Baccalaureate Degree Program Proposal
Recommendations from the Division of Florida Colleges Baccalaureate Review Team
for Consideration by the Commissioner of Education

A collaborative review was conducted by the Baccalaureate Review Team members, including staff from the Division of Florida Colleges and the Florida Colleges Budget Office. Written recommendations were submitted to the college by the Review Team, college staff revised the proposal, and submitted the final proposal, which is now complete and ready for consideration by the Commissioner of Education.

Direct questions or concerns to Abbey Ivey at (850) 245-9492 or abbey.ivey@fldoe.org.

College	Degree Type	Degree Program	Date Submitted to SBOE
Polk State College	**BS**	**Aerospace Sciences** ***No alternative proposals were received for this program.***	**9/17/13**

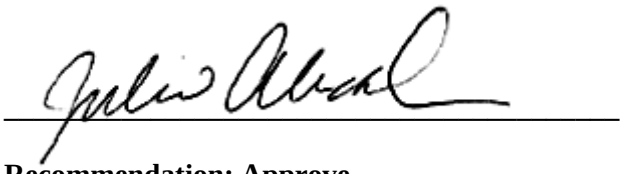
"Within 45 days following receipt of a completed proposal by the Division of Florida Colleges, the Commissioner of Education shall recommend approval or disapproval of the proposal to the State Board of Education."
Section 1007.33 (5)(e), F.S.

Comments		Summary
A	**Planning Process**	Polk State College's (Polk) proposed Bachelor of Science (BS) in Aerospace Sciences will prepare graduates for careers in the aerospace field, such as flight instruction, commercial aviation, corporate aviation and airport management. The degree will include Professional Pilot and Aerospace Administration concentrations. Currently, no other public college or university in the state offers a professional pilot science or aerospace administration baccalaureate program. Planning for the program included the creation of the Florida College System (FCS) Aerospace Consortium, which consists of FCS institutions interested in creating a BS in Aerospace Sciences. The consortium collaborated to create the guidelines for this degree program to which all participating colleges have agreed, creating a baccalaureate curriculum that will be consistent across the state. Meeting minutes, a program curriculum flowchart and numerous statewide letters of support gathered by the consortium are included in the Supplemental Materials. In addition, student and employer survey results demonstrate support for this program, and Polk also received letters of support from local aviation businesses (survey results and letters included in the Supplemental Materials). Polk shared the college's plans to develop this degree with Florida Southern College, Southeastern University, Keiser University-Lakeland, Warner University, Webber International University, Webster University, and Florida Polytechnic University. None of these intuitions objected to Polk offering this program.
B	**Program Implementation Timeline**	The projected implementation date of upper division enrollment is January 2014. The complete timeline of implementation activities is located in Section B of the proposal.
C	**Workforce Demand/Unmet Need Specific to Program Area**	As this program is intended to serve a larger regional audience and because there are only three other similar baccalaureate programs in the state – Jacksonville University (JU), Embry-Riddle Aeronautical University (ERAU), and the Florida Institute of Technology (FIT) – Polk expanded the scope of the needs analysis to cover Florida as a whole. Citing the Florida Department of Economic Opportunity (DEO), Polk reports there were 8,093 total related jobs statewide in 2012, with 375 annual job openings projected statewide through 2020.

		Polk states the three other programs in Florida, none of which are located in Polk's service district, produced an estimated 250 graduates in 2009-10, leaving a significant gap compared to the number of projected annual openings. The college notes that as this analysis involves only the output of private institutions with a significant proportion of out-of-state students, the actual need is much stronger. In addition, Polk reports information that is not covered by DEO projections (summary of industry data included in the Supplemental Materials), such as the impending pilot shortage, the need for the Aerospace Management track and the planned future program expansion to include Unmanned Aerial Systems. Considering this additional aerospace industry demand, Polk estimates an annual unmet need of about 200 job openings statewide. As Miami Dade College and Broward College have indicated plans to implement a similar degree in the future, Polk also provided adjusted workforce demand data to reflect that hypothetical long-term scenario (included on pages 12-13 of the proposal).
D	**Facilities and Equipment Specific to Program Area**	No additional capital equipment needs or facilities upgrades are anticipated to support this program. The proposed program will use standard classrooms and online interaction with substantial use of the current web-based course platform.
E	**Library/Media Specific to Program Area**	A total of $8,000 has been allocated for initial acquisitions of software resources, print and electronic books, databases, journals, and other resources. In subsequent years, $4,000 has been allocated for continuing support of the program.
F	**Academic Resources Specific to Program Area**	Polk currently has five part-time faculty members for this program. During the first year of operation, Polk plans to hire a full-time, terminally-degreed faculty member, and will hire a second full-time faculty member based upon program growth. Additional adjunct faculty members are also being recruited.
G	**Cost to Students**	The cost for this type of degree at Polk and other Florida postsecondary institutions: Polk = $14,367 for tuition; $82,367 with flight instruction in the lower division ERAU = $205,840 FIT = $191,160 JU = $166,400
H	**Academic Content**	Admission to the program requires an Associate in Science (AS) or an Associate in Arts (AA) degree, and the completion of two required prerequisite courses. An AS in Professional Pilot Science is required to enter the professional pilot track of the baccalaureate degree, or students may enter with any associate degree as long as they have the appropriate Federal Aviation Administration (FAA) pilot ratings. The program will be composed of 60 credit hours from the associate degree, 21 credit hours of upper division core courses, 21 credit hours of concentration-specific courses, and 18 credit hours of additional General Education or lower division technical course requirements.
I	**Enrollment, Performance and Budget Plan**	Polk anticipates 10 enrolled students during the first year and 30 students by the third year of operation. The program will be supported primarily through tuition and fees, as well as Florida College System Program Funds. The full budget is located on page 35.
J	**Plan of Action if Program Must be Terminated**	In the event of program termination, Polk will implement a phase-out process in line with the procedures established by the Southern Association of Colleges and Schools Commission on Colleges.

Recommendation: Approve

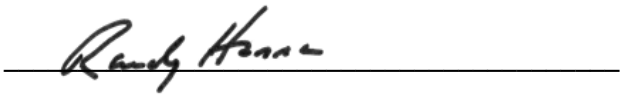
Vice Chancellor for Academic and Student Affairs, Division of Florida Colleges



Date 8/19/13

Recommendation: Approve

Chancellor, Division of Florida Colleges



Date 8/27/13

POLK STATE
COLLEGE

Bachelor of Science
in Aerospace Sciences

Degree Proposal and Application
May 2013

TABLE OF CONTENTS

THE FLORIDA COLLEGE SYSTEM

BACCALAUREATE PROPOSAL APPROVAL APPLICATION
COVER SHEET

INSTITUTION: Polk State College

BACCALAUREATE DEGREE CONTACTS:

PRIMARY

Name:	Dr. Ken Ross
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SECONDARY

Name:	Eric Crump
Title:	Aerospace Program Director
Phone:	(863) 298-6858
E-mail:	ecrump@polk.edu

DEGREE TYPE: BS

DEGREE TITLE: Aerospace Sciences

TOTAL NUMBER OF CREDIT HOURS: 120

PROPOSED DEGREE SIX-DIGIT CIP CODE: 49.0101

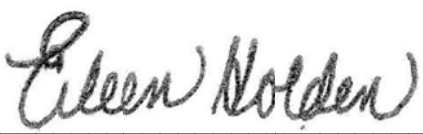
PLANNED PROGRAM IMPLEMENTATION DATE: January 2014

PROGRAM DESCRIPTION/EMPLOYMENT OPTIONS FOR GRADUATES:

The Bachelor of Science degree in Aerospace Sciences at Polk State College is designed to provide students with a holistic, operational study of U.S. and international aerospace systems. The advanced skills and information gained through this program prepares students for professional careers in commercial aviation and aerospace administration. The degree integrates the critical concept of Safety Management Systems (SMS) into each course, allowing for the development and application of information regarding safety factors and risks that are naturally present in the aerospace environment. All students participate in a common program core before specializing in either a Professional Pilot or Aerospace Administration concentration, both of which culminate in a capstone course that encourages students to implement theoretical mastery of the degree content in an operational context. Graduates of the Aerospace program are prepared for entry-level careers in the aerospace field, such as flight instruction, commercial aviation, corporate aviation, airport management, and other aerospace fields. This degree is also beneficial to current aerospace employees seeking incentive benefits or career advancement. In addition, graduates are prepared for graduate study in aerospace sciences and related fields.

BOARD OF TRUSTEES APPROVAL DATE: January 28, 2013

PRESIDENT'S SIGNATURE AND DATE:



Dr. Eileen Holden, President

July 29, 2013

Date

EXECUTIVE SUMMARY

Institution: Polk State College
Degree Type: Bachelor of Science Degree
Degree Title: Aerospace Sciences

Program Description

Polk State College proposes to add a new Bachelor of Science (BS) in Aerospace Sciences program. The program is designed as a 2+2 with our existing Associate in Science (AS) in Professional Pilot Science and Associate in Science (AS) in Aerospace Administration programs and will interface seamlessly with our other degrees as well. Students in our Associate in Arts (AA) program will need to take 18 lower level Aerospace technology credits after admission to the BS in Aerospace Sciences.

A. Planning Process

In early 2011, Polk State College began considering establishing an aerospace program at both the lower and upper levels. The College reviewed data from the Florida Department of Economic Opportunity, surveyed prospective employers in our region, surveyed existing students, and reviewed state and national workforce data for career opportunities. Employers stated that graduates from this program would meet a workforce need in our region, as documented in the numerous letters of support included with this proposal. The student survey indicated significant student interest in the degree. Externally, the College had discussions with Keiser University, Webber Int'l University, Webster University, Warner University, Florida Polytechnic University, and Florida Southern College. None had any objection to us offering the degree. Polk State College led an effort to create an aerospace consortium that included all state colleges who are offering or considering offering aerospace programs. The consortium developed a framework for a BS in Aerospace Sciences that not only pools statewide expertise but also creates a consistent baccalaureate experience for students across the state.

B. Implementation Time Line

The Polk State College District Board of Trustees approved offering the BS in Aerospace Sciences in January of 2013. A letter of intent was then submitted to the Florida College System. The curriculum was approved though the College's curricular review process in April of 2013. The College will notify SACS-COC in June 2013 and will submit the substantive change prospectus in October 2013. The current pool of adjuncts led by the existing Program Director will provide instruction, and a full-time faculty member will be added during the first year of operation of the program. Student recruitment will begin the October 2013, with upper-division classes beginning January 2014.

C. Workforce Demand/Unmet Need Specific to Program Area

Current pilot demand forecasts from Boeing, the FAA, and other sources demonstrate the need for approximately 500,000 new pilots nationwide over the next 20 years, a demand that our current training infrastructure does not support. According to the Florida Department of Economic Opportunity (FDEO), state-wide outputs will need to address 375 average annual openings for the associated workforce clusters. The current output of the three existing programs at private institutions is approximately 250, which includes an unknown number of out-of-state students.

As the airline market grows, the need for more aerospace managers and other aerospace professions, currently not covered by existing forecasting models, will increase as well. While Florida's annual unmet need as indicated above is at least 125 openings, considering the out-of-state enrollments at the private institutions and the additional industry demand, we estimate an annual unmet need of about 200 openings in this area.

D. Facilities and Equipment Specific to Program Area

The primary curricular focus of the Bachelor of Science in Aerospace Sciences program is didactic in nature. The program will utilize existing classrooms and the current web-based learning management system: *Desire2Learn*. No additional facilities or equipment will be needed.

E. Library/Media Specific to Program Area

The Polk State College library maintains an aerospace database of journals and periodicals to support our associate degrees in this field. Currently, the library participates in Ask-a-Librarian (a virtual 24/7 resource) and a national interlibrary network facilitated by OCLC/World Cat service. Periodicals such as *Aviation Week & Space Technology* and eBooks from the Elton B. Stephens Company (*EBSCO*) will be added to the collection. A complete list is in section E2.

F. Academic Resources Specific to Program Area

The College currently has five adjunct faculty, including two with terminal degrees, who will teach the BS in Aerospace Sciences program curriculum. Upon approval, during the first year of operation, the College plans to hire a full-time terminally-degreed faculty member to teach in the program. The College has also hired advisors on each campus to work specifically with students pursuing a bachelor's degree.

G. Cost to Students

The cost for the entire BS in Aerospace Sciences degree program at Polk State College is approximately $82,400 for the 4-year degree, which includes $68,000 for flight training at the lower level. The only other baccalaureate degrees in this field offered in Florida are at Embry-Riddle University, Florida Institute of Technology, and Jacksonville University, where the total for tuition and fees ranges from $166,000 at JU to over $200,000 at Embry-Riddle.

H. Academic Content

The academic content includes 42 upper-division credits and 18 general-education credits or technical courses. Two prerequisite courses are also required: ASC 1210 *Aviation Meteorology and Automation Management* and either ASC 1010 *Foundations of Air Transportation* or AVM 1010 *Aviation Management*. However, those courses count in the required 120 credits either as credits from the AS degree or as lower-level technical credits, and therefore do not constitute excess hours beyond the 120. Admission to the BS in Aerospace Sciences program will require an overall 2.0 GPA in all postsecondary work and an associate's degree from a regionally-accredited institution.

I. Enrollment Performance and Budget Plan

The College anticipates 10 students at the outset, with that number increasing to 20 the second year and 30 the third year. The College's commitment to the existing AS program along with tuition and fees will yield a net carryover of approximately $6,000 the first year and stay steady thereafter.

J. Plan of Action if Program Must Be Terminated

In the unlikely event the BS in Aerospace Sciences program is terminated, the College will follow the procedures established by SACS-COC. The College will notify SACS-COC at least 6 months prior to the closing of the program and develop a time line for affected students and faculty. For those students unable to develop a viable plan within the College, advisors would assist students with transfer options.

K. Supplemental Materials

Supplemental materials include DBOT, Advisory Board, and Curriculum Committee minutes; support letters from aerospace entities; and results from the employer and student surveys.

EVALUATION CRITERIA

A. PLANNING PROCESS

1. Summary of Internal Process and Meetings:

The Bachelor of Science in Aerospace Sciences program is the fourth baccalaureate degree proposed for Polk State College. Following appropriate approvals by the Polk State College District Board of Trustees (DBOT) and State Board of Education, the Southern Association of Colleges and Schools (SACS) approved Polk State College's application to become a Level II baccalaureate degree granting institution on June 25, 2009.

In January 2010, Polk State College began offering a Bachelor of Applied Science in Supervision and Management degree; in August 2011 the College started offering the Bachelor of Science in Nursing (BSN) degree; and in October 2012 the College started offering the Bachelor of Science in Criminal Justice degree.

In 2011, the College was approached by Polk County School Board (PCSB) about adding an AS in Professional Pilot Science to provide an educational pathway for students from PCSB's Central Florida Aerospace Academy, a stand-alone career academy serving grades 9-12. Students in this academy focus their studies around aviation and engineering. Many academy graduates wish to pursue careers in aviation; therefore, the AS in Professional Pilot science is the next step in their education.

Upon receiving this request from PCSB, the College's leadership team began considering adding programs in the aerospace field at Polk State College. The Office of Institutional Research, Effectiveness, and Planning (IREP) obtained available workforce data from the U.S. Department of Labor, the Florida Department of Economic Opportunity, and the Economic Modeling Specialists International (EMSI) analyst database to identify potential program enrollment. It was decided to add both an AS in Professional Pilot Science and an AS in Aerospace Administration.

When the College explored bachelor degree education for graduates from our AS programs, we discovered that no other public college or university in Florida offers professional pilot science or aerospace administration baccalaureate programs. Therefore, graduates of our two AS programs would have to transfer to a high-cost private institution. The College contacted other state college aviation programs to determine the level of interest in creating a BS in Aerospace Sciences.

The interested state colleges came together to form the Florida College System Aerospace Consortium. The purpose of this group was to design a bachelor degree program that would meet the needs of our AS graduates and provide a consistent bachelor-level program for AS graduates at all Florida state colleges offering a BS in Aerospace Sciences. The consortium has met four times (Supplemental Materials: Florida College System Aerospace Consortium meeting minutes).

The group has since expanded its mission to include other aerospace issues of common interest and plans to continue meeting after its initial mission is accomplished. The final product of the Consortium outlines the guidelines for a BS in Aerospace Sciences to which all the participating colleges have agreed (Supplemental Materials: Program Curriculum Flowchart for BS in Aerospace Sciences).

The Polk State Office of Institutional Research, Effectiveness, and Planning (IREP) obtained available workforce data from the Florida Department of Economic Opportunity and conducted surveys of both local aerospace entities and existing students to identify potential interest in the program. On the basis of this information, the Polk State College President asked the DBOT to authorize the formal application process, which was approved January 28, 2013 (Supplemental Materials: DBOT minutes).

The Polk State Aerospace Advisory Committee endorsed the bachelor degree in Aerospace Sciences (Supplemental Materials: Polk State Aerospace Advisory Committee minutes). Polk State has also received letters of support from airport directors at Lakeland Linder, Winter Haven, and Bartow airports; from the Director of Sun 'n Fun (the country's second largest annual air show); from the Polk County School Board; from the Polk Aviation Alliance; and from other aviation businesses in the area (Supplemental Materials: Local Letters of Support).

Because the job market for a BS in Aerospace Science is regional/statewide rather than focused on a particular county, the consortium gathered letters of support from aerospace industries across the state. Letters are included from American Airlines, Airbus North America, ExpressJet, FCS Consortium, Florida Aero Club, Florida Airports Council, Jacksonville Aviation Authority, National Aviation Academy, Silver Airways, and Wayman Flight Training (Supplemental Materials: State-Wide Letters of Support).

2. Summary of External Process and Meetings:

Proceeding with plans to establish a Bachelor of Science in Aerospace Sciences with a focus in Professional Pilot and Aerospace Management, the Polk State College leadership team discussed the proposal with representatives from local colleges and universities. None of the local institutions had any objections to the proposed degree offering. The local conversations are summarized below.

Florida Southern College: Ken Ross (VP for Academic and Student Services) and Eric Crump (Aerospace Program Director) met with Kyle Fedler, Provost at Florida Southern College. Ross and Crump shared Polk State's plans to offer the baccalaureate degree in Aerospace Sciences. Fedler said Florida Southern had looked into such a program but was not interested. Fedler had no objections to Polk State offering the degree.

Southeastern University: Ken Ross (VP for Academic and Student Services) and Eric Crump (Aerospace Program Director) met with Andrew Permenter, Associate Vice President for Academic Affairs; Douglas Roth, Dean of the College of Education; and William Hackett, Jr., Provost at Southeastern University. Ross and Crump shared Polk State's plans to offer the baccalaureate degree in Aerospace Sciences. Southeastern University had no objections to Polk State offering the degree.

Keiser University-Lakeland: Patricia Jones (District Dean of Academic and Student Services) and Eric Crump (Aerospace Program Director) spoke with Dean Mary Beth Farr and shared Polk State's plans to offer the baccalaureate degree in Aerospace Sciences. Farr conferred with the Campus President, Rebecca McDonald, who reported that Keiser University had no plans to offer a BS in aerospace and had no objections to Polk State offering the degree.

Warner University: Patricia Jones (District Dean of Academic and Student Services) spoke with James Moyer, Executive Vice President and Chief Academic Officer and shared Polk State's

plans to offer the baccalaureate degree in Aerospace Sciences. Moyer said Warner University had no objections to Polk State offering the degree.

Webber International University: Patricia Jones (District Dean of Academic and Student Services) spoke with Charles Shieh, Academic Dean, and shared Polk State's plans to offer the baccalaureate degree in Aerospace Sciences. Shieh said Webber had explored the idea of an aviation degree a few years ago but decided against it. He had no objections to Polk State offering the degree.

Webster University: Patricia Jones (District Dean of Academic and Student Services) spoke to Angie Birdwell, Director of the Lakeland campus. Birdwell noted that the Lakeland campus of Webster University offers masters' degrees only, so they had no objections to Polk State offering the degree.

Florida Polytechnic: Dr. Ross also discussed the new degree with Dr. Ghazi Darkazalli, the interim VP of Academic Affairs. They had no objections to Polk State offering the degree.

Needs Assessment

While the conversations with consortium partners and local postsecondary institutions were underway, a comprehensive needs assessment was conducted during September 2012. Area employers and current/prospective Polk State College students were surveyed separately about their interest in Polk State College establishing a Bachelor of Science in Aerospace Sciences degree program. The results from the two surveys are summarized below; survey details are available in Sections #4 and #5 of the *Supplemental Materials*.

Survey of Area Employers: A total of 22 regional aerospace businesses, representing about 1,330 employees, responded to our survey invitation. Of the respondents, 73% cover regional aviation training, aviation maintenance, aviation support, and airport operations. Employment numbers range from 2 to 450, with an average workforce of 60. When asked if individuals with a bachelor's degree in Aerospace Sciences would benefit their organization, 81% responded positively for the proposed Professional Pilot track, and 67% responded positively for the Aerospace Management track.

About 30% of positions were identified as requiring a bachelor's degree. For about one third of the businesses, this requirement pertains to 50% or more of their local employment. In total, over 570 positions across all participating businesses require a baccalaureate degree. Furthermore, more than 75% of respondents indicated that the proposed bachelor's degree would benefit those existing positions, and the detailed data provided translates into 155 (or 27%) of positions with baccalaureate requirements that Polk State's proposed program could address.

This data underlines the fact that 77% of participants clearly stated that the proposed degree would support their business needs for education and employee training. In addition, 81% indicated employee promotion opportunities for baccalaureate degree holders, 68% expect up to five employees each to enroll in the proposed program, and 32% of organizations also have a tuition payment or reimbursement plan.

Survey of Current and Prospective Polk State College Students: A survey of 570 current and prospective students revealed that 57% of respondents are very or somewhat interested in the proposed program, 14% were undecided, 29% not interested. Similar to the business-side responses, interest in the Professional Pilot track was stronger (N=207) than the Aerospace

Management track (N=163). Also, all interested survey participants declared an interest in a potential degree expansion into the area of unmanned aerial systems (UAS).

Of the respondents, 227 (44%) would be ready to enroll in this program as soon as possible, another 193 (37%) would like to begin within 2-3 years. Desired Polk State locations for taking the required baccalaureate courses generally follow existing enrollment patterns. Lakeland is slightly more preferred than Winter Haven, while online course-taking ranks third before JDAC and Airside. About half of the survey participants indicated they would like more information on the proposed program.

Overall, the survey responses illustrate strong support among employers and potential students in the community for Polk State College to establish a Bachelor of Science in Aerospace Sciences.

B. PROGRAM IMPLEMENTATION TIME LINE

Details of the program implementation time line in the form of dates or date ranges for each of the core program implementation activities are provided in Table B-1 below.

Table B-1: Program Implementation Time Line

Activity	Date
Assessment of Need and Demand	September 2012
Polk State College District Board of Trustees Approval of Aerospace Sciences BS Degree Program	January 28, 2013
Letter of Intent to Florida College System	February 5, 2013
Curriculum Development	February 2013 – March 2013
Degree Approval by College's Academic Quality Council (AQC) *(Supplemental Materials: AQC Minutes 4/15/2013)*	April 15, 2013
Submit Degree Application to FLDOE	May 29, 2013
Accreditation Activities A. SACS-COC Notification Letter B. SACS-COC Substantive Change Prospectus	 A. June 1, 2013 B. October 1, 2013
Estimated Approval by State Board of Education	September 2013
Recruitment of Faculty, Staff	June - August 2013
Systems, Facilities, Resources Upgrade	June - August 2013
Student Recruitment and Advising	Begins October 2013
Program Start (Upper-Division Courses Begin)	January 2014

C. WORKFORCE DEMAND/UNMET NEED SPECIFIC TO PROGRAM AREA

The Bachelor of Science in Aerospace Sciences degree proposed by Polk State College addresses the complex needs of the present and future advanced aerospace system. This program offers graduates a degree that provides entry into the aerospace field and the skills and experience they need to stand out in a competitive field. The curriculum was developed by aerospace/aviation program directors from several Florida College System institutions working together as the Florida College System Aerospace Consortium.

This group was formed on the premise that by working together the colleges could pool the aerospace talent that exists state-wide and create a baccalaureate curriculum that is consistent across the state. As the proposed program is designed to serve a larger regional audience and with only three other educational providers with similar programs in the state, this analysis will omit specific projections only relevant to Workforce 17 (Polk County) and expand its scope to cover the service areas of the affiliated Florida College System institutions and the workforce demand for Florida as a whole.

Florida Job Market

Florida's demand for the targeted aerospace industry jobs is projected to expand by 1% per year through 2020, which is slightly below the national projected pilot growth rate. Most of Florida's growth can be attributed to commercial pilots, a profession which is on the state's and Workforce Regions 17 targeted occupation lists. According to the Florida Department of Economic Opportunity (FDEO), about 79 new jobs per year will be created for individuals with the job skills in the areas indicated state-wide. In addition, 296 jobs are expected to open due to separation. As a result, the total forecasted demand across the respective aerospace employment cluster is 375 annual openings.

Current Institutional Outputs

Only three programs in Florida offer competing programs. None of the programs, Jacksonville University (JU), Embry Riddle Aeronautical University (ERAU), or the Florida Institute of Technology (FIT), are in our immediate regional service area. In 2009-2010, these institutions produced an estimated total of 250 graduates–including many out-of-state residents–leaving a significant gap compared to the projected annual openings of 375.

Job Market Analysis

In the analysis of the job market data provided by the Florida Department of Economic opportunity (FDEO), two scenarios emerged, which have been individually addressed and contrasted in the outmost right columns of the following table.

At the onset of the program, no other FCS institution is prepared to have a similar offering in place. Thus, the *Florida* column addresses the workforce data for the first years of program implementation. As Miami Dade College and Broward College have indicated that they are planning to implement a similar degree in the future, we also provided adjusted workforce demand data for that potential long-term scenario.

The adjusted workforce demand numbers associated with that hypothetical long-term development are provided in the *Adjusted* column, which shows the state-wide data minus the regional data for workforce regions 21-24.

