State. The average total compensation for private sector aerospace employees remained at \$70,000 per year, and still far exceeds the state average of \$41,338, and the manufacturing industry as a whole, which averages \$53,350. The growth is expected to continue and all evidence expects reasonable increases. Due to the comprehensive list of potential jobs no single category exists from the bbls.gov. If Air Traffic Controllers and Management is considered then the average salary of an Air Traffic Controller in Charleston, South Carolina is \$136,489 (BLS 53-2021) with retirements in the next 7 years expecting to account for 40% of all those employed. The Main airports now have aggressive plans to expand capacity and that will need professional staff. Boeing are ramping up production at their plant in North Charleston. ERAU Worldwide have a significant number of Alumni and have been a university of choice for Boing with many partnerships, intern and employees with the MSA degree.

Examples of jobs that are currently available in South Carolina for graduates of this program include:

- Technical Training Instructor, Boeing
- Maintenance Operations Center, Lockheed Martin
- Operational Excellence Manager, B/E Aerospace
- Manufacturing Manager, UTC Aerospace Systems
- Value Stream Manager, GKN Aerospace
- Manufacturing Multi-Skilled Assessor, State of South Carolina

ERAU-Worldwide has been linked to serving the demands of the aviation industry for many decades. This has been through the military and commercial sides. South Carolina has all 5 branches of the military represented and these are traditional student recruitment opportunities. Commercial, in particular Boeing, Lockheed Martin and commercial airports are also both demands for studies and job opportunities. The MSA degree will serve the traditional opportunities and those particular to South Carolina. Its historical developments and specializations offers a degree that is in demand and relevant to the States needs and future demands.

## **Attachment 6**

### **Master of Science in Management (MSM)**

The MSM Programs within the Worldwide College of Business is a growing educational endeavor. Based on data from the most current Academic Year (2015-2016), the current number of students in the MSM program is 535. This past year more than 105 students received degrees in these programs.

#### **MSM Student Data (Based on 2015-2016 Academic Year Figures)**

- Student Registrations- 1,239
- Student Headcount- 505
- Student Prospects- 216
- Students Applied- 314
- Students Admitted- 254
- New Students- 146
- Returning Students- 35
- Continuing Students- 324
- Degrees Awarded- 105

Source: ERAU, WW, Dashboard, October 2016

The MSM program currently has five majors (specializations), which are listed below. The MSM program will continue to stay in the forefront of today and tomorrow's educational opportunities for our students.

#### **MSM Majors for Potential Students Living and Working in South Carolina**

- Majors-
  - Leadership
  - Project Management
  - Operations Management
  - Global Management
  - Human Resources Management

Source: ERAU, WW Catalog, 2016-2017

The MSM program is focused on assisting our students fill both the current and future career needs of business. The South Carolina job market is expanding based on statistics developed by the South Carolina Department of Commerce (see below). With employment in South Carolina increasing by 2.6% over last year, it imperative that ERAU and its programs, such as the MSM Program, furnish the state with students with the right educational skills.

One of the largest growing global firms in South Carolina is Boeing. Besides ERAU being a global aviation/ aerospace-based university, many of the courses within the MSM Program concentrate on such topics as global management, operations management, and project management.

The MSM program also offer a diverse number of courses in a number of fields, such as finance, information systems, human resource management, organizational behavior, and business analytics.

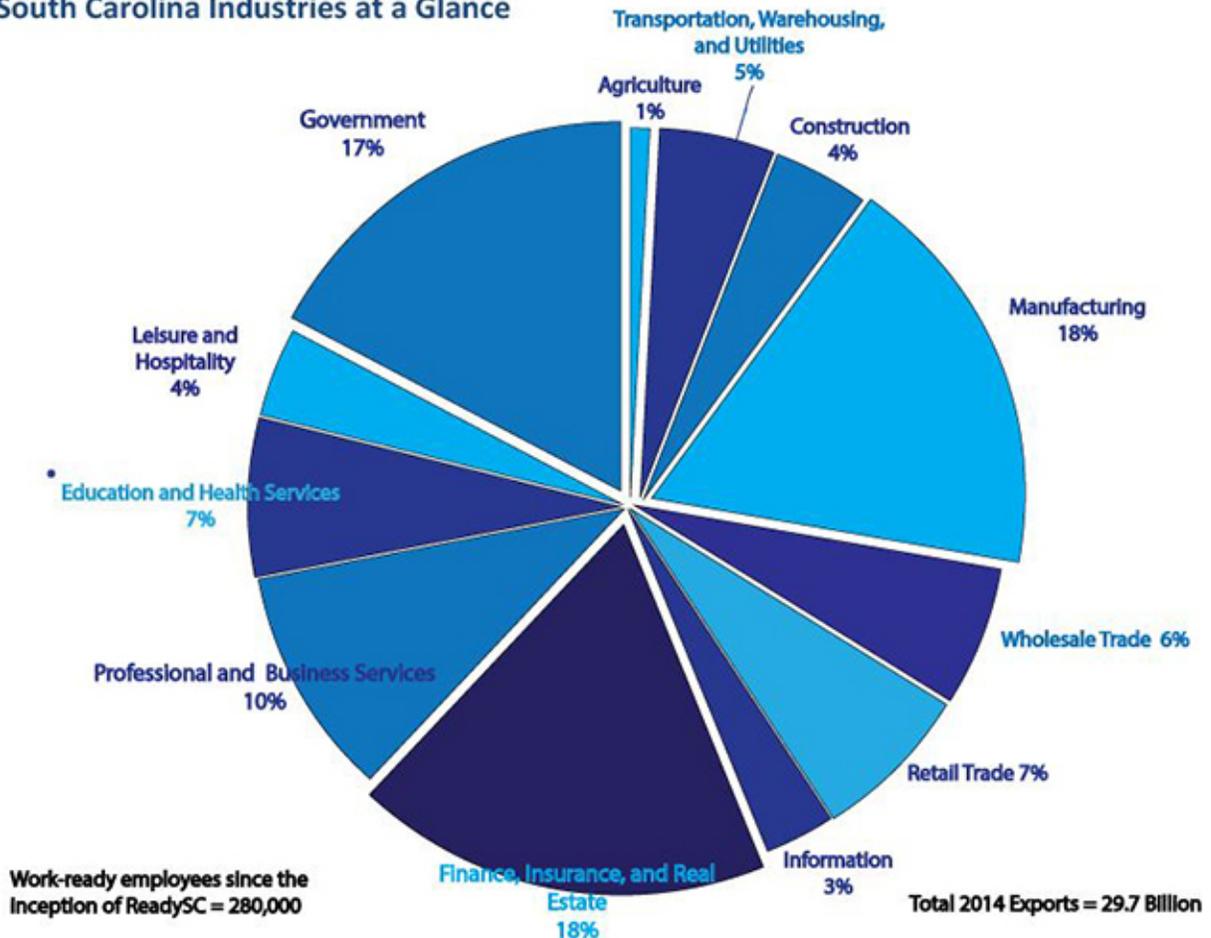
The MSM courses and majors, match up quite well with the various key industries within South Carolina, as stated below.

### Local or Regional Employment Opportunities

- August 2016 Labor Force Numbers-
  - Total Labor Force- 2,297,874 (August 2015- 2,252,788)
  - Employed- 2,180,876 (August 2015- 2,126,323)
  - Unemployed- 116,998 (August 2016- 126,465)
  - Unemployment Rate- 5.1% (August of 2015- 5.6%)
  - Annual Increase in Employment +2.6%
  - Source: South Carolina Works on Line, September 2016
- Leading Employers in South Carolina-
  - Boeing
    - Jobs in South Carolina- 8,074
    - Key Project- Construction of 787 Dreamliner
    - Current available related job positions and departments- Project Management Specialist, Transportation Manager and Management; Information Technology Center and Research & Technology Center.
    - MSM Majors that match up to the needs of Boeing- global management, operations management, project management, human resources management, and leadership.
    - Source: Boeing website, September 2016
  - Aviation Industry (outside of Boeing)
    - Jobs in South Carolina- 25,000
    - Associated Firms- Lockheed Martin, BAE Systems, Champion Aerospace, and others.
    - MSM Majors that match up to the needs of the aviation industries- global management, operations management, project management, human resources management, and leadership.
    - Source: South Carolina Department of Commerce Website
  - BMW
    - Jobs in South Carolina- 8,000
    - 297,326 vehicles manufactured in SC plants in 2013
    - MSM Majors that match up to the needs of BMW- global management, operations management, project management, human resources management, and leadership.
    - Source: South Carolina Department of Commerce Website
  - Automobile Industry (outside of BMW)
    - Jobs on South Carolina- 46,700
    - 250 firms
    - Noted automobile firms doing business in South Carolina- Daimler AG, Michelin, Bosch, Bridgestone Tire

- MSM Majors that match up to the needs of the automobile industry- global management, operations management, project management, human resources management, and leadership.
- Source: South Carolina Department of Commerce Website