1. Geographic region to be served: [At program onset all Florida Workforce Regions will be included; see narrative for further detail.]	**Florida**	**Adjusted**
2. Number of current jobs: [FDEO: http://www.floridajobs.org; Occupation Codes shown in Table C-1.]	8,093	6,250
3. Number of average annual job openings (current year): [FDEO: Average annual openings for whole SOC cluster.]	375	286
4. Projected number of job openings five years from current year: [See annualized FDEO projection above; same proportion applied.]	375	286
5. Number of most recent graduates in the discipline area from the State University System in Polk State College's service region: (Note: No comparable SUS programs exist in Florida.)	0	0
6. Number of most recent graduates in the discipline area from non-public postsecondary institutions in geographic region: [Note: Exact data is not available, but many of these graduates are out-of-state students and are not expected to be available to the local workforce.]	<250	<250

7. Data and description of the employment gap (based on 2 through 6):

The table above summarizes workforce projections for the targeted occupation clusters shown below. The first portion of Table C.1 reflects the statewide workforce needs, the second portion reflects the adjusted long-term target audience of the FCS Aerospace Consortium and excludes workforce regions 21-24 from the calculation (see bottom of previous page for explanation). As a result, we can establish an annual employment gap of at least 36 positions –using the adjusted cluster– and up 125 positions when using the state-wide annual job openings projected. As this analysis involves only the output of private institutions with a significant proportion of out-of-state students, the actual need is much stronger. If we add additional aerospace industry demand not covered by FDEO projections (see 8. below), we estimate an annual unmet need of about 200 job openings in Florida.

Table C-1: Regional Workforce Projections

Florida – All Workforce Regions						
Occupation Code/Title	Employment		Annual Percent Change	Average Annual Openings		
	2012 Current	2020 Projected		Growth	Separations	Total
531011: Aircraft Cargo Handling Supervisors	321	340	0.7%	2	6	8
532011: Airline Pilots, Copilots, Flight Engineers	4,231	4,470	0.7%	30	158	188
532012: Commercial Pilots	3,541	3,914	1.3%	47	132	179
Targeted Aerospace Employment Cluster, Florida Total	8,093	8,724	1.0%	79	296	375

FCS Aerospace Consortium – Adjusted Data (Florida Data Minus WF Regions 21-24)						
Occupation Code/Title	Employment		Annual Percent Change	Average Annual Openings		
	2012 Current	2020 Projected		Growth	Separations	Total
531011: Aircraft Cargo Handling Supervisors	209	227	1.1%	2	3	5
532011: Airline Pilots, Copilots, Flight Engineers	4,231	4,470	0.7%	30	158	188
532012: Commercial Pilots	1,810	2,018	1.4%	26	67	93
Employment Cluster for Aerospace Consortium Regions	6,250	6,715	0.9%	58	228	286

(FDEO: http://www.floridajobs.org/labor-market-information/data-center/statistical-programs/employment-projections)

Number of Most Recent Local Graduates

There are no local graduates in the targeted program.

8. Other measures as selected by the institution:

Demand for proficient pilots continues to be a predictable economy-driven figure. However, accelerated pilot retirements among the baby boomer generation coupled with decreased pilot turnover from the military has created a pilot shortage that has begun impacting the airline industry. Current pilot demand forecasts from Boeing, the FAA, and other sources demonstrate the need for approximately 460,000 new pilots over the next 20 years, a demand that our current training infrastructure cannot support (for detail and resource links please see (Supplemental Materials: *Aerospace Field Job Need Summary of Industry Data*). Furthermore, as the airline market grows, the need for more aerospace managers will increase as well.

In addition, and based on industry input, additional demand for the Aerospace Management track of the BS degree can be expected, but is currently not covered by a particular occupational code. While this evolving workforce demand exists, it is currently not possible to gather accurate forecasting information. Similarly, it should be noted that one of the future phases of program expansion includes Unmanned Aerial Systems, which is without any official labor market projection, but has created major discussions and interest across a variety of industries

UAS applications include such areas as agriculture, communications relays, aerial photography, mapping, emergency management, and scientific research. The safe operation of UAS outside segregated airspace requires addressing the same issues as manned aircraft, namely integration into the air traffic control system. The associated workforce competencies are either already covered or can be easily addressed by the proposed degree program and its expansion opportunities.

D. FACILITIES AND EQUIPMENT SPECIFIC TO PROGRAM AREA

1. Description of the existing facilities and equipment that will be utilized for the program:

The primary curricular focus of a Bachelor of Science degree program is on didactic content. Facilities and equipment needed to support this program are essentially limited to standard classrooms and online learning systems that exist for all enrolled students. The proposed program will use standard classrooms and online interaction with substantial use of the current web-based course platform (*Desire2Learn*).

2. Description of the new facilities and equipment that will be needed for the program:

No additional capital equipment needs or facilities upgrades are anticipated to support the proposed BS in Aerospace Sciences program. Current online resources (*Desire2Learn*) are sufficient, and instructional technology support services will be expanded as program growth demands. Classes for the BS in Aerospace Sciences program will initially be scheduled during the day in a traditional face-to-face format at existing sites. The opening of the Polk State Bartow Campus will provide additional space opportunities. However, as appropriate, the aerospace courses will be offered in online or hybrid format after the initial offering to provide students in the program with choice of format.

E. LIBRARY/MEDIA SPECIFIC TO PROGRAM AREA

1. Description of the existing library/media resources that will be utilized for the program:

The Polk State College library title collection includes more than 105,000 books, more than 75,000 electronic books, and access to 124 subscription-based full-text periodical and reference databases. Free access to all circulating titles in the Florida College System and Florida State University System is available to all students and faculty through a reciprocal interlibrary loan agreement.

The Polk State library also participates in the national interlibrary network facilitated by the OCLC/World Cat service. Librarians offer library and information literacy instruction, and point-of-service professional reference and research assistance is available on-site at all campus locations and via online live chat, e-mail, and telephone. The *Ask a Librarian* virtual reference service is available 24/7.

The Polk State library subscribes to over 125 general and subject-specific, full-text periodical databases and online full-text reference resources that support student work in all disciplines and career fields available at the College. The resources provide access to aviation and aerospace periodicals such as *Aviation Week & Space Technology* (*EBSCO Academic Search Complete* and *Lexis Nexis Academic*) as well as relevant reference resources packaged in general science databases such as Gale's *Science in Context.* Aerospace faculty concur that these databases in conjunction with FAA online resources provide sufficient access to periodical resources at this time.

2. Description of new library/media resources that will be needed for the program:

Aviation-specific software resources, including an instrument procedure tutorial and several aircraft-specific training resources, will be required. The total for requested software is approximately $1000, and the total for DVD resources is approximately $3000.

Start-up software and DVD resources:

Title	Vendor	Resource Type	Price ($)
Prepware School	Aviation Supplies and Academics	Software	295.00
Instrument Procedures Tutorial	Aviation Supplies and Academics	Software	49.95
Cessna 172 Aircraft Total Training	Jeppesen-Sanderson	Software	99.95
Piper Seminole PA44 Total Training	Jeppesen-Sanderson	Software	99.95
Garmin G1000 Training Bundle	Jeppesen-Sanderson	Software	299.95
Private Pilot Video Series	Jeppesen-Sanderson	DVD	151.95
Instrument/Commercial Video Series	Jeppesen-Sanderson	DVD	202.95
Flight Instructor Video Series	Jeppesen-Sanderson	DVD	151.95
Multi-Engine Video Series	Jeppesen-Sanderson	DVD	80.95
Virtual Test Prep School	Aviation Supplies and Academics	DVD	2,495.00
		Total	**3,927.60**

A subject search of print and electronic book title holdings of two Florida College System schools with aviation programs was performed using the subject terms *aviation* and *aerospace*. These searches revealed a deficit of technical materials in these subject areas; therefore, the creation of a start-up collection will be required to support the new program. Over $1000 in reference sources were ordered for the Aerospace AS program. Additional funds for a start-up

collection for the BS program will be required to cover areas of theory, practical operations, and procedures. Approximately $3000 in new titles have been identified as the target start-up collection. In subsequent years we are budgeting $1500 for updating and additional requests will then be incorporated into the $4000 library budget.

Aerospace Reference Resources – Ordered 2012:

Title	ISBN #	Resource Type	Price ($)
Aerodynamics for Naval Aviators (2012)	1616084391	Print	14.95
Stick and Rudder (1944)	0070362408	Print & Ebook	Pre-existing
Fate is the Hunter (1961)		Print	Pre-existing
Basic Flight Physiology 3rd Ed. (2008)	978-0071494885	Print	50.59
Airport Planning and Management (2011)	978-0071750240	Print & Ebook	47.36
Human Performance and Limitations in Aviation (2002)	978-0632059652	Print & Ebook	54.34
Handbook of Aviation Human Factors (2010)	978-0805859065	Print	159.95
A Human Error Approach to Aviation Accident Analysis (2003)	978-0754618737	Print	34.95
Fitting the Task to the Human (2009)	978-1420055399	Print	59.95
Aircraft Accident Investigation (2006)	978-1892944177	Print	116.47
The Weather Book (1997)	978-0679779959	Print	Pre-existing
Artful Flying (2005)	0-9768274-0-9	Print	6.41
Fly the Wing (20040	978-1560276272	Print	34.95
Skydancing (2001)	978-1560273899	Print	19.95
The Turbine Pilot's Flight Manual (2001)	978-1-56027-623-4	Print	39.95
Fundamentals of Aviation Law (2006)	978-0071458672	Print	79.95
Jane's Aircraft Recognition Guide (2007)	978-0061346194	Print	24.99
Aircraft Systems (1998)	0070386056	Print	39.95
Advanced Aircraft Systems (1993)	007038603x	Print	29.00
Flight Discipline (19980	978-0070343719	Print	29.95
Redefining Airmanship (1997)	978-0070342842	Print	29.95
Blue Threat: Why to Err is Human (2009)	978-0984206308	Print	20.98
Going Pro (2011)	978-0984206315	Print	21.95
Pilot Judgment and Crew Resource Management (1995)	978-0291398048	Print	134.95
		Total	**1050.86**

Aerospace Reference Resources – For Order 2013:

Title	Vendor	Product #	Price ($)
Global Navigation for Pilots	Aviation Supplies and Academics	ASA-GNP-2	34.95
Practical Aviation Law	Aviation Supplies and Academics	ASA-PRCT-AV-LAWS	39.95
Lesson Plans to Train Like You Fly	Aviation Supplies and Academics	ASA-LESSON-PLANS	19.95
Air Carrier Operations	Aviation Supplies and Academics	ASA-AIR-CARRIER	29.95
Airline Pilot Technical Interviews	Aviation Supplies and Academics	ASA-ATP-INT-2	29.95
Private Pilot Textbook	Jeppesen-Sanderson	10001360	86.95
Instrument/Commercial Textbook	Jeppesen-Sanderson	10001784	86.95
Flight Instructor Textbook	Jeppesen-Sanderson	10001855	76.95
Multi-Engine Textbook	Jeppesen-Sanderson	10001888	62.95
JAA ATPL Training Series	Jeppesen-Sanderson	10033667	1,295.00
Aviation History	Jeppesen-Sanderson	10001810	69.95
Aviation Weather	Jeppesen-Sanderson	10001850	70.95
Aircraft and Their Systems	Jeppesen-Sanderson	10001352	35.95
Flight Theory for Pilots	Jeppesen-Sanderson	10001350	25.95
Aviation Safety Programs	Jeppesen-Sanderson	10001365	36.95
Transport Category Aircraft Systems	Jeppesen-Sanderson	10001367	60.95
A&P Textbook Bungle	Jeppesen-Sanderson	10011905	177.95
Humans and Automation	Sheridan/Wiley	978-0471234289	86.99
		Total	**2,329.19**

Aerospace faculty have donated some print periodical resources with historic value. The following print periodical subscriptions will be ordered to provide current professional news and information: *Flying, AOPA Pilot, AOPA Flight Training,* and *FAA Safety Briefing*. Additional periodical titles will be added to serve the needs of the program as requested by program faculty and as identified by collection development librarians.

Print Periodicals:

Title	Type/Location	Price ($)
Flying	Print/Winter Haven	$26.00 yearly
AOPA Pilot	Print/Winter Haven	$33.00 yearly
AOPA Flight Training	Print/Winter Haven	$33.00 yearly
FAA Safety Briefing	Print/Winter Haven	$33.00 yearly
Plane & Pilot	Print/Winter Haven	$19.94 yearly
	Total Yearly Subscriptions	$144.94

In total, $8000 is requested to support initial acquisitions of print books, electronic books, databases, journals, and other resources. It is expected that continuing support of periodical and database subscriptions and new acquisitions will be an estimated $4000 annually and will be built into the library's budget for subsequent years.

F. ACADEMIC RESOURCES SPECIFIC TO PROGRAM AREA

1. Number of existing full-time faculty	1 (First Year, pending approval of College Budget Committee)
2. Number of existing part-time faculty	5 total ▪ All have a master's degree in the field ▪ Two have a terminal degree in Aerospace-related fields
3. Description of the anticipated additional faculty that will be needed for the program: The College is recruiting additional adjunct faculty members to provide instruction in the upper-division courses as the program grows. Upon approval, during the first year of operation, the College plans to hire a full-time terminally-degreed faculty member to teach in the program. A second full-time faculty member will be hired after the program has grown and justifies the additional position.	
4. Anticipated instructional support personnel needed: A full-time program director, who is already directing the Aerospace AS degree program, will direct Aerospace BS program as well. The College has two full-time advisors dedicated to bachelor degree programs, one on each campus.	
5. Additional information related to academic resources: After comparing our current library resources to other colleges and universities in the area with the bachelor's degree in Aerospace sciences, it was determined several resources should be added to the Polk State library and media resources specifically for Aerospace Sciences BS students (see section E2).	

G. COST TO STUDENTS

1. Anticipated cost for four years of study at FCS institution:			
Type of Credit	Number of Credits	Cost per Credit	TOTAL
Lower Division	64	$110.22	$7,054.08
Flight instruction + supplies for AS			$68,000.00
Upper Division	60	$121.89	$7,313.40
TOTAL Tuition	124		**$14,367.48**
TOTAL with Flight			**$82,367.48**
2. Estimated cost for four years of study at each state university in service district:			
NA – no Aerospace program in the SUS			
3. Estimated cost for four years of study at each non-public institution in service district:			
NA – no Aerospace program in our service district			
3a. Estimated cost for four years of study at each non-public institution in the state:			
Institution	Number of Credits	Tuition and Fees	TOTAL
Embry-Riddle Aeronautical University	121	$205,840	**$205,840**
Florida Institute Of Technology	120	$191,160	**$191,160**
Jacksonville University	120	$166,400	**$166,400**

H. ACADEMIC CONTENT

1. Admission requirements for the program:

Admission requirements for the proposed Bachelor of Science in Aerospace Sciences program at Polk State College are consistent with general admission policies and practices at Polk State. Admission to this program requires a minimum of an AS or AA degree (or the equivalent) from a regionally-accredited school or college, and at least a 2.0 grade point average on a 4.0 point scale. If the student's associate degree is not from a regionally-accredited institution, but one that is accredited by a body that is recognized by the U.S. Department of Education, a course-by-course evaluation is done according to Polk State College's transfer practices and policies.

All students must have completed the following two prerequisite courses: ASC 1210 *Aviation Meteorology and Automation Management* and either ASC 1010 *Foundations of Air Transportation* or AVM 1010 *Aviation Management*. These courses will either have been taken as part of their aerospace AS degree or, for students with an AA, must be take pre-admission but can be counted toward the 18 lower-level technical credits needed.

2. Faculty credentials:

It is anticipated that 25% of the BS upper-division courses at Polk State will be taught by faculty with a terminal degree, which meets the 25% level required by The Principles of Accreditation, Comprehensive Standard 3.4.5, Southern Association of Colleges and Schools, Commission on Colleges (SACS-COC).

3. Anticipated average student/teacher ratio in first year based on enrollment projections:

Based on the enrollment projections stated in the *Enrollment, Performance, and Budget Plan* form, the anticipated student/teacher ratio is 30:1.

4. Summary of SACS accreditation plan:

Polk State College was approved as a Level II baccalaureate-degree granting institution by SACS-COC on June 25, 2009. The College has notified SACS of the new proposed BS degree and will file a substantive change prospectus with SACS following published guidelines as soon as state approval is achieved.

5. Curriculum

a. Are there similar programs listed in the Common Prerequisites Counseling Manual (CPCM) for the CIP code (and track, if appropriate) you are proposing?

- No similar program is included in the CPCM.
- Proposed CIP code 49.0101: Aeronautics/Aviation/Aerospace Science and Technology, General.

b. Copy of the latest page from the CPCM for the CIP/Track for this program.

- No similar program is included in CPCM.

c. Lower-division common prerequisites required.

- ASC 1010: Foundations of Air Transportation **OR** AVM 1010 Aviation Management
- ASC 1210: Aviation Meteorology and Automation Management

Per Florida Statute, Section 1007.25, Polk State College's BS in Aerospace Sciences will require 36 credits of general education courses. These courses are outlined in Table 5C-1. The general education requirements of the BS in Aerospace Sciences align with the general education requirements of the College for the Associate in Arts degree.

Table 5C-1: General Education Requirements for AS Students

Polk State General Education Courses 36 Credits
Communications – 9 Credit Hours **Required:** Satisfactory completion of the following three courses. ENC 1101 - College Composition I ENC 1102 - College Composition II LIT 1000 - Introduction to Literature
Mathematics – 6 Credit Hours **Required:** Satisfactory completion of two of the following courses. MAC 1105 - College Algebra MAC 1114 - Trigonometry MAC 1140 - Precalculus Algebra MAC 1147 - Precalculus Algebra/Trigonometry MAC 2233 - Applied Calculus I MAC 2311 - Calculus I MAC 2312 - Calculus II STA 2023 - Introduction to Probability and Statistics
Natural Sciences – 9 Credit Hours **Required:** Satisfactory completion from each part is required **Part 1: Select one course** HLP 1081 - Wellness Concepts HSC 1101 - Wellness: Nutrition, Personal Growth, and Fitness **Part 2: 7 credits with one having a lab component** AST 1002 - Descriptive Astronomy BSC 1005C - Survey of Biological Science BSC 1010C - Principles of Biology I BSC 1011C - Principles of Biology II BSC 1311C - Introduction to Marine Biology BSC 1930 - Biological Issues BSC 2085C - Human Anatomy and Physiology I BSC 2086C - Human Anatomy and Physiology II CHM 1025C - Introductory Chemistry CHM 1045C - General Chemistry I CHM 1046C - General Chemistry II ESC 1000 - Survey of Earth Science EVR 1001C - Environmental Science GLY 2010C - Physical Geology MET 1010 - Introduction to Meteorology * OCE 2001C - Oceanography PHY 2001C - Basic Concepts of Physics * PHY 2048C - General Physics I with Calculus PHY 2049C - General Physics II with Calculus PHY 2053C - General Physics I PHY 2054C - General Physics II PSC 1121 - Survey of Physical Science PSC 2515 - Energy and Humanity *MET 1010 and PHY 2001C recommended.

Social Science – 6 Credit Hours
Required: Satisfactory completion of one course from each part is required.
Part 1:
PSY 2012 - General Psychology
Part 2:
AMH 1010 or AMH 1020
ECO 2013 or ECO 2023*
POS 1112 or POS 2041
WOH 1012 or WOH 1022
**ECO 2013 or ECO 2023 recommended for Aerospace Administration concentration.*

Humanities – 6 Credit Hours
Required: Satisfactory completion of one course from each part is required.
Part 1:
HUM 2020 – Introduction to Humanities
Part 2:
Satisfactory completion of any approved humanities course.

Students entering the BS in Aerospace Sciences with an AA degree will have completed the general education requirements listed above. Students entering the BS in Aerospace Sciences with an AS degree in Professional Pilot or Aerospace Administration will have earned the following general education courses (18 credits):

- ENC 1101 - College Composition I
- MAC 1105 - College Algebra
- HLP 1081 - Wellness Concepts or HSC 1101 - Wellness: Nutrition, Personal Growth, and Fitness
- MET 1010 or PHY 2001C
- PSY 2012 - General Psychology
- HUM 2020 - Introduction to Humanities or PHI 2600 Ethics

Aerospace AS students will need to complete the missing 18 credits of general education once admitted to the BS in Aerospace Sciences program. Students entering the BS in Aerospace Sciences with other AS degrees will have earned similar general education courses as those with an AS in Professional Pilot or Aerospace Administration. They will have met 18 credits in general education and will need to complete the missing 18 credits of general education to complete the requirements in the Table 5C-1.

d. All courses required for the final two years of the baccalaureate program:

BS in Aerospace Sciences Curriculum for Students Entering with an AS Degree

The Aerospace Sciences Curriculum for students entering with an AS Degree is designed to articulate 60 credits from an AS degree (42 lower-division technical credits and 18 general education credits). An AS in Professional Pilot Science is required for the professional pilot track, or students may enter with any associate degree as long as they have the FAA pilot ratings that are earned in the professional pilot degree and have completed the two prerequisite courses of ASC 1010 or AVM 1010 and ASC 12010. Those ratings are: US FAA Private Pilot (Single Engine Land), Instrument Rating (Single Engine or Multi-Engine track), Multi-Engine Rating, and Commercial Pilot (Single Engine or Multi-Engine). They can be earned through multiple training venues regulated by the FAA without attending a postsecondary institution. For the Aerospace Administration concentration, students with an AS in any area can be accommodated, and no additional prerequisites are required beyond ASC 1010 or AVM 1010 and ASC 1210.

The upper-division aerospace sciences courses will provide an overview of the aerospace sciences system; therefore, all Aerospace BS graduates, whether they have an AS in an aerospace-related area or not, will be prepared to enter the workforce as an aerospace professional. Those students who already have an AS in an aerospace-related field will benefit from more in-depth discussion of issues related to the aerospace profession and more emphasis on theoretical concepts of the profession.

The Aerospace BS program will require an additional 18 hours of general education courses, 21 hours of upper-level program core courses, and 21 hours of upper-level concentration courses. These courses total the 120 hours required for baccalaureate degree completion. Figure 5D-1 below illustrates the structure of the program for a student entering the program with an AS degree.

Figure 5D-1:

BS Degree Structure Overview for Students with an AS degree

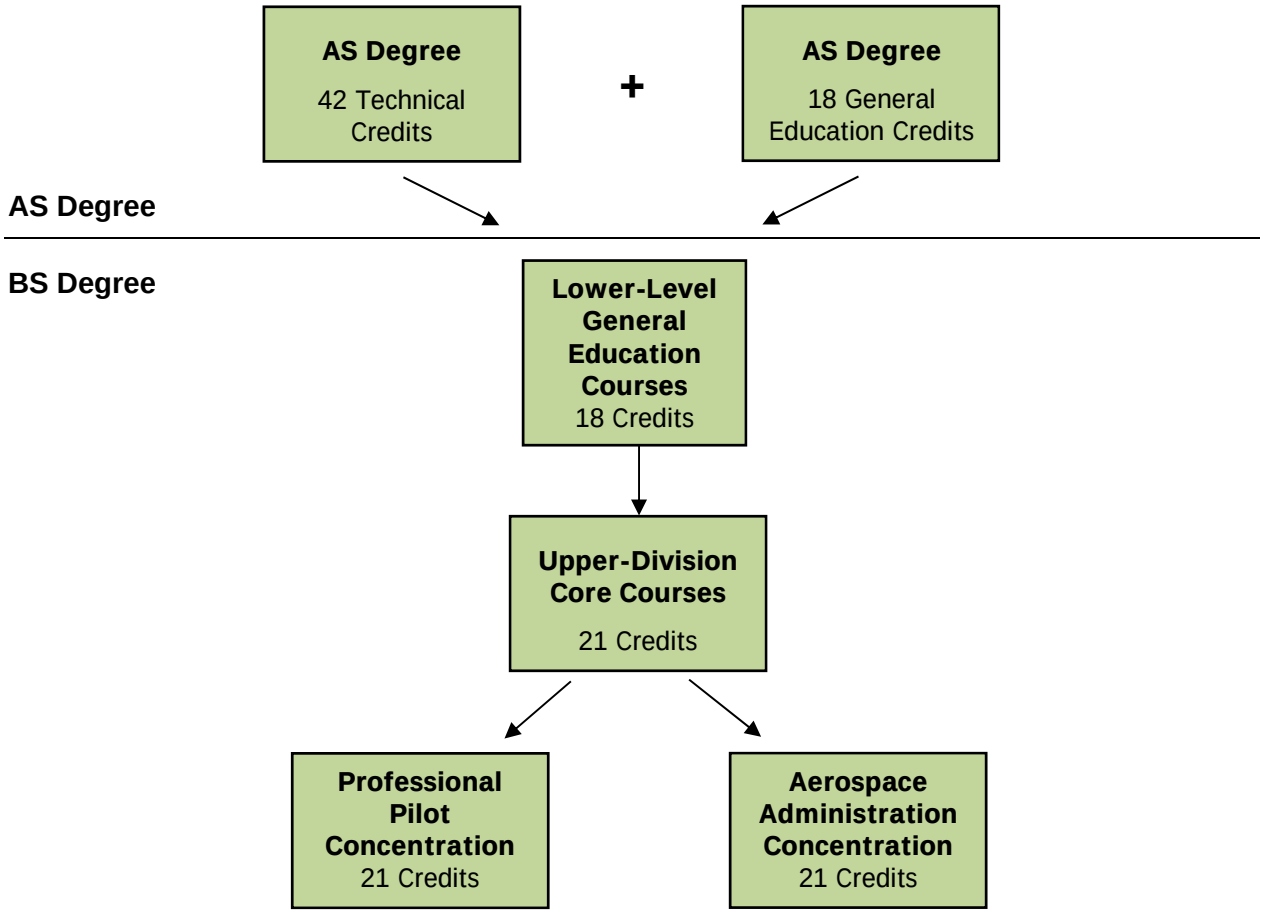


Table 5D-1 lists all the required courses in the Bachelor of Science in Aerospace Sciences, Professional Pilot concentration, for students entering with an AS degree (both lower level and upper level). Table 5D-2 lists all the required courses in the Bachelor of Science in Aerospace Sciences Curriculum, Aerospace Administration Concentration, for Students entering with an AS degree. Please note that many of the course numbers below are suggestions only and have not been approved by SCNS. They will be submitted to SCNS after approval of this degree.