### South Carolina Industries at a Glance



Source: South Carolina Department of Commerce Website, September 2016

As a sample, MSM Graduates would find career positions in the following South Carolina industries:

- Finance, Insurance and Real Estate (18% of the total SC industries MSM Majors- Global Management, Project Management, and Leadership.
- Manufacturing (18% of total SC industries)- MSM Majors- Operations Management, Leadership, and Project Management.
- Government (17% of the total SC industries)- All MSM Majors
- Professional and Business Services (10% of the total SC industries)- All MSM Majors
- Educational and Health Services (7% of the total of SC industries)- All MSM Majors

- Transportation (5% of the total SC industries) - MSM Majors- Operations Management, Global Management, Project Management, and Leadership.
  - Information (3% of the total SC industries)- MSM- Operations Management Systems, Leadership, and Global Management
- Source- South Carolina Department of Commerce Website, September 2016.

Examples of jobs that are currently available for graduates with this degree in South Carolina are:

- IBM Project Leader, GE Power
- Operational Excellence Manager, B/E Aerospace
- Sr. Program Manager, GKN Aerospace
- Aviation Project Manager, Parrish and Partners LLC
- Sr. Manufacturing Manager, GE Aviation
- Project Management Purchasing, Bosch

The MSM program would seem well suited for today and tomorrow's South Carolina students and for fulfilling the job needs in many of the industries functioning within the state.

## Attachment 7

### **Master of Science in Project Management**

The Embry-Riddle Worldwide College of Business Master of Science Degree in Project Management is accredited by the Project Management Institute Global Accreditation Center for Project Management Education Programs (GAC). Degree programs that achieve GAC accreditation must demonstrate and meet the GAC's rigorous global standards of accreditation, which include an assessment of each program's objectives and outcomes, faculty and student evaluations, onsite and online resources, annual self-evaluation, and proof of continuous improvements in the area of project management education. GAC accreditation ensures the quality of academic degree programs and their graduates in order to meet the standards of the rapidly growing field of project management.

Much of the course work is collaborative – just as it is in the workplace. The program curriculum was developed entirely by certified PMPs®, the recognized global standard for project management knowledge and experience issued by the PMI®. PMI® is the worldwide leader in the development of standards for the evolving profession of Project Management.

Globalization is affecting almost every aspect of the world's economy and domestic business operations. Therefore, the need for project managers exists in every industry, from aviation/aerospace, healthcare, telecommunications and finance to IT, construction, and the military. This is especially true in Charleston, South Carolina – which supports key industries such as Transportation (to include Aerospace & Automotive), Security, Medical, and Energy (Charleston County Economic Development, n.d.).

With the advanced knowledge and skill sets developed through the Master of Science in Project Management, the graduates of this degree will distinguish themselves as outstanding candidates for positions as project managers. This degree also focuses on the Project Management Institute (PMI) project knowledge areas and the corresponding 47 processes that enable graduates to skillfully address major challenges of managing projects in organizations and industry. The degree provides professionals with a rich knowledge and experience base and the capability to manage projects and project teams, to identify trends, to analyze requirements, to develop strategies, to recommend solutions, and to clearly communicate all skills essential to the success of the project manager. The degree will be beneficial to students who desire to advance and achieve their career objectives and to be valued team members in a variety of industries.

According to the Project Management Institute (PMI) labor statistics and reported with the 9<sup>th</sup> Edition of the Earning Power – Project Management Salary Survey, the median analyzed salary for project managers in the United States is \$108,200 (PMI, 2015). According to Indeed.com, there are 701 active vacancies in the project management field within the Charleston, South Carolina community (Indeed.com, n.d.). Monster.com reports 340 project management job vacancies near Charleston, SC (Monster.com, n.d.). Lastly, on Career Builder there are 87 project manager jobs posted in Charleston, SC (CareerBuilder.com, n.d.)

The United States Department of Labor reports doesn't have a specific category for Project Management there are two key career fields that employ project managers. For example, "computer and information systems managers, often called information technology (IT) managers or IT project **managers**, plan, coordinate, and direct computer-related activities in an organization. They help

determine the information technology goals of an organization and are responsible for implementing computer systems to meet those goals” and “Construction managers plan, coordinate, budget, and supervise construction projects from start to finish” (Occupational Outlook Handbook n.d.) According to the US Department of Labor reports, there are 540 construction manager jobs (see Figure 1) and 590 computer/IT manager jobs (see Figure 2) in the Charleston, South Carolina market. As shows in both Figure 1 & Figure 2 the Charleston area has the largest job density in these two career fields within the state of South Carolina.