Table 5D-1: Bachelor of Science in Aerospace Sciences Curriculum, Professional Pilot Concentration for Students Entering with an Associate in Science degree:

BS in Aerospace Sciences for Students Entering with an AS Degree			
Courses from AS Degree + General Education			
		Credits	**TOTAL**
Technical Courses from AS degree		42	**42**
General Education Courses		36	**36**
Upper-Division Common Core Courses			
Course Number	**Course Title**	**Credits**	
ASC 3474	Applied Human Factors	3	
ASC 3390	Air Transportation Systems Management	3	
ASC 3320	Aerospace Law and Ethics	3	
ASC 3690	Airspace Systems and NextGen	3	
AVM 3670	Safety Management Systems and Security	3	
AVM 3020	Principles of Aerospace Leadership	3	
GEB 3213	Advanced Business Communications	3	**21**
Professional Pilot Concentration Required Courses			
ASC 4460	Crew Resource Management	3	
ASC 4670	Large Aircraft Systems	3	
ASC 4551	Advanced Aerodynamics	3	
ASC 4555	Propulsion Fundamentals	3	**12**
Professional Pilot Concentration Elective Courses (Choose 6 credits)			
ATF 4700L	Advanced Flight Operations	3	
ASC 4940	Aerospace Internship	3	
AVM 4110	Fixed Base Operations Management	3	
AVM 4530	Corporate Aviation Operations	3	**6**
Capstone Course			
ASC 4900	Capstone Experience: Professional Pilot	3	**3**
TOTAL		**120**	

Table 5D-2: Bachelor of Science in Aerospace Sciences Curriculum, Aerospace Administration Concentration for Students Entering with an Associate in Science degree:

BS in Aerospace Sciences for Students Entering with an AS Degree			
Courses from AS Degree + General Education			
		Credits	**TOTAL**
Technical Courses from AS degree		42	**42**
General Education Courses		36	**36**
Upper-Division Common Core Courses			
Course Number	**Course Title**	**Credits**	
ASC 3474	Applied Human Factors	3	
ASC 3390	Air Transportation Systems Management	3	
ASC 3320	Aerospace Law and Ethics	3	
ASC 3690	Airspace Systems and NextGen	3	
AVM 3670	Safety Management Systems and Security	3	
AVM 3020	Principles of Aerospace Leadership	3	
GEB 3213	Advanced Business Communications	3	**21**
Aerospace Administration Concentration Required Courses			
AVM 4412	Airport Operations	3	
AVM 4516	Airline Operations	3	
AVM 4122	Aerospace Environmental Issues	3	
AVM 4015	Aviation Business Strategies	3	**12**
Aerospace Administration Concentration Elective Courses (Choose 6 credits)			
AVM 4450	Airport Planning and Design	3	
AVM 4110	Fixed Base Operations Management	3	
AVM 4111	Flight Dispatch and Scheduling	3	
AVM 4530	Corporate Aviation Operations	3	
ASC 4940	Aerospace Internship	3	
GEB 4891	Strategic Planning and Management	3	
MAN 4504	Operational Decision Making	3	
PAD 4204	Financial Management	3	**6**
Capstone Course			
AVM 4900	Capstone Experience: Aerospace Administration	3	**3**
TOTAL		**120**	

BS in Aerospace Sciences Curriculum for Students Entering with an AA Degree

Students entering the BS in Aerospace Sciences degree with an AA degree will articulate 36 credits of general education courses and 24 credits of lower-level electives.

In addition to the 60 credits from the AA degree, students entering the BS in Aerospace Sciences program with an AA degree will need to take 18 credits of lower-level technical courses as outlined below:

- ASC 1010 - Foundations of Air Transportation or AVM 1010 Aviation Management
- ASC 1210 - Aviation Meteorology and Automation Management
- ASC 1310 - US and International Aviation Operations
- ASC 2870 - Safety Management Systems and Operational Risk Management
- GEB 2214 - Business Communications or ENC 2210 Professional and Technical Writing

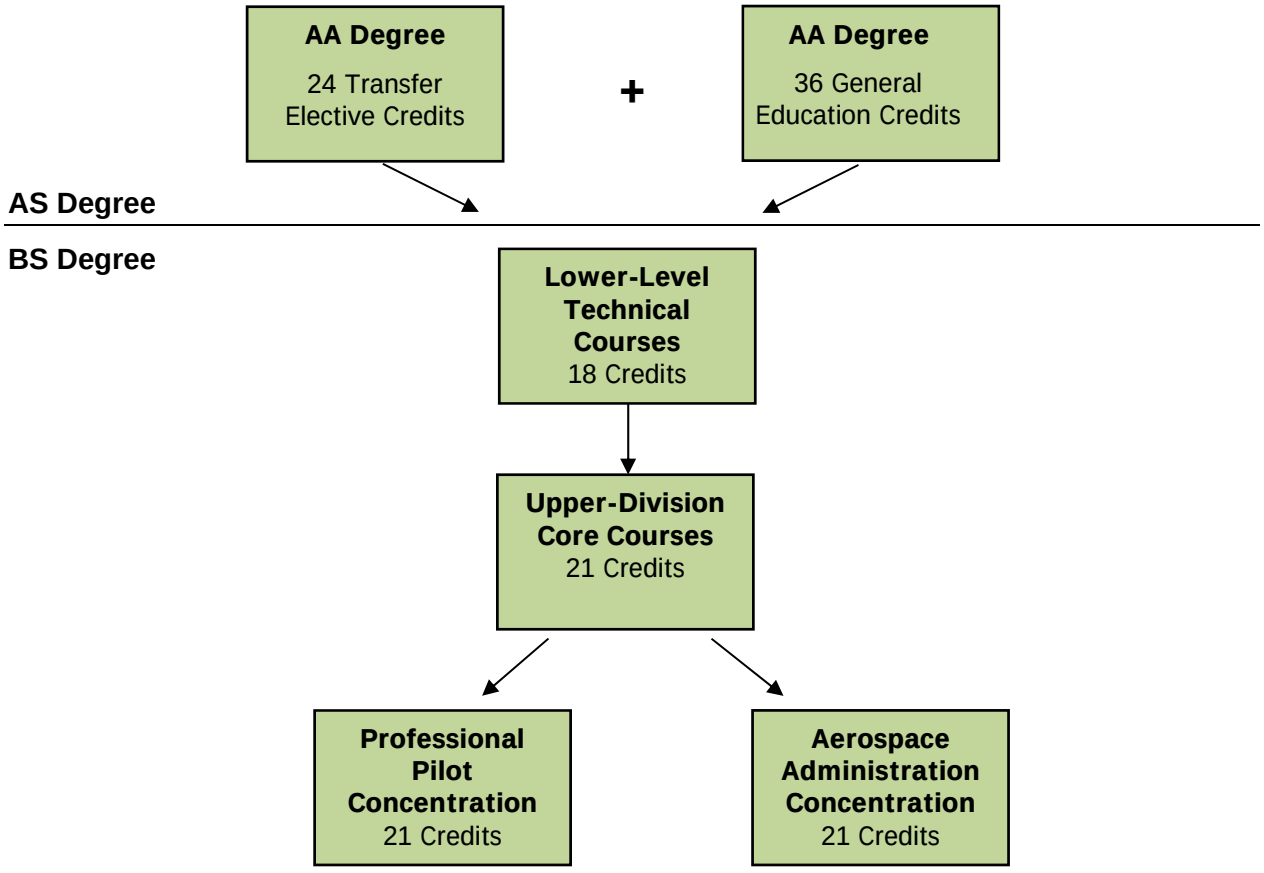
And one of the following:

- ASC 2473 - Human Factors and Resource Management
- AVM 1022 - Flight Operations
- AVM 2410 - Airport Management

These courses will provide a foundation to prepare students for upper-level courses in aerospace sciences. Then students will take 21 hours of upper-level program core courses and 21 hours of upper-level concentration courses. These courses total the 120 hours required for baccalaureate degree completion. Figure 5D-2 below illustrates the structure of the program.

Figure 5D-2:

BS Degree Structure for Students with an AA Degree



Tables 5D-3 and 5D-4 list all the required courses (both lower level and upper level) in the Bachelor of Science in Aerospace Sciences for students entering with an AA degree.

Table 5D-3: Bachelor of Science in Aerospace Sciences Curriculum, Professional Pilot Concentration for Students Entering with an Associate in Arts degree:

BS in Aerospace Sciences for Students Entering with an AA Degree			
Courses from AA Degree + Lower-Level Technical Credits			
		Credits	**TOTAL**
Lower-Level Electives from AA degree + Lower-Level Technical Courses		42	**42**
General Education Courses		36	**36**
Upper-Division Common Core Courses			
Course Number	**Course Title**	**Credits**	
ASC 3474	Applied Human Factors	3	
ASC 3390	Air Transportation Systems Management	3	
ASC 3320	Aerospace Law and Ethics	3	
ASC 3690	Airspace Systems and NextGen	3	
AVM 3670	Safety Management Systems and Security	3	
AVM 3020	Principles of Aerospace Leadership	3	
GEB 3213	Advanced Business Communications	3	**21**
Professional Pilot Concentration Required Courses			
ASC 4460	Crew Resource Management	3	
ASC 4670	Large Aircraft Systems	3	
ASC 4551	Advanced Aerodynamics	3	
ASC 4555	Propulsion Fundamentals	3	**12**
Professional Pilot Concentration Elective Courses (Choose 6 credits)			
ATF 4700L	Advanced Flight Operations	3	
ASC 4940	Aerospace Internship	3	
AVM 4110	Fixed Base Operations Management	3	
AVM 4530	Corporate Aviation Operations	3	**6**
Capstone Course			
ASC 4900	Capstone Experience: Professional Pilot	3	**3**
TOTAL		**120**	

Table 5D-4: Bachelor of Science in Aerospace Sciences Curriculum, Aerospace Administration Concentration for Students Entering with an Associate in Arts degree:

BS in Aerospace Sciences for Students Entering with an AA Degree			
Courses from AA Degree + Lower-Level Technical Credits			
		Credits	**TOTAL**
Lower Level Electives from AA degree + Lower-Level Technical Courses		42	**42**
General Education Courses		36	**36**
Upper-Division Common Core Courses			
Course Number	**Course Title**	**Credits**	
ASC 3474	Applied Human Factors	3	
ASC 3390	Air Transportation Systems Management	3	
ASC 3320	Aerospace Law and Ethics	3	
ASC 3690	Airspace Systems and NextGen	3	
AVM 3670	Safety Management Systems and Security	3	
AVM 3020	Principles of Aerospace Leadership	3	
GEB 3213	Advanced Business Communications	3	**21**
Aerospace Administration Concentration required courses			
AVM 4412	Airport Operations	3	
AVM 4516	Airline Operations	3	
AVM 4122	Aerospace Environmental Issues	3	
AVM 4015	Aviation Business Strategies	3	**12**
Aerospace Administration Concentration Elective Courses (Choose 6 credits)			
AVM 4450	Airport Planning and Design	3	
AVM 4110	Fixed Base Operations Management	3	
AVM 4111	Flight Dispatch and Scheduling	3	
AVM 4530	Corporate Aviation Operations	3	
ASC 4940	Aerospace Internship	3	
GEB 4891	Strategic Planning and Management	3	
MAN 4504	Operational Decision Making	3	
PAD 4204	Financial Management	3	**6**
Capstone Course			
AVM 4900	Capstone Experience: Aerospace Administration	3	**3**
TOTAL		**120**	

Note Regarding Number of Articulated Credits from Associate Degree

While this bachelor degree is designed for students who have completed an AS in Professional Pilot Science or Aerospace Administration, the degree is also designed to accommodate students with an AS degree in a different field and students with an AA. In order to provide a relevant and consistent upper-division experience for all students, 60 lower-division credits will be transferred and applied toward the baccalaureate degree regardless of the associate degree that was earned.

The BS curriculum is designed to provide students with 42 upper-division credits. The remaining 18 post associate-degree credits will be either general education credits for the AS students or a technical core of lower-level aerospace courses for the AA students. This feature of the curriculum ensures that AA students have a solid technical foundation, and it ensures that AS students have a solid foundation in general education coursework.

Because many AS degree programs are more than 60 credits in length, some AS transfer students will accumulate more than 120 college credits by the time the baccalaureate degree has been completed. For this reason, any first-year student who expresses interest in this program will be advised to follow the AS in either Professional Pilot or Aerospace Administration pathway or the AA degree pathway. This will ensure that students progress to graduation in the most efficient way possible and with a limited number of excess hours.

Format of the Program

The BS in Aerospace Sciences curriculum is designed in a flexible format. Students entering with an AS are not required to complete remaining general education courses before enrolling in upper-division courses. However, students entering with an AA must complete applicable lower-level technical credits before enrolling in upper-division courses. Students may take most upper-division courses in any order. Although a preferred order is designed for the program, there is sufficient reinforcement of key concepts across the curriculum, without redundancy of material, to enable students to be successful if courses are taken in a different order. This format accommodates working adults who typically enroll part time and must balance class enrollment with work and family responsibilities.

Prospective students who completed the survey as well as students in the current AS program indicate preference for courses in a face-to-face format. Therefore, Polk State will begin by offering the courses in a face-to-face format. In order to accommodate working adults and a more regional population, the College plans to offer each course as appropriate in an online or hybrid format in the semesters that follow the initial face-to-face offering of courses. Depending on student demand, courses may be offered in an accelerated 8-week format to promote timely progression toward graduation for part-time students.

The capstone course must be taken in the last semester prior to graduation. Students must have permission from the Program Director to take the Capstone Experience course.

A template of an ideal order of progression through all required courses is presented in Tables 5D-5 through 5D-8.

Table 5D-5: The following schedule is suggested for students entering the BS in Aerospace Sciences Professional Pilot Concentration with an AS degree.

Semester	Professional Pilot Concentration
Fall	ENC 1102 - College Composition II (3) Mathematics (Choose one) (3) MET 1010 - Introduction to Meteorology (3) ***or*** PHY 2001C - Basic Concepts of Physics (3) ASC 4551 - Advanced Aerodynamics (3) ASC 4555 - Propulsion Fundamentals (3) Semester Total (15)
Spring	LIT 1000 - Introduction to Literature (3) ASC 3474 - Applied Human Factors (3) ASC 4460 - Crew Resource Management (3) GEB 3213 - Advanced Business Communications (3) Semester Total (12)
Summer A (6 weeks)	AVM 3020 - Principles of Aerospace Leadership (3)
Summer B (6 weeks)	AVM 3670 - Safety Management Systems and Security (3) Semester Total (6)
Fall	Social Science (Choose one) (3) Humanities (Choose one) (3) ASC 3390 - Air Transportation Systems Management (3) ASC 3690 - Airspace Systems and NextGen (3) Aerospace Elective (3) Semester Total (15)
Spring	ASC 3320 - Aerospace Law and Ethics (3) ASC 4670 - Large Aircraft Systems (3) ASC 4900 - Capstone Experience: Professional Pilot (3) Aerospace Elective (3) Semester Total (12)
Summer	As Needed
Summary	Total 60 Credit Hours

Note: The recommended sequence for optimal program progression is subject to change at any time.

Table 5D-6: The following schedule is suggested for students entering the BS in Aerospace Sciences Professional Pilot Concentration with an AA degree.

Semester	Professional Pilot Concentration
Fall	GEB 2214 - Business Communications (3) ***or*** ENC 2210 – Prof. and Technical Writing (3) ASC 1010 - Foundations of Air Transportation (3) ASC 1210 - Aviation Meteorology and Automation Management (3) ASC 2870 - Safety Management Systems and Operational Risk Management (3) Semester Total (12)
Spring	GEB 3213 - Advanced Business Communications (3) ASC 1310 - US and International Aviation Operations (3) ASC 2473 - Human Factors and Resource Management (3) ASC 3320 - Aerospace Law and Ethics (3) Semester Total (12)
Summer A (six weeks)	AVM 3020 - Principles of Aerospace Leadership (3)
Summer B (six weeks)	AVM 3670 - Safety Management Systems and Security (3) Semester Total (6)
Fall	ASC 3390 - Air Transportation Systems Management (3) ASC 3690 - Airspace Systems and NextGen (3) ASC 4551 - Advanced Aerodynamics (3) ASC 4555 - Propulsion Fundamentals (3) Aerospace Elective (3) Semester Total (15)
Spring	ASC 3474 - Applied Human Factors (3) ASC 4460 - Crew Resource Management (3) ASC 4670 - Large Aircraft Systems (3) ASC 4900 - Capstone Experience: Professional Pilot (3) Aerospace Elective (3) Semester Total (15)
Summer	As Needed
Summary	Total 60 Credit Hours

Note: The recommended sequence for optimal program progression is subject to change at any time.

Table 5D-7: The following suggested schedule is for students entering the BS in Aerospace Sciences Aerospace Administration Concentration with an AS degree.

Semester	Aerospace Administration Concentration
Fall	ENC 1102 - College Composition II (3) Mathematics (Choose one) (3) MET 1010 - Introduction to Meteorology (3) ***or*** PHY 2001C - Basic Concepts of Physics (3) AVM 4412 - Airport Operations (3) AVM 4516 - Airline Operations (3) Semester Total (15)
Spring	LIT 1000 - Introduction to Literature (3) ASC 3474 - Applied Human Factors (3) AVM 4122 - Aerospace Environmental Issues (3) GEB 3213 - Advanced Business Communications (3) Semester Total (12)
Summer A (6 weeks)	AVM 3020 - Principles of Aerospace Leadership (3)
Summer B (6 weeks)	AVM 3670 - Safety Management Systems and Security (3) Semester Total (6)
Fall	Social Science (Choose one) (3) Humanities (Choose one) (3) ASC 3390 - Air Transportation Systems Management (3) ASC 3690 - Airspace Systems and NextGen (3) Aerospace Elective (3) Semester Total (15)
Spring	ASC 3320 - Aerospace Law and Ethics (3) AVM 4015 - Aviation Business Strategies (3) ASC 4900 - Capstone Experience: Aerospace Administration (3) Aerospace Elective (3) Semester Total (12)
Summer	As Needed
Summary	Total 60 Credit Hours

Note: The recommended sequence for optimal program progression is subject to change at any time.

Table 5D-8: The following suggested schedule is for students entering the BS in Aerospace Sciences Aerospace Administration Concentration with an AA degree.

Semester	Aerospace Administration Concentration
Fall	GEB 2214 - Business Communications (3) ***or*** ENC 2210 – Prof. and Technical Writing (3) AVM 1010 - Aviation Management (3) ASC 1210 - Aviation Meteorology and Automation Management (3) ASC 2870 - Safety Management Systems and Operational Risk Management (3) Semester Total (12)
Spring	GEB 3213 - Advanced Business Communications (3) ASC 1310 - US and International Aviation Operations (3) AVM 1022 - Flight Operations (3) ASC 3320 - Aerospace Law and Ethics (3) Semester Total (12)
Summer A (6 weeks)	AVM 3020 - Principles of Aerospace Leadership (3)
Summer B (6 weeks)	AVM 3670 - Safety Management Systems and Security (3) Semester Total (6)
Fall	ASC 3390 - Air Transportation Systems Management (3) ASC 3690 - Airspace Systems and NextGen (3) AVM 4412 - Airport Operations (3) AVM 4516 - Airline Operations (3) Aerospace Elective (3) Semester Total (15)
Spring	ASC 3474 - Applied Human Factors (3) AVM 4122 - Aerospace Environmental Issues (3) AVM 4015 - Aviation Business Strategies (3) ASC 4900 - Capstone Experience: Aerospace Administration (3) Aerospace Elective (3) Semester Total (15)
Summer	As Needed
Summary	Total 60 credit hours

Note: The recommended sequence for optimal program progression is subject to change at any time.

Graduation Requirements

A total of 120 credit hours are required to complete the BS in Aerospace Sciences at Polk State College. To graduate with the BS in Aerospace Sciences, each student must:

- Complete 120 credits as outlined in Tables 5D-1 through 5-D4
- Earn an overall cumulative grade point average of 2.0 or higher
- Earn a grade of *D* or better in all upper-division coursework
- Meet the college-level academic standards set forth by the state of Florida
- Demonstrate proficiency in a foreign language through any of the following means: completion of two years of high school instruction in the same foreign language, completion of a minimum of 8 college-level credits in one foreign language, achievement of minimum scores on a foreign language proficiency exam approved by the Registrar's Office, or completion of a high school diploma from a foreign country where the student studied in a language other than English
- Complete 25 percent (30 credit hours) of the BS program at Polk State College
- Complete at least 25 percent of the upper-division courses required for the BS degree at Polk State College, including the capstone course

e. List of specific Associate in Science and/or Associate in Applied Science programs offered at your institution that are aligned with the program, as applicable.

This program is aligned with the AS in Professional Pilot Science and the AS in Aerospace Administration.

f. Is the program being proposed as a Limited Access program?

The Bachelor of Science in Aerospace Sciences is not a limited access program.

I. ENROLLMENT, PERFORMANCE, AND BUDGET PLAN

1. Complete Enrollment, Performance, and Budget Plan (separate Excel sheet also included):

	PROJECTED	PROJECTED	PROJECTED	PROJECTED
I. PLANNED STUDENT ENROLLMENT	**2012-13**	**2013-14**	**2014-15**	**2015-16**
A. Student Headcount	0	10	20	30
B. Upper-Division Student Credit Hours Generated **(Resident)**	0	210	420	630
Upper-Division Student Credit Hours Generated **(Nonresident)**	0	0	0	0
Upper-Division Total Student Credit Hours Generated **(Resident & Nonresident)**	**0**	**210**	**420**	**630**
C. Upper-Division Student FTE (30 Credit Hours) **(Resident)**	0.0	7.0	14.0	21.0
Upper-Division Student FTE (30 Credit Hours) **(Nonresident)**	0.0	0.0	0.0	0.0
Upper-Division Student FTE (30 Credit Hours) **(Resident & Nonresident)**	**0.0**	**7.0**	**14.0**	**21.0**
II. PLANNED PERFORMANCE	**2012-13**	**2013-14**	**2014-15**	**2015-16**
A. Number of Degrees Awarded	0	0	0	8
B. Number of Placements	0	0	0	8
C. Projected Annual Starting Salary	$0	$0	$0	$50,000
III. PROJECTED PROGRAM EXPENDITURES	**2012-13**	**2013-14**	**2014-15**	**2015-16**
INSTRUCTIONAL				
1. Faculty Full-Time FTE	0	0	1	1
2. Faculty Part-Time FTE	0	0.5	0	0.5
1. Faculty Full-Time Salaries/Benefits	0	0	68,000	68,000
2. Faculty Part-Time Salaries/Benefits	0	8,800	0	8,800
3. Faculty Support: Lab Assistants, etc.	0	0	0	0
OPERATING EXPENSES				
1. Academic Administration	43,000	43,538	44,083	44,633
2. Materials/Supplies		2,500	5,000	5,000
3. Travel	0	0	0	0
4. Communication/Technology	0	0	0	0
5. Library Support	0	0	0	0
6. Student Services Support	0	0	0	0
7. Professional Services	0	0	0	0
8. Accreditation	300	0	0	11,000
9. Support Services	0	0	0	0
CAPITAL OUTLAY				
1. Library Resources	8,000	4,000	4,000	4,000
2. Information Technology Equipment	0		0	0
3. Other Equipment	0	0	0	0
4. Facilities/Renovation	0	0	0	0
TOTAL PROJECTED PROGRAM EXPENDITURES	**$51,300**	**$60,838**	**$123,083**	**$143,433**
IV. NATURE OF EXPENDITURES				
1. Recurring	43,300	56,838	119,083	139,433
2. Nonrecurring	8,000	4,000	4,000	4,000
TOTAL	**$51,300**	**$60,838**	**$123,083**	**$143,433**
V. SOURCES OF FUNDS				
A. REVENUE				
1. Special State Nonrecurring	0	0	0	0
2. Upper-Level - Resident Student Tuition Only	0	19,276	38,552	57,828
Upper-Level - Nonresident Student Fees Only	0	0	0	0
Upper-Level - Other Student Fees	0	6,321	12,642	18,963
3. Contributions or Matching Grants	0	0	0	0
4. Other Grants or Revenues	0	0	0	0
5. Community College Program Funds	55,000	55,000	55,000	60,000
6. Unrestricted Fund Balance	0	0	0	0
7. Interest Earnings	0	0	0	0
8. Auxiliary Services	0	0	0	0
9. Federal Funds - Other	0	0	0	0
B. CARRY FORWARD	0	3,700	23,459	7,571
TOTAL FUNDS AVAILABLE	**$55,000**	**$84,297**	**$130,653**	**$144,361**
TOTAL UNEXPENDED FUNDS (CARRY FORWARD)	**$3,700**	**$23,459**	**$7,571**	**$929**

2. Budget Narrative

Planned Student Enrollment: The College anticipates 10 students the first year, 20 in the second year, and 30 in the third year.

Planned Performance: Based on data from other programs and past experience, the College anticipates 50% of the students enrolling full time and 50% part time, an 80% completion rate, and 32 graduates by May 2016.

Instructional: Salary for the equivalent of one half of a part-time adjunct instructor will be approximately $8,800 the first year. As the program grows, the College plans to add a full-time faculty member at a cost of $68,000 for salary and benefits. Adjunct faculty will teach the remaining classes the third year, totaling (with the full-time faculty member) approximately $77,000 for the third year. The College plans to add a second full-time faculty member as the program grows.

Operating Expense: Salary costs include $43,000 for half of the program director salary; the remaining half is being paid out of the Associate in Science program. Additional baccalaureate advisors will not need to be hired because they have already been hired for other baccalaureate programs. Initial SACS program accreditation will cost $300. Promotional materials and other materials and supplies (printing, etc.) will be $2,500 the second year and $5,000 each year after. An additional $11,000 will be needed in the third year for accreditation with Aviation Accreditation Board International (AABI).

Capital Outlay: An initial expense of $4000 will be needed to purchase eBooks and other library resources for the Aerospace program (see complete list in section E).

Nature of Expenditures: All expenses will be recurring, approximately $86,500 the first year and increasing to $150,000 the third year when factoring in typical inflation costs.

Source of Funds: Funds to operate the program will come from tuition and fees, and the College currently funds the AS program director. The job duties will increase to provide direction for both the AS and BS, and the College will continue to fund the cost of the director. This will lead to a $3,700 carryover the first year and remain relatively stable throughout the end of the third year with a surplus of almost $1000. This budget has been based on no tuition increases.

3. Funding of Start-Up Costs

Given the support of the College and the tuition program, implementation will be feasible in lieu of the legislature providing state funding for start-up costs.

J. PLAN OF ACTION IF PROGRAM MUST BE TERMINATED

Summary of Teach-out Alternatives for Students

In the unlikely event that the program is terminated by the College, the procedures as established by SACS-COC will be followed. Following procedures for a substantive change, SACS-COC would be notified at least six months in advance of the program closing. The College would stop accepting new students into the program and offer the needed classes to allow currently-enrolled students who have maintained steady enrollment to graduate from the program.

The College would develop a time line, typically within two years, in which the program would be phased out, and the plan would be distributed in writing to all affected students and faculty. For those students unable to develop a viable plan within the College's phase-out period, advisors would assist the student with transfer options to other institutions offering similar programs. Faculty affected by the program closing would be eligible to transfer to any open faculty positions and would be assisted by the College in locating other employment.

K. SUPPLEMENTAL MATERIALS

March 22, 2013

CFAA- Polk State College Joint Advisory Board Meeting

Open: Rick Garcia, President-Last meeting of the year

A & P Update.

Gary Roy: Great job by Rick for work done and approval by FAA

Airframe has been approved by FAA. Power Plant is going through the process. Classes are running and half way through general. Still working on the PP and working to get things into compliance. Testing must be built in, administered and entered. Time constraints are a concern but everything that needs to be inventoried has been inventoried for the program. Acquisitions of operational engineers, cut away, etc. are not as easily accessible or as cheap as we had hoped. These items will be needed in order to get the program approval. Call out to the advisory board to keep eyes open for these materials and items but it can't be junk due to space limitations. Need turbines and other jet engines to make the project work.

Question and response: Rick-Contact FSU and Jacksonville-may have items that they want to sell. Gary's concern is no money and the need for resources. Gary exploring items with SKY KING and items that are already here on campus. Jet DIAMOND team may also be of help, but the planes are foreign built and documentation difficult with teardowns.

Rick is willing to contact James Ray. Lites offered the planes and engines that are not flying. SUN 'n FUN offer their planes. Dismantle engines on 727 and give one to Polk State and one to CFAA. Gary response, some of the engines are aged and would not be advisable or safe to run. Once you dismount the engine, it is not useful. Lori and Gary will meet discuss cutaway models and how useful these will be to the program. Gary was invited to look at what SUN 'n FUN has and use accordingly.

Dr. Patricia Jones offer the consortium that they have created as a resource for Gary.

John Small: Staffing needs due to the program. The growth will be fairly fast and Gary can coordinate what we have and an evening program through next year. Reality and necessity is due to the amount of paperwork and the process. Ultimately, we will need a resource sooner than anticipated in order to be effective.

John Small: If feel strongly, start looking for staff and start putting together the team to handle the work load. It is not just bringing in another instructor. Gary's name is on the manual. If there is a problem FAA will go to Gary. David suggest another instructor into Avionics program and free Gary's time and focus to A & P. David has list of current resumes for the program.
Walter Houghton is at 160 students and Keith Smith hired a para to assist with the classes. Proposing similar solution for A & P program.

John Small: Requesting written plan in order to appeal district hiring freeze to help show need for additional unit.

Dr. Jones: Question regarding plan for adult program. Traviss is starting the adult program in the fall. He will be meeting with John Leenhouts to discuss marketing. He will start with small number of adults to beta test the program.

David: May 2nd from 8am-6pm Open house at Travis. John working on the video and Christine working to get that done. Looking for advertisement and commercials. Potential survey to find out the schedule for a program that requires 1900 hours of time. This program stretches 2-3 years if people just doing evening classes. Other programs run during the day. Concern with evening program is to have the correct number of people due to the fact that there is no mid entry point into this type of program. The class should be loaded as heavily as we can and must take into consideration their previous experience.

Rick suggested sending out blanket email to Gene to get word out and use Polk Aviation Alliance.

Break for Introductions

CFAA Items:

Uniforms/CFAA Update: Keith Smith-Assistant Principal

Uniform dress code will include polo shirt with CFAA logo in Red, White or Black. Pants Khaki or black, long shorts and no open toed shoes. Belt necessary and shirts tucked in. Skort option for females suggested by Stacie Rine.

CFAA extended a thank you to Polk State. CFAA now has 4 dual enrollment options for the students. 6 period day and so students will have two classes as a junior and 2 as a senior. Walter committed to the program through next year. Student presentations at the end.

Astronaut challenge-Steven Trowbridge missed 3rd place by a few points.

CFAA Enrollment- 320 for next year and getting 1-2 per day still coming in. Third open house and got 66% out of the people that came to the program.

Polk State College: AS Program in Professional Pilot began in January 2013. Polk State looks to add an AS in Aerospace Administration for fall 2013. They are currently working on the curriculum for a BS degree in Aerospace Sciences which would have two concentrations: professional pilot and aerospace administration. Polk State would like to have a combined advisory committee with CFAA.

Patricia: If CFAA Board open, we can collaborate due to commonality. Goal is to funnel students from CFAA to Polk State College.

Lites thinks a great idea. He is currently pushing students toward Polk State through AeroClub. Lites would like to be part of Open Houses to help explain merit of aligning with programs at Polk State.

John Small suggests this could be accomplished during the formal orientation process the first week of school at CFAA. Polk Vision Board is trying to keep students in Polk County. This lets students know there are equal opportunities here in Polk

Debbie- who is doing the scheduling at CFAA this year. Guidance still doing the scheduling and Keith working with the guidance to make sure the classes are not stacked. Concern regarding incoming juniors and seniors and getting them in the program. All students must take PERT and Polk State test students to determine eligibility for the dual enrollment program. This is the first step. For aerospace and aviation they only need 2.5 GPA. Boot Camp a week or two before school is already planned. Incoming freshman not ready due to age but must focus on older students.

Motion to form a joint advisory committee: Motion by Keith Seconded by Lites. Approved by CFAA Board. Carried.

New Business: Introduce Walter Houghton

Director of aviation in Fort Lauderdale. David call and ask if teach. Walter teaches at ERAU and now is head of aviation program at CFAA. Helping build curriculum for Polk State and as well as the CFAA program. Talked about aerospace technology program.

Gene Conrad: Update and brief of what happening at tower. March 13 letter went out to request maintenance of tower. Issue with SNF and controllers that is taken care of and there will be FAA Controllers in the tower. Please let your politicians know the necessity of the maintaining the tower even on a limited time frame. We are taking it day by day at this point.

SUN ‘n FUN: Lites-SUN ‘n FUN going to happen. Volunteers and student volunteers all moving forward.

Lites mention Beuhler move into FAA restoration club. Lites want it to be aligned with the program at CFAA. Lites offer center and would like teaming agreement to assist students with the hours necessary to meet the requirements of the program.

Gene offer that JetBlue coming this year SNF. Coordinating with Lakeland Linder to create welcome ceremony and show them what we have here. Col. Miller and Lori coordinating welcome for students and jet coming in 10:30am on Thursday. 85 high school students coming in from all programs that Jet Blue Sponsors. Stacie coordinating all meetings and presentations. Eric and Patricia asked to be involved.

Educational Committee:

All systems go for Education and SNF. Collaborations with MOSI, NASA, Glazer Children’s Museum, Explorations V, Reptile Discovery and National Speakers: Janet Ivy, Dr. Jeffery Bennett

Polk State Update:

Patricia Jones: Polk State plans to add AS in Aerospace Administration. Polk State reviewed the curriculum at all other state colleges that offer this degree and shared a handout to review of Polk's proposed curriculum.

Motion made by John Small to approve AS in Aerospace Administration curriculum seconded by Rick. Voted and approved.

Polk State College then shared its draft curriculum for the BS in Aerospace Sciences and asked the board for input. She explained that at state colleges all bachelor degrees are 2 +2 - they must be built on associate degrees. For this degree, students would ideally earn an AS in Professional Pilot or Aerospace Administration and then enter the BS degree. The BS degree includes a core group of courses and then students choose either the pilot or administration concentration. Students may choose electives along their interest. This degree was developed via the work of the Florida College System Aerospace Consortium that includes all state colleges that offer aviation programs. They decided to work together to create the bachelors degree to ensure consistency of the degree across the state when multiple colleges begin offering it.

Gene Conrad suggested that the Aerospace Administration concentration needed additional foundational business courses. Discussion ensued on which business courses would be needed by students who want to work as administrators in airports, airlines, FBOs, etc. Gene specifically suggested accounting and finance.

Lites wants to make sure students have an understanding of the FAA. Eric concurred and described the courses in which the FAA is covered.

Motion made to approve BS curriculum made by Lites approved by Keith and approved by the Board. Carried.

Debbie: Interviews by some of the students. CFAA should be the gem of Polk County. I could not recommend students to Naval Academy due to language weakness. Lack of sports and languages are the weaknesses. John Small plans to address this. Summerlin has answered this and has wonderful language and sports program. Maybe partner with main campus and Summerlin.

Rick welcome Scott Franklin onto the Board. Approved and welcome.

Stacie Rine: Jet Blue and Liberty. Tours of sponsors on a set schedule to see what they can contribute.

Schedule will be distributed and CFAA informed.

Facilities Committee:

John Small: Facilities- programing drives the facilities. Thanked Lites for use of Sun ‘n FUN.

SIM Lab writing another grant and need to talk to someone regarding space. Build another lab.

Civilian Air Patrol: Lori Bradner change of leadership

Students: Keith Smith Introduce students

Steven Trowbridge: Astronaut Challenge

4 challenges, science project, brain bowl and engineering challenge. Students finished fourth only a few points shy of third. Create a centrifuge to maintain bone density. Students did a great job.

Norwegian Presentation:

Speakers Timothy, Marcus, Joey, Adam and Adam. Parents share the merit of such a program and benefit to the students. Power Point to the group.

Mr. Pollock-Benefit and college experience

Mr. Evans-Benefit to college and educational institution and raise the future this is an invaluable experience.

Mrs. Anderson-Experience of a lifetime for all the students. This is true experiential learning at its best.

Mrs. Mancini- thanked the boys for their presentation and shared that this was an experience of another culture feeds the students desire to learn and engage.

Angel thanked the Board for the efforts and how the program has grown in the past 4 years. Thanked leaders for their mentorship and education. Spoke to integration and foundation built by all the clubs.

Rick close the meeting at 10:40am.

Florida Aerospace Consortium
First Meeting
January 27, 2012

Location: Central Florida Aerospace Academy

Present: Gene Milowicki (FSCJ), Thomas Baine (FSCJ), Sam Fischer (FSCJ), David Dagenais (FSCJ), Jorge Guerra (Broward College), Diana Lewis (MDC), George Mazzeo (SFC), Ken Ross (Polk State), Naomi Boyer (Polk State), Patricia Jones (Polk State), Janeen Kochan (Polk State/ Aviation Research, Training and Services, Inc.), John Small (Polk County School Board), Serena Peeler (Polk County School Board), Gary Roy (CFAA)

I. Welcome

John Small welcomed everyone to Central Florida Aerospace Academy and explained the history of the aerospace initiatives in Polk County.
Introductions were made.

II. Degree Name and Structure

Name: Everyone agreed that BS was preferred over BAS but many voiced concerns about potential opposition from Embry-Riddle and FIT, as well as their own administration. George mentioned that he was not sure it was possible to get commissioned in the military with a BAS. He will research this. There were also questions about whether the airlines will accept a BAS. The consensus was to request BS with a strong case for BS over BAS.

FSCJ proposed the name BS in Aerospace Science and Technology. They felt this title was broad and gave the sense that this degree was a survey as opposed to a technical/engineering degree. Broward suggested BS in Professional Aeronautics- they were worried that Science and Technology would be perceived as math/science heavy (which the degree is not). FSCJ suggested keeping Technology because it would mollify those who felt the degree should be BAS. It was agreed that Aerospace was preferred over Aviation (too narrow) or Aeronautics (too dated). Final consensus was BS in Aerospace Sciences.

Structure- it was agreed to go with the following model:
60 credits from AS degree which includes 18 gen ed
18 additional general education credits
42 upper level credits split as follows: 21 credits of Core Courses and 21 credits in a concentration selected by the student.

Students with an AA will have 36 general education credits completed but will need to complete certain bridge courses required by all students for success at upper level. These courses were discussed and decided on later in the discussion (see below)

III. Letter of Intent

Tom Baine gave of overview of the requirements for requesting a bachelor degree in the Florida College System. Gene Milowicki shared a draft Letter of Intent that can be used by each college as they prepare their application for the Department of Education. The letter references the work of the Consortium and attempts to leverage the collaboration of the FSC aviation programs to provide support for the degree.

Gene felt the timeline for FSCJ to begin the degree would be spring of 2014. Polk State is shooting for Fall 2013.

IV. Core Courses

Both FSCJ and Polk State had submitted suggestions for possible core courses. The group compared the two proposals. After significant discussion, the following courses were decided for the Core:

1. Human Factors/Safety
2. Air Transportation Systems Management (includes business models of airports, FBOs, airlines, etc.)
3. Aerospace Law and Ethics
4. Airspace Systems
5. Safety Management Systems and Security
6. Principles of Aerospace Leadership (to include supervisory practice, labor relations, and professionalism)
7. Communications/Critical Thinking course- not aerospace specific- need to find an existing course at upper level. PSC suggested GEB 3213 *Advanced Business Communications*

Lower Level prerequisites needed to be successful with Core Courses: weather course, history of aviation course

It was noted that all courses should be built to be compliant with Aviation Accreditation Board, International (AABI) requirements to facilitate accreditation if a college chooses to pursue that.

V. Concentrations

FSCJ and Polk State had both suggested numerous possible concentrations. After much discussion these were narrowed down to: Professional Pilot, Aerospace Management, and UAS.

Professional Pilot (*Required: US FAA Private Pilot (Airplane Single engine Land); Instrument Rating (Single engine or multi-engine track); Multi-engine Pilot; Recommended: Commercial Pilot (SEL; MEL)*

The group decided on the following courses for Professional Pilot:

1. Advanced Human Factors/Crew Resource Management
2. Large Aircraft Systems
3. Aircraft Systems Management (to include basic systems, preflight, maintenance a pilot could perform)
4. Mission Planning

Plus 3 elective courses at discretion of the college. Options include:

- Flight training: CFI, CFII, MEI, Upset Recovery
- Course on International Operations/ICAO
- Courses from Aerospace Management concentration

Aerospace Management:

The group decided that there would be no required courses in this track. Instead they developed a list of courses and said suggested students should select any 7 depending on their career aspirations.

Airport Operations
Airport Planning and Design
Airline Operations (to include Flight Dispatcher)
General Aviation Operations
FBO Operations
Aerospace Environmental Issues
Aviation Business
Maintenance Management
Logistics and Supply Chain Management Finance (general course- not specific to Aerospace)
Finance (general course- not specific to Aerospace)
Project Management (general course- not specific to Aerospace)
Risk Management (general course- not specific to Aerospace)
Human Resource Management (general course- not specific to Aerospace)
Special Topics Course
Internship Course
Capstone Course

VI. Next Steps:

1. Collect data to support need for degree (everyone)
2. Identify credentials necessary for Aerospace at upper level (everyone)
3. Identify communications course for core- Jorge Guerra
4. Course descriptions for courses:
    - Core Courses- FSCJ
    - Prof Pilot courses- Polk State/ Janeen Kochan
    - Aerospace Management courses- Diana Lewis

    - UAS-Polk State with UND and Northland Community and Technical College
5. Review all courses for AABI compliance (everyone)
6. Look for grant funding- Diana Lewis

Due date: Wednesday, February 29
Send materials to everyone to review through “Reply All”
We will determine after February 29 if another meeting is necessary.

FLORIDA STATE COLLEGE AEROSPACE CONSORTIUM

October 19, 2012

Minutes

Valencia Community College
1800 South Kirkman Road
Orlando, FL 32811
407-299-5000

Agenda Items

Items in yellow are actions items. Bold items indicate group decision.

Present: Jeff Hess, Sam Fischer, Mike Nonnemacher for Anthony Petriello, Ken Ross, Naomi Boyer, Patricia Jones, Eric Crump, Diana Lewis, Ed Goolsby

I. Introductions

Introductions were made and the contact list for the group was updated. Changes for the contact list: add Jeff Hess's contact info, remove Judy Rice and Tom Baine, add Eric Crump, revise Sun'N Fun contact info to John Leenhouts, add Stacie Rine from Sun'N Fun. Add Mike Nonnemacher contact info under Industry Partners. Add Airline contacts- Sam and Diana will provide.

The name of the group was discussed. It was decided to revise the name to expand its role beyond the bachelor's degree. This group will also address common issues for lower level programs–for example revising the curriculum frameworks. **The revised name will be Florida State College Aerospace Consortium.**

It was also suggested that for each meeting members of the local advisory committee be invited.

II. Approval of Minutes from 1-27-12 Meeting

Moved by Patricia Jones, seconded by Sam Fischer. Motion approved.

III. Updates on Current Aviation Programs

Miami-Dade: working on AS degree in Intermodal Transportation that includes aviation; in the AS aviation programs they are focusing on student retention, especially in the pilot program

Polk State- AS in Professional Pilot begins in January 2013

UAS: no longer working with Northland Technical College; trying to hire consultant who can assist with UAS maintenance and data imagery tracks; no progress at this point on UAS pilot/operations track

Pasco-Hernando: approached by 3 flight schools at Hernando Airport about starting AS degree in Professional Pilot.

Broward: adding a global perspective to their programs- both in the curriculum and working with international students. Working to recruit Chinese students. New flight training provider; will be hiring dean.

FSCJ: Switched flight training providers last fall, which going very well; working on bringing in Chinese students; increased simulation in the program to reduce program costs; looking at UAS but not sure what direction they will go in; director position is being converted to a dean position; working on increasing pipeline of students- not a lot of success from career academies and summer camps

IV. Name of Bachelor's Degree

Diana Lewis noted that her advisory committee had concerns about the name Aerospace Sciences for the bachelor degree. The "space" component raised issues because it appeared more broad based and inclusive of NASA topics, rather than being aviation focused. Another mentioned concern was that the degree title appeared engineering focused. She asked if any other programs had received feedback from their advisory committees. Broward's advisory committee was supportive of the title; FSCJ is meeting with their advisory committee next week and will ask.

The group reviewed why they had selected the term aerospace: most general term- includes all aspects of the discipline. Aeronautics is just aviation. Also, as space becomes more and more privatized, the BS program will include more content on space travel.

V. BS Curriculum

Core- discussed removing Air Transportation course- would this be redundant for Aerospace Management majors? It was decided to leave this in.

- **Air Transportation to remain in the core.**

Discussion of capstone: should this be in Core or Concentration? It depends on whether the capstone is a common course that both Prof Pilot and Aerospace Management (AM) students take together, or will be capstone be specialized to each concentration? It was decided that the course would stay in the concentration since it is the last course each student should take. **It was also decided the course would be specialized to review the concentration but should provide the opportunity to connect the entire program content in to a cohesive whole by including concepts from the core as well.**

Broward asked if we needed to add Aviation Marketing class to AM concentration. **It was decided to add a reference to marketing to several of the AM course descriptions.** Diana offered to do this.

The question was raised about whether there will be flight training in the Prof Pilot track. Most Prof Pilot AS degrees get students through commercial multi, so repetition would not be appropriate CFI is also offered at lower level but not all students will be ready for this course until upper level. Maintaining appropriate Bachelors level content (junior/senior level) was important for academic integrity. **It was decided that Sam and Eric would work together to develop an upper level version of the CFI I, CFII, and MEI that differs enough from lower level that we can keep lower level course and offer upper level option too.**

Eric raised concern that if a student completed their flight training at end of AS and did no flying for 2 years while they complete their bachelor's degree, they would not be able to find a job- won't be current. **It was decided that upper level students would be encouraged to do CFI and then start working as a flight instructor for the remainder of their BS degree to help them build time and stay current.** Also, additional flight options such as sea plane rating, tailwheel endorsement, upset recovery, etc. would be offered at the upper level as electives. However, the majority of the upper level will be theoretical in nature since the degree will be a BS vs. a BAS (more applied).

Another option is advanced simulation courses. Diana noted that she has access to a 737 simulator since Boeing is in Miami. The group discussed the option of some colleges leveraging specialized options in their area and students from other colleges traveling there to get that experience.

Broward asked if ATC was covered in BS. It was noted that this topic is covered in the Core course Airspace Systems.

Aerospace Management- Originally this concentration was proposed as a group of multiple courses from which students select any 7. Diana and Mike would like to identify a few that are required for all and then have a few elective options. Diana and Mike will work on this and report back.

Pilot Concentration- Eric noted that Aircraft Systems Management and Mission Planning would be covered in his lower level program. He'd like to have other options such as a propulsion course and an applied aerodynamics course. Sam noted that applied aerodynamics is covered in his lower level program. Since there are differences like this

between the AS programs, it was decided that the group would decide on a group of courses that each college could select from for their 4 required pilot courses. Then there will be a group of elective courses developed that each college can choose from so students have several options for the electives. Sam and Eric will work on this.

Jeff suggested we consider a diversity course since graduates will be traveling all over the world and also because some of the colleges are working with international students. The group liked the idea but would like to see if that could be fit in to the general education courses. Since the state is currently revising the general education package, the group decided to what until the general education project was done and then revisit this idea.

VI. Prerequisites for BS degree

For students going into the Pilot Concentration- AS in Prof Pilot or associate degree with equivalent FAA ratings

For students going into Aerospace Management- Diana, Eric, and Sam will review the lower level courses and determine some common courses that would be good prerequisites.

VII. Employer and Student Surveys

Polk State shared their preliminary results of employer and student surveys. Student results show strong interest. Limited response to employer survey- Polk is still working with industry partners to get them to respond. Diana has done both employer and student surveys- good results. FSCJ plans to give employer survey next week and will do student soon after.

Group discussed aggregating employer survey data to create a strong picture for the state of Florida as a whole. Then each college can present local results and state results in their DOE applications.

Sam has connections with airlines through graduates of his program. He is going to try to get feedback from airline to support the program.

Timeline for offering BS- Polk is still trying to offer degree in Jan., 2014 but this will require no additional delays. Miami and FSCJ are anticipating at Fall., 2014.

Letters of support from industry- the group would like to approach large industry partners for a generic letter for the program as a whole vs. the program at a particular college. For example, American Airlines is in Miami but Diana would ask them to write a letter supporting the BS degree that all colleges could use in their application to the state. Then colleges can also include letters of support from smaller, local companies as well. Patricia and Naomi will craft a letter emphasizing the impending pilot shortage, number

of pilots trained in Florida, etc. Need to decide who the industry partners would address the letter to so that they remain Statewide rather than local in nature.Randy Hanna was suggested.

VIII. Additional Tasks for Group
Review credentials for AS degrees in OESC document and suggest revisions to OESC (we will delay this until next meeting).

Ask OESC/CIA to recognize our group.

Next Meeting: January 2014- hosted by Miami-Dade.

FLORIDA COLLEGE SYSTEM AEROSPACE CONSORTIUM

CONSORTIUM MEETING #3

Miami Dade College School of Aviation
MIA Facility
2460 NW 66 Avenue
Miami, FL 33122
305 237-5950

Minutes

Friday, January 25, 2013
10:00 AM to 2:00 PM

Present: Jerry Collins, Jeff Hess, Sam Fischer, Donnie Blalack for Russell McCafferty, Ken Ross, Naomi Boyer, Patricia Jones, Eric Crump, Ed Goolsby, Diana Lewis, Jorge Guerra, George Mazzeo, Frank Margiotta, Sean Gallagan, Andre Nauman, Victor Fernandez, Tim Schmelzer, Brian Wilkins

- Introductions

  Introductions were made and minutes from October 19 meeting were approved (moved by Diana Lewis, seconded by Jorge Guerra)

- Brief Program Updates from Each College

  - Polk State: AS in Professional Pilot began in January with 9 students. Still waiting on approval for financial aid.
  - FSCJ: reviewing current AS curriculum and re-doing surveys in preparation to apply for BS degree
  - Santa Fe College: enrollment in Aerospace program up 7%
  - Broward: Just hired transportation dean to fill vacancy left by Jorge; new dean interested in participating in the consortium, will be at next meeting
  - Miami Dade: low response from industry survey- will redo that before submitting for BS

- Brevard- has AS in Aerospace Technologies aligned to the space program but looking to add AS in Maintenance and/or Professional Pilot with emphasis on helicopter

✈ BS Curriculum Development

- BS Aerospace Sciences model and curriculum review

Everyone agreed with the first two pages of the program flowchart which show entry from AS and AA.

Professional Pilot concentration:

Changes were made as follows:

Addition of the following courses to the Required Concentration Course list:

1. Advanced Cockpits
2. Emerging Topics in Aerospace

   Tim Schmelzer agreed to write the course descriptions for these two courses by February 15 and share with Eric and Sam who will submit final version to Naomi

In the Electives list, the following was agreed to:

CFI, CFI II and MEI need course descriptions that distinguish them from the lower level courses. Sam and Eric will work on this and submit course descriptions by February 15 to Naomi.

No ATC courses need to be added

The question was raised about the content of the Capstone course. The topics below are options for this course:

Synthesis of program content to prepare for a comprehensive final exam (this exam will be necessary if any colleges go for AABI accreditation)

Project or internship that requires students to synthesize content of program

Aerospace Management Concentration:

It was decided to use same model as Prof Pilot concentration: 12 credits of required courses that are chosen by the college from a list of options, and 6 credits of electives from a list chosen by the college.

For the required courses list, the following courses need to be added:

Aviation Business Issues

Principles of Marketing or Marketing for Airports and Aviation Businesses (shifted from elective credit column)

Principles of Management or Principles of Airport Management (shifted from elective credit column)

For the electives list, the following courses need to be added:

Maintenance, Repair, & Overhaul Operations- Sean Gallagan will write the course description by February 15 and submit to Naomi.

Sean is submitting to Diana first. Diana will review and submit to Naomi.

- Prerequisites for program admission and for each concentration

Everyone agreed that prereq's for the program should be ASC 1210 and either ASC 1010 or AVM 1010. They also agreed on the prereq's for the Pilot Concentration (ratings through multiengine with commercial recommended). It was decided that no prerequisites were needed for the Aerospace Management Concentration.

- Review of curriculum items from October task list

List was reviewed and all tasks completed or assigned for next meeting.

- Degree Approval Items
  - Employer and student survey results

    Results from Polk State and Miami Dade were reviewed by the group.

  - Joint Letters of support

    Letter written by Polk State reviewed. First paragraph revised to remove references to specific colleges. Consortium members agreed to ask large aviation entities in their service area to write letters. Letters to be submitted to Naomi Boyer by April 1

    Diana Lewis:
    SE Chapter of American Associate of Airport Executives
    Florida Airports Council
    Boeing
    Airbus

    Eric Crump:
    NBAA
    NTAA
    Sun'N'Fun

    Sam Fisher:
    Flight Star
    Lockheed Martin
    Northup Grumman
    JAX Airport Authority

    Ken Ross:
    Letter from Aerospace Consortium explaining the process of formation and indicating our advisory committees are supportive of this effort as well as Consortium support for the development of the BS in Aerospace Science degree.

- Consortium Business
  - Logos

The group selected the around teal logo (2C) with the following changes:
Make the state of Florida white, add windows to the plane to make it look like it's coming out toward viewer. B&W version also requested.

- Review of any outstanding tasks from October list
  All tasks accomplished.

- Next meeting date and location
  Florida state College at Jacksonville, Friday, May 10
  Polk State plans to submit DOE proposal for BS in early May- will share draft with consortium for input prior to submission
  Topic for next time: Funding of pilot education
  Topic for next time: Formal organization and continuation of consortium
  Naomi Boyer agreed to facilitate the May meeting.