PMI also commissioned a research study to better understand project management education programs. The results showed that all project management degree programs experienced growth in enrollment (some with dramatic growth). Institutions surveyed believe the primary benefits of their programs have been to provide students with quantitative skills necessary for management and technology functions in industry, thereby; providing students with distinct advantages in finding attractive workplace positions upon graduation.

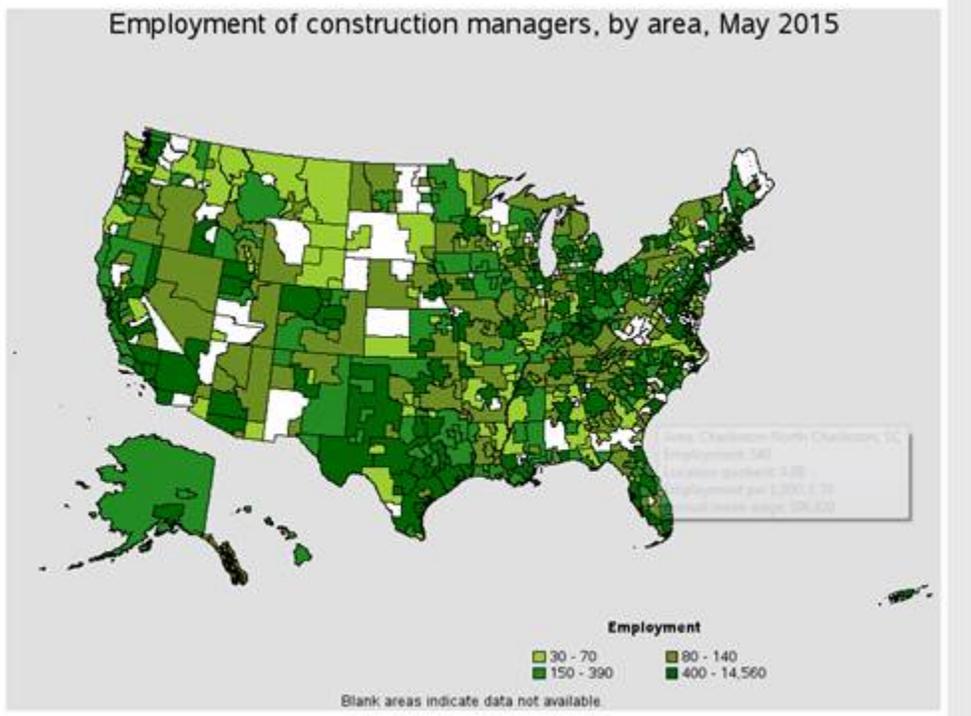
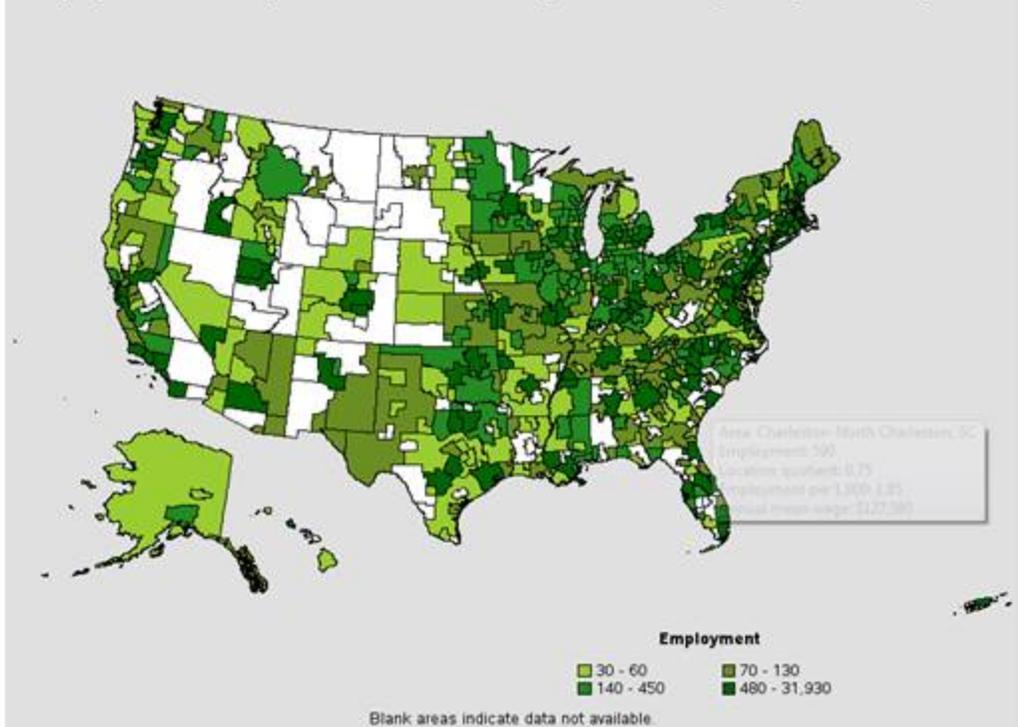