- Time Remained so the group discussed the issue of Faculty Credentials in BS degree

Minimum qualifications is masters with 18 in aerospace but can use faculty who have bachelors degree if experience and certifications are documented- these would be exceptions.

25% of the 42 upper level credits must be taught by someone with a terminal degree. It was noted that only UND and Embry-Riddle have PhDs in Aerospace. They are so new there are few graduates. Current bachelors degrees at four year colleges are taught by faculty with PhD in education and masters in aerospace. Therefore, unlikely we will find faculty with terminal degree for ASC courses. It was decided to target terminal degrees in courses that can be taught by faculty from other disciplines such as the Business Communications course or the Aviation Law course. In Aerospace Management track, terminal degree is PhD in Business or Management.

CONSORTIUM MEETING #4

Friday, May 10, 2013

Cecil Center of Florida State College Jacksonville
Building K, Room K-145, 13450 Lake Fretwell St.
Jacksonville, FL 32221

Items in yellow= action items

Present: Jerry Collins, Jeff Hess, Sam Fischer, Naomi Boyer, Patricia Jones, Eric Crump, Ed Goolsby, Diana Lewis, Mildred Coyne, Kay Pruitt, Jennifer Peterson, Patrick Murphy (Sunrise Aviation), Gene Thomas (US Airways), Dale Simms (Boeing), Kelly Dollarhide (Jacksonville Airport Authority)

Agenda Items

10:00 AM to 2:00 PM
(Working Lunch)

- Welcome & Introductions

  Dr. Maggie Cabral-Maly, President of the Kent Campus and Cecil Center of FSCJ welcomed the consortium to FSCJ.

  Introductions were made and minutes from January 25, 2013 meeting were approved (moved by Diana Lewis, seconded by Sam Fischer)

- 3 Minute Program Updates from each College

  FSCJ- currently moving A&P program from PSAV to credit; adding avionics courses and a UAS course; reorganization at the College taking place this summer, administration over Aviation programs will shift from an Associate Dean of Aviation to an Associate Dean of Career Education

  Miami-Dade – new AS degree in transportation and logistics; once that degree is launched they will focus efforts on BS in Aerospace; the business community has come up with 7 industries to focus on in the next year- one of them is aviation.

  Brevard- working with FIT on partnership in aviation. FIT has the flight programs, Brevard will offer the A&P programs. FIT is willing to provide hangar space for the A&P program.

Polk State- launched AS in professional pilot in January, adding AS in Aerospace Administration in Fall 2013, working to complete proposal for BS degree now

PHCC- adding 5th campus in Wesley Chapel, adding BSN and BAS in fall 2014, working on adding AS in Professional Pilot and Aviation Administration

- Presentation of the Polk State BS Proposal
  - Course format- online vs. face-to-face, accelerated semesters
  - Lessons Learned

Patricia Jones and Eric Crump shared the curriculum section of the proposal with the group. As Patricia went through the proposal, she stopped and asked the group for feedback on multiple issues.

Under the Aerospace Administration concentration courses, she noted that Polk State's advisory committee had suggested adding more business courses in basic areas such as management, finance, accounting, etc. They received the same feedback from the Polk State business faculty. Since Eric and Patricia wanted to stay aligned with the curriculum laid out by the consortium, they did not make any changes to the Required Concentration courses in Aerospace Administration. However, they did add several elective options from the Bachelor's degree in Supervision and Management at Polk State. Patricia and Eric suggested that the consortium might want to review the entire Aerospace Admin concentration in light of this advice, particularly if our colleges get similar feedback when they work with their local advisory committees.

Jerry Collins suggested that the group look at courses under the LDR prefix (Leadership). He felt those courses might meet the needs of the advisory committee but not be as intense as courses offered for business majors. It was also suggested that the Aerospace Administration curriculum be submitted to the Florida Airports Council to review.
Note: Subsequent to this meeting Diana contacted Florida Airports Council and the Southeast Chapter of American Association of Airport Executives- both were open to reviewing the curriculum. Patricia Jones will follow up before the next consortium meeting.

Format of the courses: Polk State requested input from other colleges on how they envision the format of the program. The current group of students at Polk prefer 16-week, face-to-face (F2F) courses. But in order to reach a regional audience and to reach aerospace professionals who are employed, Polk State was considering 8-week hybrid or online courses which is how all the other bachelor degrees at Polk are taught. The group encouraged Polk to follow the wishes of the current student body by beginning with F2F courses and adding other modalities later. FSCJ noted that their pilot program is heavily VA so those students can come in the day (they don't have to work). Miami Dade mentioned that they have many classes at night so students can take flight courses during the day. They also noted that aviation administration courses are often taught at night because the adjunct faculty are working professionals.

The group also provided Eric suggestions on sequencing of courses.

Patricia asked about an issue involving prerequisites. Students who have already completed an AS or AA degree but need to take the two prerequisite courses are not eligible for financial aid. Jerry Collins noted that FSCJ had received state board guidance that if a student is enrolled in prerequisite courses they can complete in one term and then be admitted to the program, then they can be eligible for financial aid. It is called the transitional admit status for bachelor degrees.

Eric asked about library resources because some of the electronic databases he wants to provide for students are very expensive. The group wondered if there was a way that as a consortium we can split costs for databases and make them available to students at all consortium colleges. Eric said he would share his list of resources he would like. The other colleges will then state whether they already have that database or if they would be interested in getting access to the database. Then we can explore pooling resources.

Naomi asked the colleges what timeline they had for submitting their proposals to DOE for BS degree.

- FSCJ- they have been asked to not submit additional bachelor degree proposals while the reorganization is being worked out, so they are on hold for now
- Miami Dade- plan to submit Letter of Intent in fall 2013
- Brevard- do not plan to add BS at this point b/c of partnership with FIT

Patricia said that Polk State would share the course content summaries they have developed for all of their courses.

- Instructor Credentials
  - AS versus BS requirements

    Patricia shared Polk's proposed credentials for Aerospace courses. For the AS courses, the college provides both a preferred credential and an alternative credential option, following the model set forth by the CIA's OESC committee during the AAS project. In extreme cases, where the alternative credential is not met, a letter of exception can be used. For the bachelor's degree courses, Polk is proposing requiring the preferred credential or a letter of exception. There will be no standard alternative credential. This will require upper level faculty to have a masters degree with 18 credits in aerospace or the college will have to write a letter of exception. The group concurred this was similar to what they were planning for their upper level courses.

  - BS Terminal Degree

    SACS requires that 25% of upper level Aerospace courses are taught by faculty with a terminal degree in the field – usually this is the PhD. Patricia reported that the only universities that offer PhDs in Aerospace/Aviation are UND, FIT and Embry-

Riddle. All of these degrees are fairly new and therefore the number of faculty available with a PhD in aerospace/aviation is very low. Following the OESC model, this would mean that the masters degree would count as a terminal degree for purposes of the 25% required by SACS. This is as yet an untested model (no colleges have been visited by SACS since this model was adopted). Eric learned from FIT that they allow masters for upper level but do prefer PhD in field or related fields. Presumably, related fields would include aerospace engineering, human factors, aerospace education. The group cautioned about following the OESC model since it is untested and recommended using the PhD in related field for the 25% required by SACS.

Eric stated that ABBI counts PhD in Education or PhD in business for Aerospace Admin courses.

- Articulation Agreements
  - AS to BS at Private and Public Institutions

    Because of the common course numbering system and our consortium work, it was agreed that articulation agreements were not needed between Florida state colleges.

    The group discussed allowing students to take BS courses at non-home institutions if a course was not offered at the home institution. Students would use the transient form and still be able to apply their financial aid for those courses.

    Since the AS varies at each institution, it was suggested that each institution develop their own articulation agreements for the BS with the private institutions. However it would be nice to have UND, ERAU and FIT agree to accept the BS degree with no prerequisites needed for their masters degree programs. Possible future step to explore.

- Financial Aid Strategies

  Polk asked for assistance with financial aid issues they were experiencing in the new AS degree. FSCJ and Miami reported they had no significant financial aid issues- their FA offices had worked out what needed to be done with each student, and therefore they were not familiar with the details of financial aid. Eric asked how they got their students in the air in the first semester given the 30 waiting period for federal loans. Miami reported that students can sign up for ATF courses at any point in the semester and they are given 2 semesters to complete the course. FSCJ reported that require their students to pay for the entire course upfront so students have to wait until they have sufficient funds to fly to enroll in ATF courses.

- Department of Labor Grant Discussion (TAACCT Proposal)

- Status and follow-up input

  MDC working with MRO entities in Miami to develop single institution TAACCT grant centered around maintenance

  The following colleges expressed interest in participating in a consortium grant led by Brevard: FSCJ, Miami- Dade, and Polk State. The group discussed requirements of the grant and individual projects each college might want to pursue. Conference to call to follow next week.

- Airman Certification Standards

  Eric Crump shared work he had done as part of an FAA committee looking at changes to flight training standards. He asked each program director to review them and provide comments to the FAA at the link below:

  http://www.regulations.gov/#!docketDetail;D=FAA-2013-0316

  Eric also encourage them to share with their advisory committee members. Proposed implementation date is Fiscal 2015.

- Consortium Governance

  The group decided that Naomi and Patricia would continue as co-chairs for the time being. The group also asked that we check with Dr. Ross about official recognition of the Consortium at the state level to provide expertise for curriculum review and development and provide feedback beyond what currently exists with the transportation SCNS committee.

  Note: Subsequent to the meeting Naomi worked with Dr. Ross to achieve the following: Dr. Ross has contacted Matt Bouck at SCNS to inquire about the consortium being consulted for courses related to aerospace. Ken received a positive response and asked that we send him the names of those who would serve in this capacity from the Consortium.

  Initial list (subject to change):
  Eric Crump
  Diana Lewis
  Sam Fischer
  Jorge Guerra
  George Mazzeo
  Russel Mccaffery
  Frank Margiotta

- Next steps and task assignments

  -Next meeting date Friday, September 20. Brevard Community College (soon to be Eastern State College)

POLK STATE COLLEGE
AQC MINUTES

Meeting:	**Academic Quality Council**
Date/Time:	**Monday, April 15, 2013 – 3:00 p.m.**
Locations:	**Winter Haven Campus – WMS 124** **Lakeland Campus – LAC 1243**
Recorder:	**Kelly McDavid**
Attending Members:	**Martha Santiago, Dawn Taylor, Rebecka Sare, Greg Harris, Brad Massey, Anna Butler, Dodie Cowan, Laurel Smith, Jeff Woodside, Annette Hutcherson for Lorrie Jones, Karen Greeson, Beth Luckett, Herb Nold, Karen Walfall, Jenny Nguyen (student) for Joshua Austin, Patricia Jones**
Resource Members:	**Kelly McDavid, Ken Ross, Kathy Bucklew, Peter Usinger, Chris Amato, Nathan Neuman, Marcia Conliffe**
Other Faculty/Staff:	**John Huff, Paul Carbonell, Maria Lehoczky, Becky Pugh, Natalie Whitcomb, Susan Whatley, Eric Crump via telephone**
Absent Members:	**John Anderson, Tiffany Messerschmidt for Becky Heintz, Sylvester Little, Lindsey Myers**
Absent Resource Members:	**Bill Foege, Chris Fullerton, Reggie Webb, Saul Reyes**

Welcome
Patricia welcomed everyone. A quorum was reached at 3:15 p.m.

I. Approval of Minutes from 3/20/2013
Dodie Cowan made a motion to approve the meeting minutes, which was seconded by Karen Walfall. No further discussion; motion passed unanimously.

II. **New Program Proposal, Program Modifications, and Numerous New Courses: Computer Networking, AS**
Patricia introduced John Huff. John proposed modifications for the following courses and programs for Computer Network Engineering:

a. The proposal to modify courses is due to changes in technology requirements. CTS 2339C is having a title change to reflect newer technology. CTS 2346C, Server 2008 Administration will be end-termed and replaced with a new course CTS 2358C, Administering Windows Server 2012. CTS 2345C, Server 2008 Active Directory Configuration will be end-termed and replaced with CTS 2357C, Installing and Configuring Windows Server 2012. These changes require a program modification for all Computer Networking specializations as these three courses are in the program's core. The core has been modified to include the three new courses and to remove the two that were end-termed. These changes will keep student's skills up-to-date and competitive in the job market. Dodie Cowan made a motion to approve

the changes, which was seconded by Ana Butler. No further discussion; motion passed unanimously.

b. John proposed to end-term CTS 2343C, 2008 Infrastructure Configuration and to replace it with a new course: CTS 2359C, Configuring Windows Server 2012 Advanced Services. The course is for the Microsoft Specialization program: AS 25261. This program modification removes CTS 2343C and adds CTS 2359C due to changes in Microsoft technology requirements. Dodie Cowan made a motion to approve the changes, which was seconded by Herb Nold. No further discussion; motion passed unanimously.

c. John proposed a new specialization, Virtualization. This specialization will contain three new courses:
   1. CTS 2411C, Information Storage Management, which leads to EMC certification;
   2. CTS 2370C, VMware cSphere: ICM v5.1, which leads to a VCP certification;
   3. CTS 2374C, VMware View: Virtualizing the Desktop, which leads to a VCAP-DTD certification from VMware. Karen Greeson made a motion to approve the new specialization and courses, which was seconded by Brad Massey. No further discussion; motion passed unanimously.

III. New Courses: TPA 2077, TPP 2250, and TPP 2514. Patricia introduced Paul Carbonell. Paul proposed three new courses for Theatre:

a. TPA 2077, Theatrical Scene Painting provides a study of color theory, painting techniques, and painting styles as related to the art of theatrical scene painting and its processes. Students participate in scene painting for theatrical productions from concept to finished product.

b. TPP 2250, Musical Theatre provides an introduction to the practical skills needed in musical theatre performance with an emphasis on acting, voice, and dance skills. Students prepare for and perform in song and dance ensembles in musical revues and cabarets. Students explore the development of style, interpretation skills, flexibility, and range.

c. TPA 2077, Stage Movement provides a study of the movement skills necessary for actors and performers to function physically during rehearsals and performances. Emphasis is on developing the physical characteristics appropriate for a play set in various locales and time periods. Students are introduced to physical exercises that develop balance, relaxation, coordination, agility, and control. Rhythm and flow in contemporary and period movement styles are explored as well as basic safety techniques for stage-fighting and combat choreography.

These courses were piloted last semester and are a vital part of the Theatre program. Dawn Taylor made a motion to approve the courses, which was seconded by Beth Luckett. No further discussion; motion passed unanimously.

IV. New Program: BS in Aerospace Sciences

Patricia introduced Eric Crump who joined via telephone and Dr. Janeen Kochan, a consultant who was present at the LK campus. Eric and Janeen proposed a new Bachelor's program: Aerospace Sciences. There is currently no public four-year Aerospace Sciences degree program in Florida. The private institutions that have this degree are Florida Institute of Technology, Embry-Riddle, and Jacksonville University. Eric explained that Polk State College has a unique advantage to offer the program due to price point and quality of program content. This program has been designed around safety management, which is the wave of the future in the aerospace field. This program was designed with a future focus on the needs and demands of the FAA. Eric elaborated that he is still looking for a

space at no cost to the college or future cost for expansion. Eric also mentioned that student enrollment would more than pay for the faculty (per SPOL). The Perkins Grant already covers the cost of simulator equipment in the AS Aerospace program. Patricia mentioned that Eric has been networking and working with vendors in the community to obtain donations or low-cost simulators. Housing has been the only concern for out-of-area students, but the low program cost would help offset the additional expenses for housing. Greg Harris made a motion to approve the BS in Aerospace Sciences, which was seconded by Herb Nold. Dodie Cowan questioned the wording of the justification in the new courses. Patricia suggested re-wording “Its approach to teaching” to "Its inclusion in the program" is key to helping students understand the nature of their future workplace. Dodie felt this would address the justification issue. Dodie mentioned that the Course Objectives in ACSC 4940 were numbered instead of bulleted, that they were numbered incorrectly, and that they should be numbered 1-7. Dodie pointed out that in ASC 4900 under Course Objectives, the word “of” was omitted in objective number 1, and a period was omitted in objective number 10. Dodie stated that in AVM 4110, Course Objective number 7 should be re-worded to read “Develop a Safety Management System (SMS) program and apply an atmosphere of ‘safety-first’ with every employee.” Dodie then mentioned the last sentence in the Course Description of ASC 3320 should read “significantly” instead of “exponentially.” Dodie Cowan made a motion to approve the new program and all courses as a block with changes mentioned above, which was seconded by Greg Harris. No further discussion; motion passed unanimously.

V. Program Modification: Business Administration AS

Patricia introduced Maria Lehoczky. Maria proposed a program modification for Business Administration. The Florida Department of Education has mandated that the Business Administration degree be reduced from 64 to 60 credits. This proposal addresses the need to reduce those hours. FIN 2000 is being removed from the core and in some cases replaces a course in the specializations. Also, the practicum course will be reduced from 2 credits to 1 credit. Dodie Cowan made a motion to approve the program modification and the new courses, which was seconded by Dawn Taylor. No further discussion; motion passed unanimously.

VI. New Course: EVR 2930

Patricia introduced Natalie Whitcomb. Natalie proposed new course, EVR 2930, Special Topics in Environmental Science. This course has been offered once in Honors format as a pilot course. Jeff Woodside mentioned that the Lakeland Science Department had not been consulted. Natalie apologized as she had intended to send an e-mail to Bruce and stated it had been an oversight due to workload. Jeff stated that there were no issues with approving the course. Greg Harris made a motion to approve the new course, which was seconded by Dodie Cowan. No further discussion; motion passed unanimously.

VII. Course Modification: EME 2040

Patricia introduced Becky Pugh. Becky proposed a course modification for EME 2040, Introduction to Technology for Educators to change the course description due to software changes. Becky informed the committee that this course provides a study of educational technology including the use of computers, the means to access and evaluate information on the web, and the integration of computers and educational technology into a classroom curriculum. Dr. Ross was concerned that because the objectives are vague, adjuncts would not know what to cover. The committee recommended a list of software to be used by faculty teaching the course be developed annually and shared with the deans. Greg Harris made a

motion to approve the course modification, which was seconded by Ana Butler. No further discussion; motion passed unanimously.

VIII. Course Modifications: OST 2471, OST 2612C, and OST 2613C

Patricia introduced Susan Whatley. Susan proposed three course modification proposals for the Medical Transcription program: OST 2471, Legal and Ethical Office Issues; OST 2612C, Medical Transcription II; and OST 2613C, Medical Transcription III.

a. Susan stated that OST 2471 needs to be reactivated as it is still needed for the Medical Transcription Program. OST 2471 was mistakenly end-termed when the Office Administration degree was eliminated.
b. OST 2612C had a contact-hour distribution change from 48 lecture hours to 32 lecture hours and 16 lab hours. The course description was changed to accurately reflect the content of the course.
c. OST 2613C had a course description change that included more specific description and a contact-hour distribution change from 48 lecture hours to 32 lecture hours and 16 lab hours.

Dr. Ross discovered a numbering error under Course Content in OST 2471 and recommended adding *and* after *expectations,* adding a period after *projects*, and deleting the remainder of the content in number 1. Greg Harris made a motion to approve the course modification with changes mentioned above, which was seconded by Beth Luckett. No further discussion; motion passed unanimously.

Meeting adjourned at 4:40 p.m.

Aerospace Sciences Employer Survey 2012

1. Please enter your address below.

Name	Address	Address 2	City	State	ZIP Code	Country
James Williams	AVT Simulation	2603 Challenger Tech Court, #180	Orlando	Fl	32826	USA
TERRY LLOYD	301 DYER BLVD	SUITE 101	KISSIMMEE	FLORIDA	34741	USA
Wayne Keyes	ELITE Simulation Solutions	5700 Dot Com Court Suite 1010	Oviedo	FL	32765	USA
Deric Dymerski	825 Severn Avenue		Tampa	FL	33606	US
Gene Conrad	3900 Don Emerson Dr. Suite 210		Lakeland	Florida	33813	USA
Preston Aviation	2073 US Highway 92		Winter Haven	FL	33881	USA
Lisa Waters	Hanson Professional Services Inc.	1601 Belvedere Rooad, 303S	West Palm Beach	FL	33409	USA
Sebring Airport Authority	128 Authority Lane		Sebring Florida	FL	33870	USA
Cindy Barrow	P.O. Box 650		Bartow	FL	33831	USA
Rick Garica	3650 Drane Field Road		Lakeland	FL	33811	USA
John Leenhouts	4175 Medulla Road		Lakeland	FL	33811	USA
Tommy Grimes	2073 US HWY 92		Winter Haven	Florida	33881	USA
Stacie Rine	4175 Medulla Rd		Lakeland	Fl	33811	Usa
Debbie Murphy	2073 US Highway 92 West	PO Box 2277	Winter Haven	Florida`	33883-2277	USA
Steve Graham	3008 patrick St		Kissimmee	FL	34741	USA
Brown's	2704 Hwy 92		Winter	Fl	33881	USA

Seaplane Base	W		Haven			
Bill Boege	3086 21st ST NW		Winter Haven	FL	33881	USA
Kevin McNamara	365 Rickenbacker Drive		Orlando	Florida	32803	USA
Teresa Allen	201 Central Avenue West		Lake Wales	Florida	33853	
Kieran O'Farrell	1404 Royal Forest Loop		Lakeland	FL	33811	Polk
Fantasy of Flight	1400 Broadway Blvd SE		Polk City	Florida	33868	USA
Aircraft Engineering	PO Box 1319		Eagle Lake	Fl	33839	USA

Statistic	Value
Total Responses	22

2. Approximately how many full-time employees work in your organization?

Text Response
62
7
5
20
14
2
350
9
18
27
27
10
20
450
16
5
3
15
173
29
60
8

Statistic	Value
Total Responses	22

3. Would individuals with a bachelor's degree in Aerospace Sciences benefit your organization?

#	Question	Yes	No		Mean
1	Professional Pilot	17	4	21	1.19
2	Aerospace Management	14	7	21	1.33

Statistic	Professional Pilot	Aerospace Management
Min Value	1	1
Max Value	2	2
Mean	1.19	1.33
Variance	0.16	0.23
Standard Deviation	0.40	0.48
Total Responses	21	21

4. Approximately what percent of your employees are in positions that require a bachelor's degree?

Text Response
80%
40%
3%
15%
60%
0%
75%
50%
6%
0%
65%
4%
2%
30%
0%
50%
6%
30 %
100%
6%
0%

Statistic	Value
Total Responses	21

5. Approximately what percentage of positions at your organization would benefit from a bachelor's degree in Aerospace Sciences?

Text Response
20%
40%
2%
20%
100%
0%
0%
0%
6%
90%
35%
2%
10%
10%
30%
0%
100%
6%
0%
100%
2%
10%

Statistic	Value
Total Responses	22

6. Would Polk State College's bachelor's degree in Aerospace Sciences support your needs for education and training of employees for your business?

#	Answer		Response	%
1	Yes		17	77%
2	No		5	23%
	Total		22	100%

Statistic	Value
Min Value	1
Max Value	2
Mean	1.23
Variance	0.18
Standard Deviation	0.43
Total Responses	22

7. Are opportunities for promotion available to your employees who obtain a bachelor's degree in Aerospace Sciences?

#	Answer		Response	%
1	Yes		17	81%
2	No		4	19%
	Total		21	100%

Statistic	Value
Min Value	1
Max Value	2
Mean	1.19
Variance	0.16
Standard Deviation	0.40
Total Responses	21

8. Does your organization have a tuition payment or reimbursement plan?

#	Answer		Response	%
1	Yes		7	32%
2	No		15	68%
	Total		22	100%

Statistic	Value
Min Value	1
Max Value	2
Mean	1.68
Variance	0.23
Standard Deviation	0.48
Total Responses	22

9. Approximately how many of your employees do you think might be likely to enroll in a program like this?

#	Answer		Response	%
1	none		7	32%
2	less than 5		15	68%
3	5-10		0	0%
4	11-15		0	0%
5	16-20		0	0%
6	more than 20		0	0%
	Total		22	100%

10. Which category most accurately describes your organization?

#	Answer		Response	%
1	Aviation Training		4	18%
2	Aviation Maintenance		3	14%
3	Aviation Manufacturing		0	0%
4	Aviation Services (air carrier, air charter, pilot services, aerial advertising, aerial application, etc.)		0	0%
5	Aviation Support (fixed base operator, consulting)		3	14%
6	Airport Operations		6	27%
7	Simulation		2	9%
8	Other		4	18%
	Total		22	100%

Statistic	Value
Min Value	1
Max Value	8
Mean	4.86
Variance	6.69
Standard Deviation	2.59
Total Responses	22

11. Please list the categories of aviation-related jobs your company offers and then answer the associated questions for each category.

Aviation jobs offered by your company, one category per blank (ex.- pilots, mechanics, FBO manager, etc.)	How many people do you employ in each category?	How many employees have you hired in each category over the last year?	How many employees do you expect to hire annually for the next five years?
Simulation	40	25	30
AIRPORT OPERATIONS	3	2	2
Pilot	3	1	1
FBO Manager	3	0	0
Airport Operations	10	3	1
CIVIL ENG.	67	4	2
Airport Management	2	0	1
Airport Manager	1	0	0
avionics techs	12	5	10
pilot	5	2	4
FBO Manager	1	1	2
Airport Admin	2	2	?
pilots	11	3	5
office manager	2		0
Pilot	3	2	2
airport director	1	0	0
Aviation Safety Inspectors	19	1	20
pilots	2	0	1
mechanics	8	12	2
[unknown]	2	2	2

Aviation jobs offered by your company, one category per blank (ex.- pilots, mechanics, FBO manager, etc.)	How many people do you employ in each category?	How many employees have you hired in each category over the last year?	How many employees do you expect to hire annually for the next five years?
Aerospace Management	3	1	2
Pilots	5	0	1
Business operations Manager	1	0	0

AIRPORT PLANNER	20	0	1
FBO Manager	1	0	0
Assistant Manager	1	0	1
mechanic	5	3	8
Pilots	5	5	25
manager	1	2	1
instructor	6	2	10
Mechanic	3	1	1
manager of facilities	1	0	0
mechanics	8	3	0
Managers	4	0	6

Aviation jobs offered by your company, one category per blank (ex.- pilots, mechanics, FBO manager, etc.)	How many people do you employ in each category?	How many employees have you hired in each category over the last year?	How many employees do you expect to hire annually for the next five years?
Properties Manager	1	0	0
MECH. ENG	8	4	1
Operations manager	1	0	0
FBO Manager	1	0	1
Mechanics	3	3	10
mechanics	3	3	1
mechanic	2		0
FBO Manager	1	1	1
operations supervisor	4	2	1
Administrative	4	0	3

Aviation jobs offered by your company, one category per blank (ex.- pilots, mechanics, FBO manager, etc.)	How many people do you employ in each category?	How many employees have you hired in each category over the last year?	How many employees do you expect to hire annually for the next five years?
ELECT. ENG.	10	2	2
Tower Controller	2	1	2
dispatch	4	4	4
lineman	2	1	1

Parts Manager	1	1	1
administrative coordinator	1	1	0

Aviation jobs offered by your company, one category per blank (ex.- pilots, mechanics, FBO manager, etc.)	How many people do you employ in each category?	How many employees have you hired in each category over the last year?	How many employees do you expect to hire annually for the next five years?
PROJECT COORDINATOR	12	0	1
Line Service	8	3	2
Flight Instructor	2	2	2
maintenance lead	1	1	0

Aviation jobs offered by your company, one category per blank (ex.- pilots, mechanics, FBO manager, etc.)	How many people do you employ in each category?	How many employees have you hired in each category over the last year?	How many employees do you expect to hire annually for the next five years?
CONSTRUCTION SUPER.	12	0	1
Secretary/Desk Clerk	3	2	0
equipment operator III	3	1	0

Aviation jobs offered by your company, one category per blank (ex.- pilots, mechanics, FBO manager, etc.)	How many people do you employ in each category?	How many employees have you hired in each category over the last year?	How many employees do you expect to hire annually for the next five years?
RESIDENT INSPECTOR	4	0	0
Flight Instructors	4	0	2
Airfield electrician	1	0	0

Aviation jobs offered by your company, one category per blank (ex.- pilots, mechanics, FBO manager, etc.)	How many people do you employ in each category?	How many employees have you hired in each category over the last year?	How many employees do you expect to hire annually for the next five years?
Env. Eng.	4	1	0
Airfield Maintenance	3	2	2

janitor	1	0	0

12. Do you have any additional comments or opinions regarding Polk State College's proposed degree in Aerospace Sciences?

Text Response
It would be great to have a simulation course that introduces students to the technology and its use. We could supply visiting Lecturers.
Polk County has a number of airports and other aviation assets that can benefit your program. I also suggest you contact the Florida Airport Council, whom Embry-Riddle, Florida Institute of Technology and other colleges involved in aviation are members and their students enjoy the benefits of membership
Best wishes to your new program.
The proposed degree in aerospace Science is a great opportunity for both local and foreign students.
I am personally excited to know that Polk State College may offer a degree in Aerospace Sciences. Over the years, I've seen a lack of aviation professionals, not only in Polk County, but in other areas of the State. Offering this degree is a true indication of how important aviation is and most people can't comprehend how aviation touches each of us on a daily basis. I would anticipate that if Polk State College offers a degree in Aerospace Sciences, it will be a beneficial and successful program.
This would tremendously benefit the workforce & employers in Polk County
It provides an excellent opportunity for our aviation oriented high school graduates to pursue an advanced degree in aerospace field at an affordable cost and in our local community.
Demand for pilots and mechanics could grow dramatically in the next few years.
It is a great program we will promote and encourage all of our attendees to learn more about.
The answers to the questions above reflect the current airport operational structure. The benefits of having a local aerospace program will be most beneficial should we decide to change the way we currently do business at the airport.
It looks like an excellent program.
Believe it would greatly enhance the variety of curriculum offered in our community

Statistic	Value
Total Responses	12

Aerospace Sciences Student Survey 2012

1. In which degree program are you currently enrolled?

#	Answer		Response	%
1	Certificate		12	2%
2	AA degree		227	40%
3	AS degree		164	29%
4	AAS degree		24	4%
5	Baccalaureate program		68	12%
6	Currently not enrolled		72	13%
	Total		567	100%

2. Do you presently hold an AA or AS degree?

#	Answer		Response	%
1	Yes		136	24%
2	No		432	76%
	Total		568	100%

Statistic	Value
Min Value	1
Max Value	2
Mean	1.76
Variance	0.18
Standard Deviation	0.43
Total Responses	568

3. If Polk State College begins to offer a Bachelor of Science Degree in Aerospace Sciences, would you be interested?

#	Answer		Response	%
1	Very interested		207	36%
2	Somewhat interested		117	21%
3	Undecided		79	14%
4	Not interested		167	29%
	Total		570	100%

4. Would you be interested in the Aerospace Management or Professional Pilot concentration for this degree?

#	Answer		Response	%
1	Aerospace Management		163	29%
2	Professional Pilot		207	36%
3	Not interested		199	35%
	Total		569	100%

5. If Polk State College were to develop programs related to unmanned aerial systems (UAS) in the future, would any of the following concentrations be of interest? (Check all of those that apply):

#	Answer		Response	%
1	Unmanned Aerial Systems Operations/Pilot		202	36%
2	Unmanned Aerial Systems Maintenance Technologies		92	16%
3	Unmanned Aerial Systems Data and Imagery Analysis		119	21%
4	Not Interested		244	43%

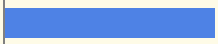
6. What is your class schedule preference (check all that apply)?

#	Answer		Response	%
1	Mornings Mon. - Fri.		262	47%
2	Afternoons Mon. - Fri.		152	28%
3	Evenings Mon. - Thurs.		212	38%
4	Friday evenings		67	12%
5	Saturdays		92	17%
6	Online (Web-based)		221	40%
7	Hybrid (Partially Web-based)		191	35%
8	Other, please specify:		25	5%

Other, please specify:
Not interested in this degree
Any evenings
mornings and afternoon Mon.-Thurs.
Mornings Mon-Thurs
whatever
graduated - n/a
MS Degree, Educator
not interested
none
Anytime
Mornings, Tuesday Thursday
I am flexible...just would like the opportunity to work and still go to school
Monday and Wednesday
monday evenings
Mon. and Wed.
Mornings Mon-Thursday
Tuesdays and Thursday mornings.
Night classes
Monday and Wednesday
Tue thursday Uuu
Mon-Thurs mornings

Statistic	Value
Min Value	1
Max Value	8
Total Responses	552

7. When would you be ready to begin this Bachelor's program?

#	Answer		Response	%
1	As soon as possible		227	44%
2	2-3 years		193	37%
3	3-4 years		27	5%
4	More than 4 years		68	13%
	Total		515	100%

8. What is your preferred Polk State College location for taking bachelor degree courses? Rank in order of preference from 1 to 5, where 5 is most preferred and 1 is least. To change the ranking, simply drag your answer up or down and drop it in the appropriate place.

#	Answer	1	2	3	4	5	
1	Winter Haven Campus	142	145	81	96	38	502
2	Lakeland Campus	177	138	84	67	36	502
3	JD Alexander Center in Lake Wales	69	38	104	117	174	502
4	Airside Center in SW Lakeland	33	96	105	159	109	502
5	Online (Web-based)	82	85	128	63	145	503
	Total	503	502	502	502	502	-

9. Which factors do you consider important in deciding to pursue this Bachelor's program (check all that apply)?

#	Answer		Response	%
1	Convenience of location		362	69%
2	Program fits my schedule		362	69%
3	Cost of attending the program		346	66%
4	Availability of financial aid		283	54%
5	Small classes (30 or fewer students)		202	38%
6	Availability of online courses		207	39%
7	Short course sessions (8 weeks instead of 16 weeks)		158	30%

10. Are there any special considerations that would affect whether you would enroll or not in this Bachelor's program?

#	Answer		Response	%
1	No		467	86%
2	Yes. Please explain		74	14%
	Total		541	100%

Yes. Please explain
If I complete the bachelor's in another program
I live in Broward county
enrolled in other classes
Price and job placement assistance since its a hard field to get into.
Accreditation of this program, job placement, and AA/AS degrees in this field offered through PSC.
I hate flying
Polk State College is all about selling something that is worthless. My father is a pilot and there are NO jobs. Just like I graduated the x-ray program from Polk state college and there are NO JOBS!
I am on a track to elementary education, and would probably not enroll myself, however feel that this is an important program that should be offered
If this program is available starting sometime in 2013, I would enroll. Anything later than that, I might go to another college instead.
I do not see this being an import factor for obtaining a job in the current work industry.
schedule
I've always dreamed of being a professional pilot since I was a teenager. This program is just what I need to fulfill my dream.
I will have a bas by the time this program starts.
Whether it's a B.S. or B.A.S. Yes to former, no to latter.
occupational relevance
md.asadchowdhury@yahoo.com
I am looking for a BS in education
Depends on how many prerequisites are required
Transfer of my Aviation Technology (Professional Pilot) degree from St. Petersburg Junior College, Credits for Licenses already held, I hold an ATP MEL, Type Rated in Hawker and Lear Jet, Commercial SE Land and SEA, Private Rotorcraft and CFI-I. Also have Airframe & Power-plant Mechanics License.
I've already almost completed a degree: I wouldn't want to go back to get another AS to then get my BS
True Job Outlook
Too much math and I would have to learn to fly. Please offer something else
whether it requires a pilots license
Although I'm well into the Business Admin program, I may change if VA will allow me to.
Job market and the availability of jobs once I graduate.
Some things are hard with online classes and I do not think I will be attending Polk State for my Bachelor's degree. I will attend a school with more face to face classes.
I would want to have a solid aerospace science foundation for the course
When graduating, it would be nice if they could help find places of hire or something like that.
Cost for classes. Location and time of classes.
I'm not entirely sure of what I want to do

All of my credit earned at SIU would transfer. I majored in Aviation Management back in 1989
Experience and education of the faculty. Connections to post graduate employment or internships.
Would you offer an Air Force ROTC Program to
Financial aid
Financial aid
Banks will not loan on AA degree, only Bachelor’s degree
will this certify me for a pilot license
Financial Aid
Work schedule and cost
family and job obligations
length of time to complete the program
Is this even a class where one can graduate and immediate start working? I just don't see this being an priority to have at this point in time. Its an interesting field but should be considered in the future.
Worried that UAV will be used against non-combatants.
availability of jobs and how well they would pay if I got one
I would actually like to pursue a Bachelor's in engineering technology, this would be a secondary choice only if no other local schools offered continuations of that program.
Credits from career as a professional pilot that could be applied to the degree
Job market relevance
When I tried to enroll into another AS program I was denied financial aid because I already have an AA degree. I was more interested in the Professional Pilot's program but will have to receive the AS degree in that area before getting the Bachelors. I cannot afford to pay out of pocket. Financial Aid is all I have. I am currently unemployed due to layoffs.
The location of your flight school is of concern to me. There is only one flight school in the area and that is Winter Haven. I’m also concerned with how flight hours and aircraft rental will factor into the degree.
The time of the classes.
Schedule because I work full time and are not allowed to make any changes to it that's why I prefer online, weekend and evening courses.
I want to start fall 2013, so if it's not available at PSC I will start taking classes in Tampa at USF
Military service while enrolled
Potential job market for someone with this degree.
Ability to meet my and my husband’s doctor’s appointment and my husband’s classes
I do not have an AA or AS. I am currently a criminal justice major but would willingly switch majors for an A.S./A.A. in aerospace science or professional pilot.
maybe
Distance
schedule
Just the financial aid aspect because so few programs are offered that take all government loans

If there was an obvious opportunity to be employed in this Field, i.e a feeder program per say
How much visual input is involved?
Job placement/availability when graduating
Financial aid
not interested in Bachelor's program
Price
I'm not interested in learning to be a pilot.
I am 52 years old
Application of skills learned
Cost
would be interested if a bachelor’s degree were available for digital media technology
Childcare, we need a on-site affordable childcare program.
If this program would offer me a better opportunity to find a career in it, then I would be more than willing to do what it takes to enroll and begin studying.
It would help if instructors/professors had significant "real world" airline experience.

Statistic	Value
Min Value	1
Max Value	2
Mean	1.14
Variance	0.12
Standard Deviation	0.34
Total Responses	541

11. Would you like information on the BS in Aerospace Science program?

#	Answer		Response	%
1	No		276	50%
2	Yes. Please Provide email address:		277	50%
	Total		553	100%

Aerospace Field Job Need Summary of Industry Data

Every industry analysis on the pilot/technician job market shows marked increases in need over the next 20 years. According to the annual Boeing Pilot and Technician Outlook, there will be a need for approximately one million new commercial airline pilots and maintenance technicians by 2031, including 460,000 new commercial airline pilots and 601,000 maintenance technicians.(1)

The current global training infrastructure in place is not adequate to meet these growing demands. Based on research by the University of North Dakota,(2) there will be an 85,777 pilot shortfall through the year 2025, considering our current rates of pilot certification and air carrier pilot attrition.

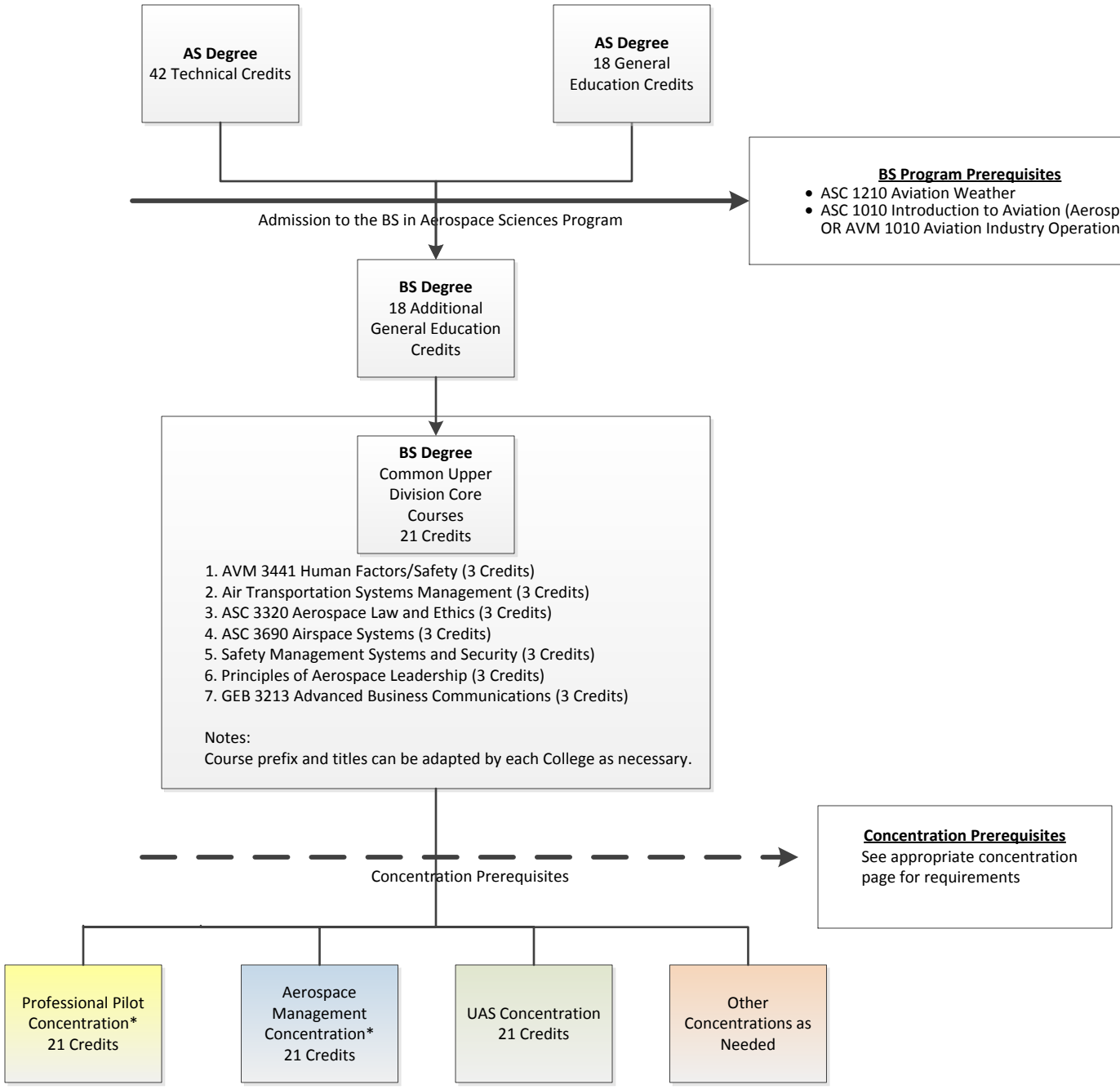
As the aerospace industry, and specifically the piloting field, becomes a global industry, the job outlook for future pilots trained in the United States has to include countries other than the United States, just as other countries are looking to the United States as the source for the training of their pilots. According to anecdotal data from the North Florida Flight Standards District Office (FSDO) in Orlando, Florida, roughly 80% of pilot certifications processed by that FSDO are for non-resident aliens.

The FAA Aerospace Forecast for fiscal years 2012-2032(3) echo the needs identified in the Boeing report mentioned previously. Over this period, the FAA predicts a 3.2% per year increase in global system capacity (2.7% domestically), which, by 2032, would result in commercial air carriers transporting 1.23 billion passengers a total of 1.57 trillion passenger miles. Again, system demand is projected to increase far beyond the current supply of qualified pilots. The global pilot training market is already scrambling to meet the demands currently in existence. While these needs are greater overseas, we are already experiencing similar issues in the United States. Every industry analysis of this subject shows that our domestic needs will only increase as time goes on.

Sources:

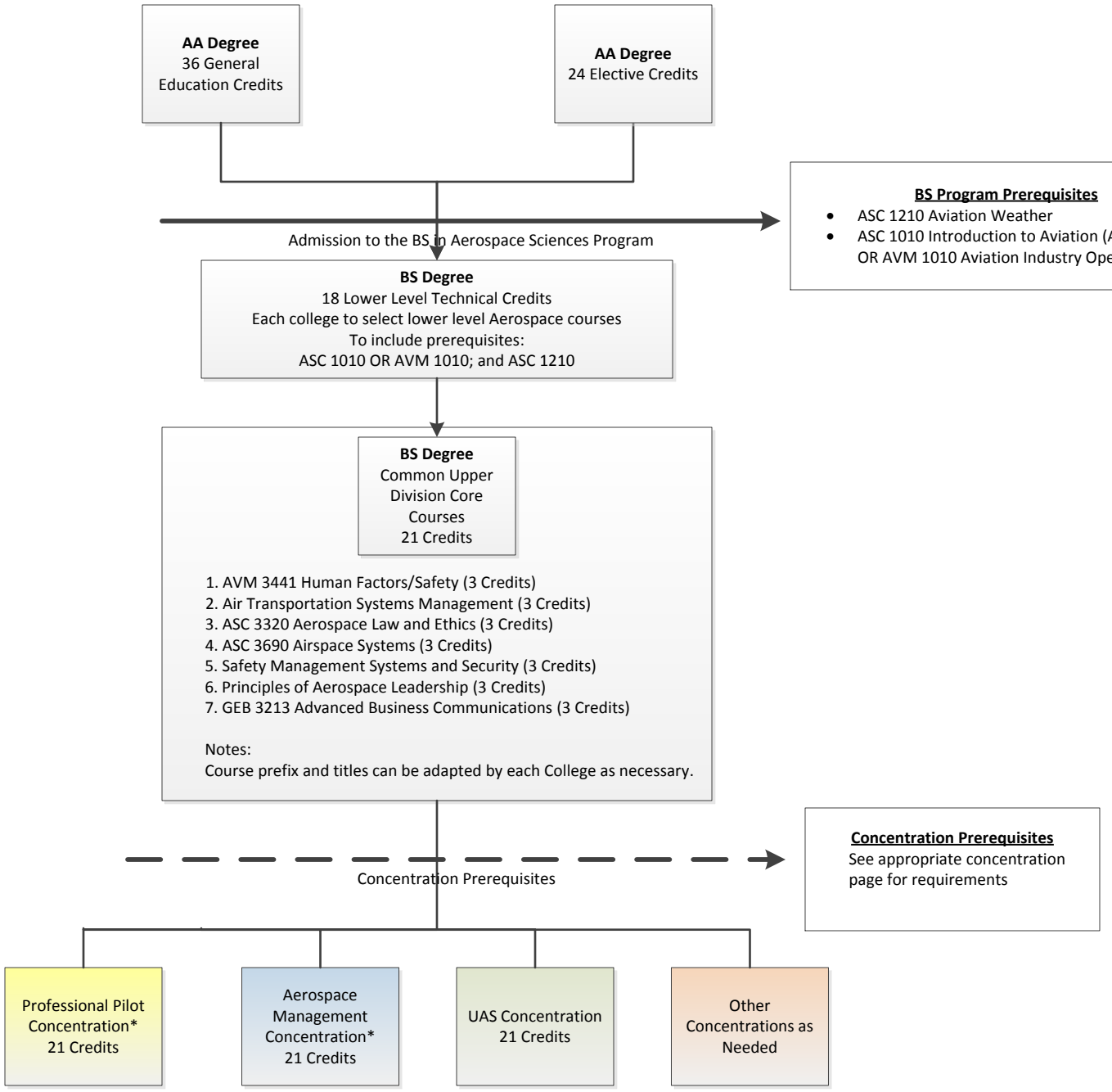
1. **2012 Boeing Pilot & Technician Outlook** (2012) | http://www.boeing.com/commercial/cmo/pilot_technician_outlook.html
2. **U.S. Pilot Labor Supply analysis by University of North Dakota** (2009) | https://www.faa.gov/news/conferences_events/aviation_forecast_2010/agenda/media/GAF%20Jim%20Higgins%20and%20Kent%20Love.pdf
3. **FAA Aerospace Forecasts, Fiscal Years 2012-2032** (2012) | https://www.faa.gov/about/office_org/headquarters_offices/apl/aviation_forecasts/aerospace_forecasts/2012-2032/media/FAA%20Aerospace%20Forecasts%20FY%202012-2032.pdf

BS Aerospace Sciences Program Curriculum Flowchart: AS Degree Pathway

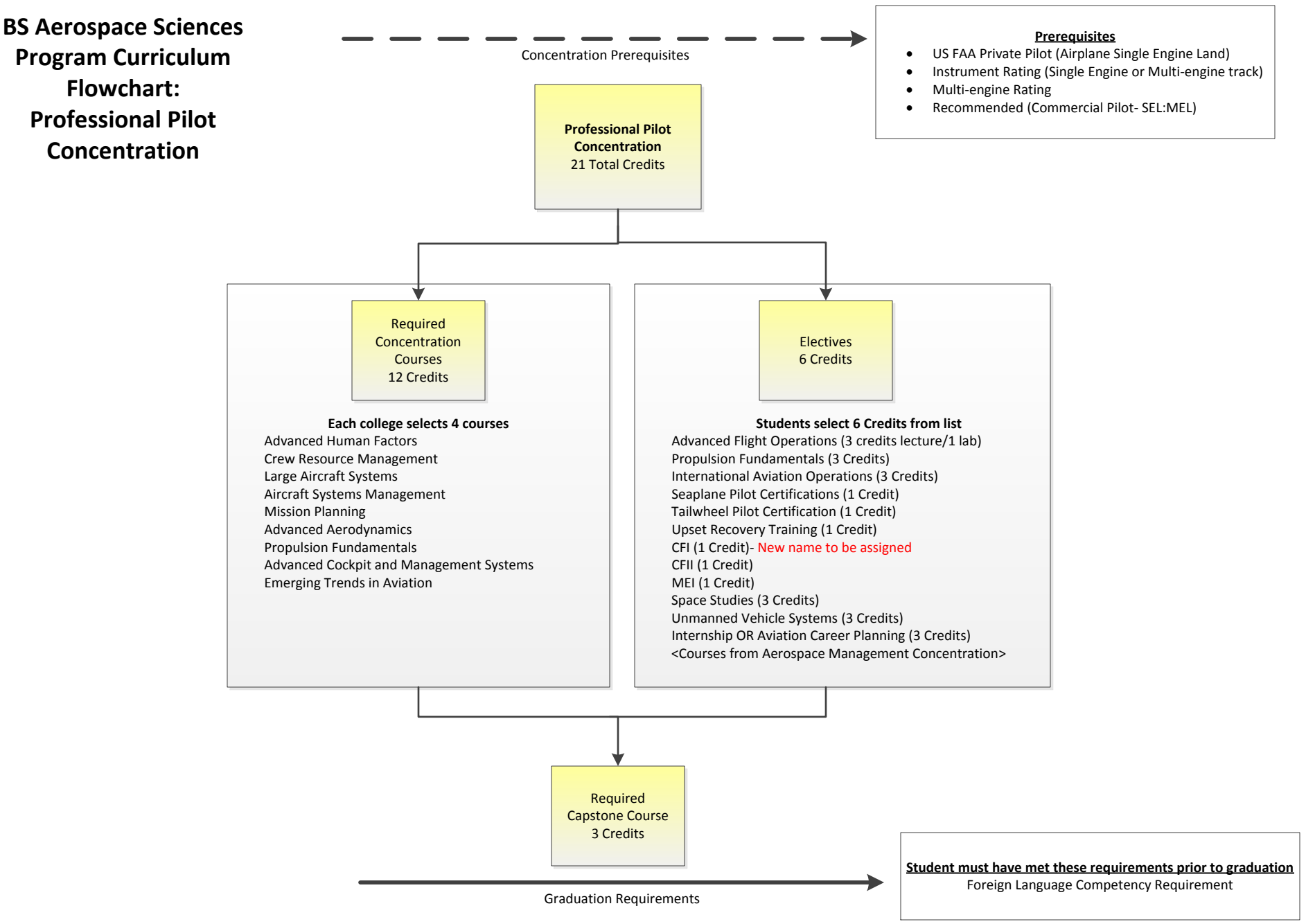


* Concentration curriculum described on attached documentation

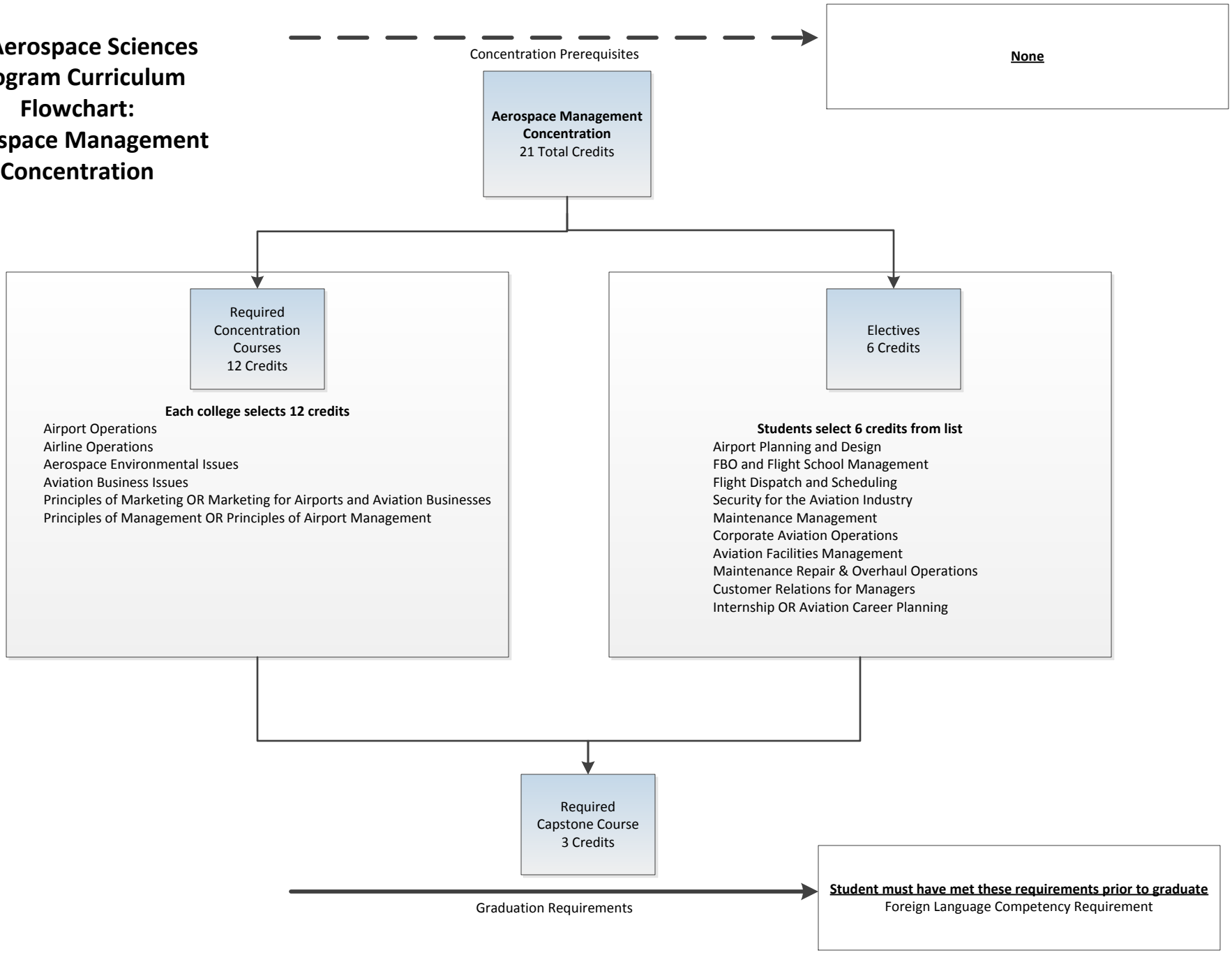
BS Aerospace Sciences Program Curriculum Flowchart: AA Degree Pathway



BS Aerospace Sciences Program Curriculum Flowchart: Professional Pilot Concentration



BS Aerospace Sciences Program Curriculum Flowchart: Aerospace Management Concentration



MINUTES
POLK STATE COLLEGE
District Board of Trustees Meeting
Monday, January 28, 2013 – 4:00 p.m.
Lakeland Campus – LTB-1100

Chair Mark Turner called the January 28, 2012 District Board of Trustees meeting to order at 4:05 p.m.