Figure 1: SOURCE: <http://www.bls.gov/oes/current/oes119021.htm>

## Employment of computer and information systems managers, by area, May 2015



Examples of jobs that are currently available for graduates in this field in South Carolina are:

- General Operations Manager, LeapTech Composite Manufacturing
- Manager, Project Management, AAIPHARMA
- Construction Quality Control Manager, RC Construction
- Information Systems Analyst, Lockheed Martin
- Project Management Senior Manager, Lockheed Martin
- Aviation Project Manager, Parrish and Partners LLC
- Project Manager, JR Automation Technologies
- Project Manager, Faithful + Gould

Attachment 8

Dear Sir/Madam:

Our purpose in writing this letter is to lend our support to Embry-Riddle Aeronautical University Worldwide's goal of offering in-residence and distance learning degree programs at its proposed North Charleston campus, (located at 7301 Rivers Avenue), and to provide background as to why The Boeing Company endorses this proposal to support the workforce, community of Charleston, and State of South Carolina.

It is our understanding this new campus will include staples of the Embry-Riddle curriculum, to include: AS/BS in Aeronautics; AS/BS in Technical Management; AS/BS in Aviation Maintenance; MS in Aeronautics; MS in Management; and MS in Project Management.

We have a long, multi-faceted, and successful relationship with Embry-Riddle Aeronautical University, with many teammates attending either main campus in Arizona and Florida, as well as satellite locations world-wide, to include near Boeing South Carolina, at the Charleston Air Force Base.

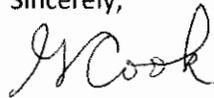
Formal dialogue through the years has ensured that Embry Riddle's degrees remain uniquely relevant and keep abreast of our workforce's professional educational needs. Necessary changes are made to Embry-Riddle degrees, learning outcomes, and practices as a result of our industry participation.

Embry-Riddle has also maintained the status of a "preferred school partner" within our higher education portfolio, enabling tuition reimbursement through our "Learning Together Program", for teammates who take STEM-based courses there. This investment represents an endorsement of the university's programs', and has allowed many teammates to continue their education, including Boeing US military veterans who have chosen to settle in states like South Carolina.

In closing, we appreciate the Commission on Higher Education's recognition of the university's unique degrees relevant to the aviation industry, and their consideration of this new campus proposal.

Please do not hesitate to contact me, should you wish to learn more of our support for Embry-Riddle's efforts.

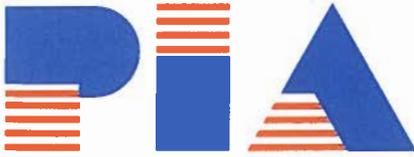
Sincerely,



Dr. Garth Cook

Boeing South Carolina

Education Relations



**PITTSBURGH INSTITUTE OF AERONAUTICS**  
P. O. Box 10897 • Pittsburgh PA 15236-0897  
(412) 346-2100 • (412) 462-9011 • FAX (412) 466-0513

October 21, 2016

South Carolina Commission on Higher Education  
1122 Lady Street, Suite 300  
Columbia, SC 29201

South Carolina Commission on Higher Education representative,

Pittsburgh Institute of Aeronautics (PIA) presently has an articulation agreement with Embry-Riddle at our main campus located in Pittsburgh, PA. This agreement is an exceptional opportunity for our students to continue their education and gain additional skills to allow them to assist the growing aviation industry throughout the United States.

PIA looks forward to the opportunity to continue this relationship with Embry-Riddle Aeronautical University (ERAU) through our branch campus located in Myrtle Beach, SC. PIA values this relationship and hopes that expanding our partnership to the ERAU Charleston, SC campus would assist the growing aviation industry specifically in the state of South Carolina.

Please feel free to contact me with any questions.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Jason S. Mongan', is written over the typed name and title.

Jason S. Mongan  
Director of Compliance and Career Services  
Pittsburgh Institute of Aeronautics  
P.O. Box 10897  
Pittsburgh, PA 15236  
Office: 412-346-2175  
Mobile: 412-401-2552  
Fax: 412-466-0513