Members Present: Mr. Dan Dorrell, Mr. Rick Garcia, Mr. Greg Littleton, Ms. Teresa Martinez, Ms. Linda Pilkington, Mr. Ernie Pinner and Mr. Mark Turner

Members Absent: None

Student Spotlight: Emily Aleman – Student Activities Board Member, Lakeland Campus

Foundation Special Recognitions – Ms. Tracy Porter
Ms. Porter introduced Polk State College Foundation Board member Mr. Jim Rhodes to acknowledge a donation from the Polk Education Foundation in the amount of $62,280 for scholarships. Mr. Rhodes then introduced Ms. Susan Copeland, a representative from the Polk Education Foundation. Following the introductions, Ms. Copeland briefly addressed the Board, emphasizing the valuable role that the College plays within the community.

Special Recognitions – Dr. Eileen Holden:
Dr. Holden advised the Board that Pat Baker, the College's Board Assistant, is planning to retire on May 31, 2013.

Dr. Holden recognized Ms. Tracy Porter and Dr. Ken Ross who recently teamed up in a sporting clay shoot competition as representatives of Polk State College. As a result of this competition, they won a trophy which will be displayed in a prominent location at the College.

Agenda:
Mr. Littleton moved, seconded by Ms. Pilkington to approve the agenda for January 28, 2013. All members voted affirmatively.

Consent Agenda Items:
A. Payroll Distribution for November and December 2012 – Approved on consent agenda. Board action is required.

B. Expenditure Summary for November and December 2012 – Approved on consent agenda. Board action is required.

C. Tangible Personal Property Deletions – Approved on consent agenda. Board action is required.

D. Personnel Actions for November and December 2012 – Mr. Elliott presented and recommended approval of the Personnel Actions for November 1, 2012 – December 31, 2012. Board action is required.

E. Salary Schedule Changes – Mr. Elliott presented and recommended approval of the Salary Schedule changes for December 2012. Board action is required.

Mr. Garcia moved, seconded by Mr. Dorrell to approve the consent agenda items for December 2012. All members voted affirmatively.

Those items included under the Consent section are self-explanatory and are not expected to require discussion before action. Items will be enacted by one motion. If discussion is desired by any Board member on any item, the item should be identified and removed from the Consent agenda for separate action.

Approval of Board Minutes:
Mr. Pinner moved, seconded by Mr. Dorrell to approve the November 26, 2012 Board minutes. All members voted affirmatively.

President's Report
Dr. Holden presented and reviewed the following items included in this month's President's Report for the Board's information:

- Enrollment Update
- Facilities Master Plan
- Highlights

Dr. Holden reviewed the enrollment update included with this month's President's Report for the Board's information.

Dr. Holden reviewed the following Facilities Master Plan revised next steps for the Board's information:

- Campus Provost review and amendment - November 2012-December 2012
- College Senior staff presentation - December 2012
- DBOT presentation - March 2013
- DBOT submission - April 2013.

Dr. Holden provided a "What's Up" highlights list for the Trustees to update them on recent and current happenings at Polk State College. Dr. Holden said this item was recently added to the President's Report to provide the Trustees with additional information regarding the College's accomplishments.

Dr. Holden thanked Trustees Dorrell and Turner for agreeing to accompany her to Tallahassee next week. She said they plan to meet with our legislators while in Tallahassee to discuss the College's various issues.

Attorney's Report
Attorney Don Wilson presented the President's Contract of Employment for the Trustees' approval. He advised the Trustees that back in December 2012 when they did their annual evaluation of Dr. Holden, the effect of that evaluation was to roll her contract for another year. Mr. Wilson said that being presented to them this evening is a new contract effective February 1, 2013. The dates have been changed to advance Dr. Holden's contract for one year with a salary increase equal to the percentage received by a staff general.

Mr. Pinner moved, seconded by Mr. Littleton to approve Dr. Eileen Holden's Contract of Employment as presented. All members voted affirmatively.

Business Services Action Items:

- **Advanced Technology Center at Clear Springs –** Mr. Elliott presented and recommended acceptance of the real property on which the Advanced Technology Center at Clear Springs is to be constructed. He advised the Trustees that this item is a result of several years of work between the donor, the Polk State College Foundation and the College. Mr. Elliott reminded the Trustees that the original donation was for $12M and 20 acres of land. This item completes the transfer of the 20 acres of land. Mr. Elliott said included in the submittal is the deed and the environmental report from the property that were included in the two appraisals done previously. Discussion followed.

  Mr. Dorrell moved, seconded by Ms. Martinez to approve the Advanced Technology Center at Clear Springs as presented. All members voted affirmatively.

Business Services Informational Items

A. Investment Interest Comparison for November and December 2012 - No Board Action required. Mr. Elliott briefed the Board on the College's investment interest. Discussion followed.

B. Budget Amendment Summary for November and December 2012 – Mr. Elliott presented and reviewed the Budget Amendment Summary for November and December 2012 for the Board's information. Discussion followed.

C. Financial Report as of December 31, 2012 – Mr. Elliott presented and reviewed the Financial Report cumulative through the month of December 2012 for the Board's information. Discussion followed.

D. Project Status Report College-Wide for January 2013 - Mr. Elliott presented and reviewed the Project Status Report for January 2013 for the Trustees' information. Discussion followed.

Academic & Student Services Action Items

- **Bachelor of Science in Aerospace Sciences** – Dr. Ross presented and recommended approval of the Bachelor of Science in Aerospace Sciences. He advised the Trustees that Federal Express recently donated a 727 aircraft to Fun 'n Sun for Polk State College's use. Dr. Ross said the aircraft will be anchored at the Lakeland Airport for Sun 'n Fun. Dr. Ross said per section 1007.33 of the Florida Statutes, the Board of Trustees must approve new bachelors programs upon review of the discussions with the state university and other regionally accredited postsecondary providers in our area and review of the Needs Assessment data. He added that the College may submit the baccalaureate proposal at least 100 days after the Letter of Intent has been submitted to the Division of Florida Colleges. Discussion followed.

  Mr. Garcia moved, seconded by Ms. Pilkington to approve the Bachelor of Science in Aerospace Sciences. All members voted affirmatively.

Charter High School Items

- **Polk State Lakeland Collegiate 2013 Recruitment Enrollment Plan – Information Only –** Ms. Brisbane presented and reviewed the Polk State Lakeland Collegiate 2013 Recruitment Enrollment Plan for the Board's information.

First Reading Items (No action required)

A. **DBOT Rule 1.01 – Board Membership and Organization** – Dr. Holden presented as a first read item revised DBOT Rule 1.01 – Board Membership and Organization. She reviewed the proposed changes made to Rule 1.01 and advised the Trustees that it will be presented for final approval at the February 2013 Board meeting.

B. **DBOT Rule 1.02 – Board Meetings** – Dr. Eileen Holden presented as a first read item revised DBOT Rule 1.02 – Board Meetings. She reviewed the proposed changes made to Rule 1.02 and advised the Trustees that it will be presented for final approval at the February 2013 Board meeting.

C. **DBOT Rule 1.05 – Goals of the Board** – Dr. Eileen Holden presented as a first read item revised DBOT Rule 1.05 – Goals of the Board. She reviewed the proposed changes made to Rule 1.05 and advised the Trustees that it will be presented for final approval at the February 2013 Board meeting.

D. **DBOT Rule 1.06 - Code of Ethics** – Dr. Holden presented as a first read item revised DBOT Rule 1.06 – Code of Ethics. She reviewed the proposed changes made to Rule 1.06 and advised the Trustees that it will be presented for final approval at the February 2013 Board meeting.

E. **DBOT Rule 1.07 - Trustee Performance Standards** – Dr. Holden presented as a first read item revised DBOT Rule 1.07 - Trustee Performance Standards. She reviewed the proposed changes made to Rule 1.07 and advised the Trustees that it will be presented for final approval at the February 2013 Board meeting.

F. **DBOT Rule 1.09 – Authority to Sign Contracts** – Dr. Holden presented as a first read item revised DBOT Rule 1.09 – Authority to Sign Contracts. She reviewed the proposed changes made to Rule 1.09 and advised the Trustees that it will be presented for final approval at the February 2013 Board meeting.

G. **DBOT Rule 1.10 – Selection and Appointment of a President of the College** – Dr. Holden presented as a first read item revised DBOT Rule 1.10 – Selection and Appointment of a President of the College. She reviewed the proposed changes made to Rule 1.10 and advised the Trustees that it will be presented for final approval at the February 2013 Board meeting.

Second Reading Items (Final Approval)

A. DBOT Rule 4.30 – Credit Course Repeat Policy – Dr. Ross presented for final approval revised DBOT Rule 4.30 – Credit Course Repeat Policy. He reviewed the proposed revisions made to Rule 4.30 for the Board's information.

Ms. Pilkington moved, seconded by Ms. Martinez to approve DBOT Rule 4.30 – Credit Course Repeat Policy. All members voted affirmatively.

B. DBOT Rule 4.31 – College Preparatory Alternatives - Dr. Ross presented for final approval revised DBOT Rule 4.31 – College Preparatory Alternatives. He reviewed the proposed revisions made to Rule 4.31 for the Board's information.

Mr. Garcia moved, seconded by Ms. Pilkington to approve DBOT Rule 4.31 – College Preparatory Alternatives. All members voted affirmatively.

Board Discussion
Ms. Martinez said she is thrilled with the news that we received today regarding the Bachelor of Science in Aerospace Sciences Program, and she is very pleased with the direction in which the College is heading.

Mr. Garcia said that he is very pleased about the Bachelor of Science in Aerospace Sciences Program and with what is going on at Polk State College. He also expressed his appreciation for everything that Dr. Ross, Dr. Patricia Jones and Dr. Naomi Boyer are doing to establish and promote this program.

Adjournment:
Having no further business, the meeting adjourned at 4:45 p.m.

_____
Mr. Mark Turner, DBOT Chair Date

_____
Eileen Holden, Ed.D. Date
President

American Eagle®
AmericanAirlines®

Aircraft Maintenance

February 13, 2013

Mr. Randall W. Hanna
Chancellor, Division of Florida Colleges
325 West Gaines Street, Room 1544
Tallahassee, Florida 32399-0400

Dear Mr. Hanna:

I am writing to recommend that the Florida Department of Education approve the Bachelor of Science in Aerospace Sciences proposed by several Florida State College institutions including Broward College.

Demand for competent and proficient pilots has historically been steady, predictable, and economy-driven; however, accelerated pilot retirements among the baby boomer generation coupled with decreased pilot turnover from the military, has created a looming pilot shortage that has already begun impacting the airline industry. Current pilot demand forecasts from Boeing, the FAA, and other sources demonstrate the need for approximately 500,000 new pilots over the next 20 years, a demand that the current training infrastructure both nationally and in the state of Florida cannot feasibly support. Additionally, as the airline market grows, the need for more professional talented personnel to manage the airlines will increase as well. American Eagle is always seeking pilots with the bachelor's degree to manage and fly their aircraft.

Florida is the perfect location for pilot training due to the state's great weather, airspace infrastructure, and available job opportunities. For this reason, Florida is home to many flight training providers offering various levels of certification and recurrent training opportunities. In fact, the FAA's Orlando Flight Standards District Office process more airmen certification requests than the entire Western half of the country combined. Adding a cost effective bachelor degree option for all of these students would be an excellent addition to the training opportunities already available. While not all pilot and other aerospace positions require a bachelor's degree, more and more airlines and airports are seeking bachelor level education for their future positions. As the aerospace infrastructure continues to increase in complexity, higher level critical thinking skills will be increasingly needed.

The BS in Aerospace Sciences was developed through the work of the Florida State Colleges Aerospace Consortium, a group consisting of the program directors and academic administrators for the aerospace/aviation programs at Florida State College institutions. By pooling the expertise that exists across the state of Florida, this group developed a curriculum that addresses the complex needs of both today's and tomorrow's advanced aerospace system, offering graduates the skills and experience they need to stand out in a competitive field.

Sincerely,

Terry Siddiqui
Manager – aircraft maintenance
American Eagle airlines
Terry.Siddiqui@aa.com

Executive Airlines, Inc. • Miami Int'l Airport • P.O. Box 996370 • Miami, Florida 33299-6370
Office: (305) 870-2564 • Fax: (305) 870-2599

AIRBUS

April 3, 2013

Mr. Randall W. Hanna
Chancellor, Division of Florida Colleges
325 West Gaines Street, Room 1544
Tallahassee, Florida 32399-0400

Dear Mr. Hanna:

I am writing to recommend that the Florida Department of Education approve the Bachelor of Science in Aerospace Sciences proposed by several Florida state colleges.

Demand for competent and proficient pilots has historically been steady, predictable, and economy-driven; however, accelerated pilot retirements among the baby boomer generation coupled with decreased pilot turnover from the military, has created a looming pilot shortage that has already begun impacting the airline industry. Current pilot demand forecasts from Boeing, the FAA, and other sources demonstrate the need for approximately 500,000 new pilots and 600,000 new maintenance technicians over the next 20 years, a demand that the current training infrastructure both nationally and in the state of Florida cannot feasibly support. Additionally, as the airline market grows, the need for more aerospace managers will increase as well. As the Miami Airbus Training Center, we frequently have to seek candidates outside not only Miami, but frequently outside Florida. The majority of the positions in our training center require a minimum of a Bachelor's degree. To have a local source of such talent, in our case specifically from the Aviation Department of Miami-Dade College, would be a tremendous benefit.

Florida is the perfect location for pilot training due to the state's great weather, airspace infrastructure, and available job opportunities. For this reason, Florida is home to many flight training providers offering various levels of certification and recurrent training opportunities. In fact, the FAA's Orlando Flight Standards District Office process more airmen certification requests than the entire Western half of the country combined. Adding a cost effective bachelor degree option for all of these students would be an excellent addition to the training opportunities already available. While not all pilot and other aerospace positions require a bachelor's degree, more and more airlines and airports are seeking bachelor level education for their future positions. As the aerospace infrastructure continues to increase in complexity, higher level critical thinking skills will be increasingly needed.

The BS in Aerospace Sciences was developed through the work of the Florida State Colleges Aerospace Consortium, a group consisting of the program directors and academic administrators for the aerospace/aviation programs at Florida State College institutions. By pooling the expertise that exists across the state of Florida, this group developed a curriculum that addresses the complex needs of both today's and tomorrow's advanced aerospace system, offering graduates the skills and experience they need to stand out in a competitive field.

Sincerely,

William G. Rivenbark
Customer Development Manager

AN EADS COMPANY

AIRBUS NORTH AMERICA
CUSTOMER SERVICES, INC.

4355 NW 36 STREET
MIAMI SPRINGS, FL 33166
TELEPHONE: (305) 871-3655
FAX: (305) 871-4649
www.airbus.com

May 6, 2013

Mr. **Randall W. Hanna**
Chancellor, Division of Florida Colleges
325 West Gaines Street, Room 1544
Tallahassee, Florida 32399-0400

Dear Mr. Hanna:

I am requesting the Florida Department of Education approve the Bachelor of Science in Aerospace Sciences proposed by several Florida state colleges.

Demand for competent and proficient pilots has historically been steady, predictable, and economy-driven; however, accelerated pilot retirements among the baby boomer generation, the new rest rules that take effect in January of 2014 and coupled with decreased pilot turnover from the military, has created a perfect storm for a pilot shortage that has already begun impacting the airline industry. Most regional airlines today cannot fill new hire classes. Current pilot demand forecasts from Boeing, UND and the FAA, and other sources demonstrate the need for approximately 500,000 new pilots and 600,000 new maintenance technicians over the next 20 years, a demand that the current training infrastructure both nationally and in the state of Florida cannot feasibly support. Additionally, as the airline market grows, the need for more aerospace managers will increase as well. Over 17,000 major airline pilots will retire within the next 10 years. Historically the major airlines in America hire pilots from regional airlines. There are only 18,000 regional airline pilots in the US so we are on the edge of the biggest hiring event in the history of America.

Florida is the perfect location for pilot training due to the state's great weather, airspace infrastructure, and available job opportunities. For this reason, Florida is home to many flight training providers offering various levels of certification and recurrent training opportunities. In fact, the FAA's Orlando Flight Standards District Office process more airmen certification requests than the entire Western half of the country combined. Adding a cost effective bachelor degree option for all of these students would be an excellent addition to the training opportunities already available. While not all pilot and other aerospace positions require a bachelor's degree, more and more airlines and airports are seeking bachelor level education for their future positions. As the aerospace infrastructure continues to increase in complexity, higher level critical thinking skills will be increasingly needed.

The BS in Aerospace Sciences was developed through the work of the Florida State Colleges Aerospace Consortium, a group consisting of the program directors and academic administrators for the aerospace/aviation programs at Florida State College institutions. By pooling the expertise that exists across the state of Florida, this group developed a curriculum that addresses the complex needs of both today's and tomorrow's advanced aerospace system, offering graduates the skills and experience they need to stand out in a competitive field.

Sincerely,

Dan Robertson
Manager Pilot Recruiting
ExpressJet Airlines
990 Toffie Terrace
Atlanta, Georgia, 303454

expressjet.com

999 Avenue H NE • Winter Haven, FL 33881
Phone: (863) 297-1000 • Fax: (863) 297-1000 • *www.polk.edu*

May 21, 2013

State Board of Education
325 W. Gaines Street
Suite 1520
Tallahassee, FL 32399

Dear Chair Chartrand and State Board of Education Members:

The Florida College System Consortium for Aerospace Sciences respectfully submits this letter in support of the submission of the Bachelor of Science in Aerospace Sciences. The Consortium emerged from a group of schools with similar interests in postsecondary Aerospace academic programming and has met for over a year to collaborate and plan on a variety of degree opportunities. The Consortium consists of representatives from Brevard Community College, Broward College, Florida State College-Jacksonville, Miami Dade College, Palm Beach State College, Pasco-Hernando Community College, Polk State College, and Sante Fe College. In addition, members from local airports, industry, and aviation high school academies have been included in the correspondence and meetings. Prior to its dissolution in July 2012, the Aerospace Resource Banner Center was also instrumental at the initiation of the Consortium. Furthermore, representation from academic administrations, content expertise, and the workforce have been cultivated.

Through the collaboration, the group collectively established the economic need, student interest, local interest, and organizational capacity for the development of the Bachelor of Science in Aerospace Sciences. There are currently NO bachelor's programs in aviation or aerospace being offered in public institutions in the State of Florida. A degree program model was developed, allowing for optimal transition of students from the associate's level and the sharing of expertise and resources from across the state. Course descriptions and areas of specialization were collectively created with each school providing curriculum content and input on the final product. The Consortium also recognized the need to allow each college local flexibility in the following areas: responsiveness within the degree design, articulation agreements and pathways, submission timelines, and specialization areas. Common needs assessment survey were developed and administered by Consortium Colleges.

Polk State College is the first Consortium member to respectfully submit its proposal for the Bachelor of Science in Aerospace Sciences for consideration. The Consortium strongly supports this proposal and has contributed to the development of structure, content, and data.

Sincerely,

Consortium Co-Chairs

Patricia Jones, Ph.D.
District Dean
Polk State College

Naomi Boyer, Ph.D.
Associate Vice-President, Strategic Initiatives
Polk State College

Paul E. Cassel
Senior Vice President

Flight Operations
3131 Democrat Road
Suite B124
Memphis, TN 38118

Telephone 901.224.5515
Mobile 901.359.6912
Fax 901.224.5561
pecassel@fedex.com

FedEx Express

May 8, 2013

Mr. Randall W. Hanna
Chancellor, Division of Florida Colleges
325 West Gaines Street, Room 1544
Tallahassee, Florida 32399-0400

Dear Mr. Hanna:

I am writing to recommend that the Florida Department of Education approve the Bachelor of Science in Aerospace Sciences proposed by several Florida state colleges.

Demand for competent and proficient pilots has historically been steady, predictable, and economy-driven; however, accelerated pilot retirements among the baby boomer generation coupled with decreased pilot turnover from the military, has created a looming pilot shortage that has already begun impacting the airline industry. Current pilot demand forecasts from Boeing, the FAA, and other sources demonstrate the need for approximately 500,000 new pilots and 600,000 new maintenance technicians over the next 20 years, a demand that the current training infrastructure both nationally and in the state of Florida cannot feasibly support. Additionally, as the airline market grows, the need for more aerospace managers will increase as well.

Florida is the perfect location for pilot training due to the state's great weather, airspace infrastructure, and available job opportunities. For this reason, Florida is home to many flight training providers offering various levels of certification and recurrent training opportunities. In fact, the FAA's Orlando Flight Standards District Office process more airmen certification requests than the entire Western half of the country combined. Adding a cost effective bachelor degree option for all of these students would be an excellent addition to the training opportunities already available. While not all pilot and other aerospace positions require a bachelor's degree, more and more airlines and airports are seeking bachelor level education for their future positions. As the aerospace infrastructure continues to increase in complexity, higher level critical thinking skills will be increasingly needed.

The BS in Aerospace Sciences was developed through the work of the Florida State Colleges Aerospace Consortium, a group consisting of the program directors and academic administrators for the aerospace/aviation programs at Florida State College institutions. By pooling the expertise that exists across the state of Florida, this group developed a curriculum that addresses the complex needs of both today's and tomorrow's advanced aerospace system, offering graduates the skills and experience they need to stand out in a competitive field.

Sincerely,

Captain Paul E. Cassel

268038/pf

Anthony Restaino
FLORIDA AERO CLUB
8550 NW 24TH CT
Pembroke Pines FL.
33024

FLORIDA AERO FAC CLUB INC.
"Growing with Florida Aviation"

April 18,2013
Mr. Randall W. Hanna
Chancellor, Division of Florida Colleges
325 West Gaines Street, Room 1544
Tallahassee, Florida 32399-0400

Dear Mr. Hanna:

I am writing to recommend that the Florida Department of Education approve the Bachelor of Science in Aerospace Sciences proposed by several Florida State College institutions including Broward College.

Florida is the perfect location for pilot training due to the state's great weather, airspace infrastructure, and available job opportunities. For this reason, Florida is home to many flight training providers offering various levels of certification and recurrent training opportunities. In fact, the FAA's Orlando Flight Standards District Office process more airmen certification requests than the entire Western half of the country combined. Adding a cost effective bachelor degree option for all of these students would be an excellent addition to the training opportunities already available. While not all pilot and other aerospace positions require a bachelor's degree, more and more airlines and airports are seeking bachelor level education for their future positions. As the aerospace infrastructure continues to increase in complexity, higher level critical thinking skills will be increasingly needed.

Sincerely,
Anthony Restaino

FLORIDA AIRPORTS COUNCIL

250 John Knox Road, Suite 2 Tallahassee, FL 32303 Phone: 850-224-2964 Fax: 850-681-6185 www.floridaairports.org

April 3, 2013

Mr. Randall W. Hanna
Chancellor, Division of Florida Colleges
325 West Gaines Street, RM 1544
Tallahassee, FL 32399-0400

Dear Mr. Hanna:

As President of the Florida Airports Council, the statewide association representing the airport industry in Florida, I would like to support the proposed Bachelor of Science in Aerospace Science Degree Program being proposed by several state colleges in Florida.

Current demand forecasts from the Federal Aviation Administration (FAA), and others, indicate that there will be a need for approximately 500,000 new pilots and 600,000 new maintenance technicians over the next twenty years, a demand that the current training infrastructure, in the nation and in Florida, may not be able to fully support.

Historically, Florida has one of the largest pilot training industries in the country due to the state's excellent weather, airspace infrastructure, and numerous flight schools. In fact, I am told that the Orlando Flight Standards District Office (FSDO) processes more airmen certificates than the entire western half of the nation.

I understand this program was developed through the work of the Florida State Colleges Aerospace Consortium, a group consisting of the program directors and academic administrators for the aerospace/aviation programs at Florida State College institutions. The curriculum developed by the group addresses the complex needs of both today's and tomorrow's aviation industry, offering graduates the skills, training and experience they need to compete in the global marketplace.

Sincerely,

Debra Lemke

Debra Lemke
President

cc. Bill Johnson, Executive Director

AVIATION DEPARTMENT - Fort Lauderdale/Hollywood International Airport
2200 SW 45th Street, Suite 101 • Dania Beach, FL 33312 • 954-359-6100

February, 18, 2013

Mr. Randall W. Hanna
Chancellor, Division of Florida Colleges
325 West Gaines Street, Room 1544
Tallahassee, Florida 32399-0400

Dear Mr. Hanna:

I am writing to recommend that the Florida Department of Education approve the Bachelor of Science in Aerospace Sciences proposed by several Florida State College institutions including Broward College.

Demand for competent and proficient pilots has historically been steady, predictable, and economy-driven; however, accelerated pilot retirements among the baby boomer generation, coupled with decreased pilot turnover from the military has created a looming pilot shortage that has already begun impacting the airline industry. Current pilot demand forecasts from Boeing, the FAA, and other sources demonstrate the need for approximately 500,000 new pilots over the next 20 years, a demand that the current training infrastructure both nationally and in the state of Florida cannot feasibly support. Additionally, as the airline market grows, the need for more aerospace managers will increase as well. In the airport management profession, it is common that entry-level supervision and second tier front-line positions require a Bachelor's Degree in order to be considered as a candidate. This is necessary due to the required technical, managerial, and leadership skills that employers demand.

Florida is the perfect location for pilot training due to the state's great weather, airspace infrastructure, and available job opportunities. For this reason, Florida is home to many flight training providers offering various levels of certification and recurrent training opportunities. In fact, the FAA's Orlando Flight Standards District Office processes more airmen certification requests than the entire Western half of the country combined. Adding a cost-effective Bachelor Degree option for all of these students would be an excellent addition to the training opportunities already available. While not all pilot and other aerospace positions require a Bachelor's Degree, more and more airlines and airports are seeking bachelor level education for their future positions. As the aerospace infrastructure continues to increase in complexity, higher level critical thinking skills will be increasingly needed.

The BS in Aerospace Sciences was developed through the work of the Florida State Colleges Aerospace Consortium, a group consisting of the program directors and academic administrators for the aerospace/aviation programs at Florida State College institutions. By pooling the expertise that exists across the state of Florida, this group developed a curriculum that addresses the complex needs of both today's and tomorrow's advanced aerospace system, offering graduates the skills and experience they need to stand out in a competitive field.

Sincerely,

Michael Nonnemacher, A.A.E., I.A. P.
Director of Operations

MN/JS/me

C: Jan Shakepeare, Associate Dean, Aviation Institute

G:\OperationS\Division Admin Asst\Letters\ltr to R. W. Hanna re BC BA Aerospace 2-18-13.doc

JAA Jacksonville Aviation Authority
14201 Pecan Park Road
Jacksonville, Florida 32218

May 10, 2013

Mr. Randall W. Hanna
Chancellor, Division of Florida Colleges
325 West Gaines Street, Room 1544
Tallahassee, Florida 32399-0400

Dear Mr. Hanna:

I am writing to recommend that the Florida Department of Education approve the Bachelor of Science (BS) in Aerospace Sciences proposed by several Florida state colleges. The BS in Aerospace Sciences was developed through the work of the Florida State Colleges Aerospace Consortium, a group consisting of the program directors and academic administrators for the aerospace/aviation programs at Florida State College institutions. By pooling the expertise that exists across the state of Florida, this group developed a curriculum that addresses the complex needs of both today's and tomorrow's advanced aerospace system, offering graduates the skills and experience they need to stand out in a competitive field.

Demand for competent and proficient pilots has historically been steady, predictable, and economy-driven; however, accelerated pilot retirements among the baby boomer generation coupled with decreased pilot turnover from the military, has created a looming pilot shortage that has already begun impacting the airline industry. Current pilot demand forecasts from Boeing, the FAA, and other sources demonstrate the need for approximately 500,000 new pilots and 600,000 new maintenance technicians over the next 20 years, a demand that the current training infrastructure both nationally and in the state of Florida cannot feasibly support. Additionally, as the airline market grows, the need for more aerospace managers will increase as well. The Jacksonville Aviation Authority in partnership with Florida State College of Jacksonville looks at the expansion of the degree programs as a way to assist with the growth and development of Cecil Airport. Workforce availability in the aerospace industry is at the forefront for current and future tenants of the airport looking for expansion opportunities in the state of Florida.

Florida is the perfect location for pilot training due to the state's great weather, airspace infrastructure, and available job opportunities. For this reason, Florida is home to many flight training providers offering various levels of certification and recurrent training opportunities. In fact, the FAA's Orlando Flight Standards District Office process more airmen certification requests than the entire Western half of the country combined. Adding a cost effective bachelor degree option for all of these students would be an excellent addition to the training opportunities already available. While not all pilot and other aerospace positions require a bachelor's degree, more and more airlines and airports are seeking bachelor level education for their future positions. As the aerospace infrastructure continues to increase in complexity, higher level critical thinking skills will be increasingly needed. Advanced studies, such as this Aerospace Sciences program provides a highly skilled workforce to Florida's aviation employers, but also benefits the local economy.

Sincerely,

Kelly Dollarhide
Jacksonville Aviation Authority
Cecil Airport Operations Duty Officer

National Aviation ACADEMY

April 22, 2013

Mr. Randall W. Hanna
Chancellor, Division of Florida Colleges
325 West Gaines Street, Room 1544
Tallahassee, Florida 32399-0400

Dear Mr. Hanna:

I am writing to recommend that the Florida Department of Education approve the Bachelor of Science in Aerospace Sciences proposed by several Florida State College institutions including Broward College.

Demand for competent and proficient pilots has historically been steady, predictable, and economy-driven; however, accelerated pilot retirements among the baby boomer generation coupled with decreased pilot turnover from the military, has created a looming pilot shortage that has already begun impacting the airline industry. Current pilot demand forecasts from Boeing, the FAA, and other sources demonstrate the need for approximately 500,000 new pilots over the next 20 years, a demand that the current training infrastructure both nationally and in the state of Florida cannot feasibly support. Additionally, as the airline market grows, the need for more aerospace managers will increase as well. As National Aviation Academy continues to grow, we will be continuously seeking candidates for employment that have earned degrees in the Aerospace Industry. These candidates posses the education that make for excellent flight training staff members.

Florida is the perfect location for pilot training due to the state's great weather, airspace infrastructure, and available job opportunities. For this reason, Florida is home to many flight training providers offering various levels of certification and recurrent training opportunities. In fact, the FAA's Orlando Flight Standards District Office process more airmen certification requests than the entire Western half of the country combined. Adding a cost effective bachelor degree option for all of these students would be an excellent addition to the training opportunities already available. While not all pilot and other aerospace positions require a bachelor's degree, more and more airlines and airports are seeking bachelor level education for their future positions. As the aerospace infrastructure continues to increase in complexity, higher level critical thinking skills will be increasingly needed.

The BS in Aerospace Sciences was developed through the work of the Florida State Colleges Aerospace Consortium, a group consisting of the program directors and academic administrators for the aerospace/aviation programs at Florida State College institutions. By pooling the expertise that exists across the state of Florida, this group developed a curriculum that addresses the complex needs of both today's and tomorrow's advanced aerospace system, offering graduates the skills and experience they need to stand out in a competitive field.

Sincerely,

Chris Couture
Director of Flight Operations
National Aviation Academy

Tampa Bay: 6225 Ulmerton Rd., Clearwater FL 33760
Toll Free: 800.659.2080
Main: 727.531.2080 · Fax: 727.535.8727

New England: 150 Hanscom Dr., Bedford MA 01730
Toll Free: 800.292.3228
Main: 781.274.8448 · Fax: 781.274.8490

NAA EDU

1100 Lee Wagener Boulevard, Suite 200
Ft. Lauderdale, FL 33315

gosilver.com

April 19, 2013

Mr. Randall W. Hanna
Chancellor, Division of Florida Colleges
325 West Gaines Street, Room 1544
Tallahassee, Florida 32399-0400

Dear Mr. Hanna:

I am writing to recommend that the Florida Department of Education approve the Bachelor of Science in Aerospace Sciences proposed by several Florida State College institutions including Broward College.

Demand for competent and proficient pilots has historically been steady, predictable, and economy-driven; however, accelerated pilot retirements among the baby boomer generation coupled with decreased pilot turnover from the military, has created a looming pilot shortage that has already begun impacting the airline industry. Current pilot demand forecasts from Boeing, the FAA, and other sources demonstrate the need for approximately 500,000 new pilots over the next 20 years, a demand that the current training infrastructure both nationally and in the state of Florida cannot feasibly support. Additionally, as the airline market grows, the need for more aerospace managers will increase as well. *Insert sentence on how degree will benefit your company – do you plan future hiring for positions that will require or benefit from a bachelor's degree?*

Florida is the perfect location for pilot training due to the state's great weather, airspace infrastructure, and available job opportunities. For this reason, Florida is home to many flight training providers offering various levels of certification and recurrent training opportunities. In fact, the FAA's Orlando Flight Standards District Office process more airmen certification requests than the entire Western half of the country combined. Adding a cost effective bachelor degree option for all of these students would be an excellent addition to the training opportunities already available. While not all pilot and other aerospace positions require a bachelor's degree, more and more airlines and airports are seeking bachelor level education for their future positions. As the aerospace infrastructure continues to increase in complexity, higher level critical thinking skills will be increasingly needed.

The BS in Aerospace Sciences was developed through the work of the Florida State Colleges Aerospace Consortium, a group consisting of the program directors and academic administrators for the aerospace/aviation programs at Florida State College institutions. By pooling the expertise that exists across the state of Florida, this group developed a curriculum that addresses the complex needs of both today's and tomorrow's advanced aerospace system, offering graduates the skills and experience they need to stand out in a competitive field.

Sincerely,

David T. Querio
Chief Operating Officer

2800 Executive Way
Miramar, FL 33025
(Office) 954-628-4837
mike.anderson@Spirit.com

February 15, 2013

Mr. Randall W. Hanna
Chancellor, Division of Florida Colleges
325 West Gaines Street, Room 1544
Tallahassee, Florida 32399-0400

Dear Mr. Hanna:

I am writing to recommend that the Florida Department of Education approve the Bachelor of Science in Aerospace Sciences proposed by several Florida State College institutions including Broward College.

Demand for competent and proficient pilots has historically been steady, predictable, and economy-driven; however, accelerated pilot retirements among the baby boomer generation coupled with decreased pilot turnover from the military, has created a looming pilot shortage that has already begun impacting the airline industry. Current pilot demand forecasts from Boeing, the FAA, and other sources demonstrate the need for approximately 500,000 new pilots over the next 20 years, a demand that the current training infrastructure both nationally and in the state of Florida cannot feasibly support. Additionally, as the airline market grows, the need for more aerospace managers will increase as well. At Spirit Airlines we are forecasting pilot hiring to be at 100 to 120 new pilots per year for the next 9 years based on our current aircraft orders and growth plan. In addition to the pilot need, we will have many opportunities for managers, supervisors, and front line staff in all areas of our company.

Florida is the perfect location for pilot training due to the state's great weather, airspace infrastructure, and available job opportunities. For this reason, Florida is home to many flight training providers offering various levels of certification and recurrent training opportunities. In fact, the FAA's Orlando Flight Standards District Office process more airmen certification requests than the entire Western half of the country combined. Adding a cost effective bachelor degree option for all of these students would be an excellent addition to the training opportunities already available. We prefer a four year degree for our new hire pilots; strong emphasis is placed on pilots with an undergraduate degree.

The BS in Aerospace Sciences was developed through the work of the Florida State Colleges Aerospace Consortium, a group consisting of the program directors and academic administrators for the aerospace/aviation programs at Florida State College institutions. By pooling the expertise that exists across the state of Florida, this group developed a curriculum that addresses the complex needs of both today's and tomorrow's advanced aerospace system, offering graduates the skills and experience they need to stand out in a competitive field.

Sincerely,

Mike Anderson
Senior Director of Safety
Spirit Airlines

SUN 'n FUN®
A BRIGHTER FUTURE THROUGH AVIATION

4175 Medulla Rd. | Lakeland, FL 33811
P: 863.644.2431 | F: 863.644.9737

May 28, 2013

Mr. Randall W. Hanna
Chancellor, Division of Florida Colleges
325 West Gaines Street, Room 1544
Tallahassee, Florida 32399-0400

Dear Mr. Hanna:

I am writing to recommend that the Florida Department of Education approve the Bachelor of Science in Aerospace Sciences proposed by several Florida state colleges.

Demand for competent and proficient pilots has historically been steady, predictable, and economy-driven; however, accelerated pilot retirements among the baby boomer generation coupled with decreased pilot turnover from the military, has created a looming pilot shortage that has already begun impacting the airline industry. Current pilot demand forecasts from Boeing, the FAA, and other sources demonstrate the need for approximately 500,000 new pilots and 600,000 new maintenance technicians over the next 20 years, a demand that the current training infrastructure both nationally and in the state of Florida cannot feasibly support. Additionally, as the airline market grows, the need for more aerospace managers will increase as well.

Florida is the perfect location for pilot training due to the state's great weather, airspace infrastructure, and available job opportunities. For this reason, Florida is home to many flight training providers offering various levels of certification and recurrent training opportunities. In fact, the FAA's Orlando Flight Standards District Office process more airmen certification requests than the entire Western half of the country combined. Adding a cost effective bachelor degree option for all of these students would be an excellent addition to the training opportunities already available. While not all pilot and other aerospace positions require a bachelor's degree, more and more airlines and airports are seeking bachelor level education for their future positions. As the aerospace infrastructure continues to increase in complexity, higher level critical thinking skills will be increasingly needed.

The BS in Aerospace Sciences was developed through the work of the Florida State Colleges Aerospace Consortium, a group consisting of the program directors and academic administrators for the aerospace/aviation programs at Florida State College institutions. By pooling the expertise that exists across the state of Florida, this group developed a curriculum that addresses the complex needs of both today's and tomorrow's advanced aerospace system, offering graduates the skills and experience they need to stand out in a competitive field.

Sincerely,

John R. Leenhouts
President and CEO
SUN 'n FUN Inc.
4175 Medulla Road
Lakeland, FL 33811

Wayman Flight Training
14351 NW 41 Ave Opa Locka Airport Miami, FL 33054 | http://Wayman.net | 305 685-6468

April 22, 2013

Mr. Randall W. Hanna
Chancellor, Division of Florida Colleges
325 West Gaines Street, Room 1544
Tallahassee, Florida 32399-0400

Dear Mr. Hanna:

The country and the world need more pilots and aerospace professionals. Florida must position itself as the #1 producer of this highly-educated well-paid workforce. We whole-heartedly support the effort of Miami-Dade College and of schools around the state to offer more program and degrees Bachelors of Science for Aerospace Sciences.

An FAA official recently told me that 50% off all FAA licensed pilots receive at least one certificate or rating in Miami. The Beacon Council reports that 1 in 5 jobs in Miami-Dade County are tied to aviation. This is spurred on by Miami International Airport, the #1 cargo airport in the world. Florida is at the epicenter of a global multi-billion dollar industry that is growing and modernizing at a quickening pace. Students and citizen of this great state must be trained to join and support this industry. Not simply as baggage handlers, but as airport managers, engineers, designers, and aerospace scientists. Those careers require Bachelors degrees and post-graduate degrees.

I am a proud product of the Florida State college system. My 4 years at Florida State University allowed a first generation immigrant to see the opportunities in aerospace. A further business degree opened my eyes to the amazing international platform that is Florida. Aviation links every other corner of the planet to this state. We have to let the rest of the world know that Florida is open for business. Well-trained professional Floridians can do just that. Authorize our college network to offer BS degrees in Aerospace Sciences.

Sincerely,

Wayman Eduardo Luy
General Manager

Bartow Municipal Airport and Industrial Park

May 6, 2013

Dr. Eileen Holden, President
Polk State College
999 Avenue H NE
Winter Haven, Florida 33881

Dear Dr. Holden,

It is with great enthusiasm that the Bartow Municipal Airport Development Authority is submitting this letter of support for Polk State College to provide the Bachelor of Science degree in Aerospace Sciences. Polk County's airport professionals are committed to providing safe and efficient airports for our citizens. The Bartow Municipal Airport fully supports Polk State College offering this degree that includes a focus in airport management and professional pilot science.

Airport efficiency can be measured by the satisfaction of the local flying community and the passengers who use the Bartow Municipal Airport as a stop along their journey. Polk State College has a history of providing exceptional educational opportunities for our community and producing quality graduates. Bartow Municipal Airport is excited about the prospect of Polk State's new program to help maintain and improve our customer satisfaction record in safety and in ground-side and air activities.

Furthermore, with the widely publicized probability of a pilot shortage in the airline industry, pilot candidates will be sought after for years to come. Bartow Municipal Airport recognizes the advanced flight training and experience Polk State College will be providing to produce quality, professional, airline-ready pilots and we salute Polk State College's willingness to fill this industry void.

Please accept this letter as evidence that the Bartow Municipal Airport Development Authority supports Polk State College's Bachelor of Science in Aerospace Sciences degree program.

Very truly yours,

BARTOW MUNICIPAL AIRPORT DEVELOPMENT AUTHORITY

Cynthia L. Barrow

Cynthia L. Barrow
Executive Director

CLB/dmm

P.O. Box 650, Bartow, Florida 33831-0650 Tel: 863/533-1195 Fax: 863/533-5968 Web: www.bartow-airport.com

LAKELAND LINDER REGIONAL AIRPORT

May 1, 2013

Dr. Eileen Holden, President
Polk State College
999 Avenue H NE
Winter Haven, Florida 33881

Dear Dr. Holden,

It is with great enthusiasm that Lakeland Linder Regional Airport (LLRA) is submitting this letter of support for Polk State College to provide the Bachelor of Science degree in Aerospace Sciences. Polk County's airport professionals are committed to providing safe and efficient airports for our citizens. LLRA fully supports Polk State College offering this degree that includes a focus in airport management and professional pilot science.

The aviation industry is in desperate need of aviation career oriented professionals. Polk State College has a history of providing exceptional educational opportunities to its community and producing quality graduates and because of this LLRA fully supports the prospect of the College's new program to help build the next generation of aviation professionals!

Furthermore, with the widely publicized probability of a pilot shortage in the airline industry, pilot candidates will be sought after for years to come. LLRA recognizes the advanced flight training and experience Polk State College will be providing to produce quality, professional, airline-ready pilots. LLRA salutes Polk State College's willingness to fill this industry void.

Please accept this letter as evidence of LLRA support of Polk State College's Bachelor of Science in Aerospace Sciences degree program.

Sincerely,

Eugene B. Conrad III, C.M.
Airport Director

AIRPORT ADMINISTRATION
3900 Don Emerson Drive, Suite 210 · Lakeland, FL 33811 · 863/834-3298 · FAX: 863/834-3274
LakelandAirport.com

Captain Steven A. Briner
Director of Flight Operations
11495 Navaid Road, Suite 340
Bridgeton, Missouri 63044
314.222.4390 office
sbriner@gojetairlines.com

May 10, 2013

Dr. Eileen Holden, President
Polk State College
999 Avenue H NE
Winter Haven, Florida 33881

Dear Dr. Holden,

It is with great enthusiasm that GoJet Airlines is submitting this letter of support for Polk State College to provide the Bachelor of Science degree in Aerospace Sciences. A postsecondary degree impacts a pilot's resume with professional distinction that makes his or her aviation career advancement unlimited.

With the widely publicized probability of a pilot shortage in the airline industry, pilot candidates will be sought after for years to come. GoJet recognizes the advanced flight training and experience Polk State College will be providing to produce quality, professional, and airline-ready pilots.

GoJet Airlines salutes Polk State College's willingness to fill this industry void. The Bachelor of Science degree in Aerospace Sciences will benefit the citizens of Polk County, the State of Florida, and the entire traveling public.

Sincerely,

Captain Steven A. Briner
Director of Flight Operations

POLK
Aviation Alliance

May 5, 2013

Dr. Eileen Holden, President
Polk State College
999 Avenue H NE
Winter Haven, FL 33881

Dr. Holden;

Please accept this enthusiastic letter of support on behalf of the Polk Aviation Alliance for Polk State College to launch a Bachelor of Science degree in Aerospace Sciences. We heartily recommend approval of this program.

Demand for competent and proficient pilots has historically been steady, predictable, and economy-driven; however, accelerated pilot retirements among the baby boomer generation coupled with decreased pilot turnover from the military, has created a looming pilot shortage that is already beginning to impact the airline industry. Current pilot demand forecasts from sources such as Boeing and the FAA demonstrate a market for approximately half a million pilots and an equal or greater number of new maintenance technicians over the next 20 years. That is to say nothing of the growing need for more well educated aerospace managers and administrators. This demand is real, and could outstrip the capacity of the existing training infrastructure both nationally and in the state of Florida.

Florida is the world leader in flight training. Thanks to the state's exceptional weather, diverse airspace, and aviation friendly infrastructure, the state attracts flight and maintenance students from across the globe. In fact, the FAA's Orlando Flight Standards District Office processes more airmen certification requests than the entire Western half of the country combined. Making a cost effective bachelor degree option available to students would provide them with an exceptional opportunity for employment in a growing, high-tech, industry that has become critical to business on a global scale.

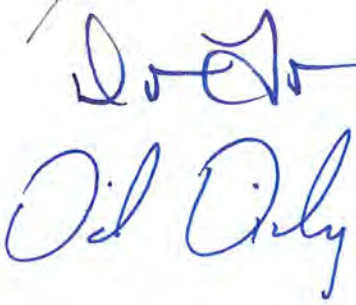
As an organization dedicated to the support and enhancement of aviation and aerospace education and commerce in Polk County, the Alliance and its members believe the Polk State program would be a tremendous benefit to the people, the businesses, and the increasingly positive reputation of our county on the state, regional, national and international market. It is our sincere hope that you will approve this program.

Sincerely;

Jamie Beckett

*See attached signature sheet.

Jamie Beckett
President
Polk Aviation Alliance



Deric Feacher
City Manager
Winter Haven, FL

David Dickey
Community and Economic Development
Winter Haven, FL

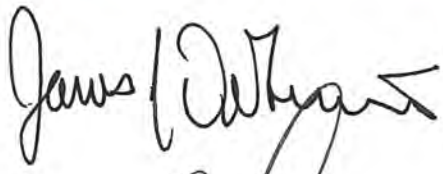
Keith Smith
Assistant Principal
Central Florida Aerospace Academy
Lakeland, FL

John "Lites" Leenhouts
President/CEO
SUN 'n FUN
Lakeland, FL

Kermit Weeks
Founder/Owner
Fantasy of Flight
Polk City, FL

Debbie Murphy
Airport Director
Winter Haven Municipal Airport
Winter Haven, Florida

Cindy Barrow
Executive Director
Bartow Muncipal Airport Development Authority
Bartow, FL



Jim DeGennaro
Community Development Manager
Bartow, Florida

Mark Jackson
Director of Tourism and Sports
Visit Central Florida
Auburndale, Florida

SCHOOL BOARD OF POLK COUNTY

P.O. BOX 391
BARTOW, FLORIDA 33831

(863) 534-0500

1915 SOUTH FLORAL AVENUE
BARTOW, FLORIDA 33830

May 1, 2013

Dr. Eileen Holden, President
Polk State College
999 Avenue H NE
Winter Haven, Florida 33881

Dear Dr. Holden,

The Polk County School Board (PCSB) offers full support for the establishment of the Polk State College Bachelor of Science in Aerospace Sciences. This program will provide Polk County students another important rung in the aerospace educational ladder. The School Board's Workforce Education Department oversees the Central Florida Aerospace Academy, a stand-alone career academy that provides aerospace-related education to students in grades 9-12 in Polk County. Since beginning in the fall of 2008 with 70 students, the program has grown to a current enrollment of 253 students. Areas of study include aerospace science, avionics, aviation maintenance, and engineering.

Many students in our school are interested in careers as professional pilots or other aerospace professionals, and they are currently able to pursue postsecondary education through Polk State College's Associate of Science degrees in Professional Pilot Science or Aerospace Administration. However, to complete a bachelor degree in these fields, they must enroll at a private institution or leave Florida. Polk State's Aerospace Sciences bachelor degree program will allow our students to affordably complete their baccalaureate education close to home, thereby increasing access to the aerospace field. Polk State College and the Polk County School Board have a long history of collaboration to provide the best educational opportunities for the citizens of Polk County. The proposed degree is just one more example of this collaborative relationship.

The need for qualified professional pilots, flight educators, and aviation management personnel is immense in Central Florida, where much of the world's flight training takes place. Providing an expanded postsecondary option for students interested in this career field will increase the professionalism of the aerospace industry.

Polk State College has a reputation for offering progressive, vital programs to the area's workforce. We anticipate that the BS in Aerospace Sciences will continue that trend and prepare future aviation workers with the knowledge, skills, and attitudes needed for the aerospace industry of today and tomorrow.

Please accept this letter as evidence of our support for the Polk State College Bachelor of Science in Aerospace Sciences degree program.

Sincerely,

John K. Small
Senior Director of Workforce Education

The Mission of Polk County Public Schools is to ensure rigorous, relevant learning experiences that result in high achievement for our students..

WINTER HAVEN
The Chain of Lakes City

Winter Haven Municipal Airport
Gilbert Field

April 30, 2013

Dr. Eileen Holden, President
Polk State College
999 Avenue H NE
Winter Haven, Florida 33881

Dear Dr. Holden:

It is with great enthusiasm that Winter Haven Municipal Airport at Gilbert Field (WHMA-GIF) is submitting this letter of support for Polk State College to provide the Bachelor of Science degree in Aerospace Sciences. Polk County's airport professionals are committed to providing safe and efficient airports for our citizens. WHMA-GIF fully supports Polk State College offering this degree that includes a focus in airport management and professional pilot science.

Airport efficiency can be measured by the satisfaction of the local flying community and the passengers who use WHMA-GIF as a stop along their journey. Polk State College has a history of providing exceptional educational opportunities for our community and producing quality graduates. WHMA-GIF is excited about the prospect of Polk State's new program to help maintain and improve our customer-satisfaction record in safety and in ground-side and air activities.

Furthermore, with the widely publicized probability of a pilot shortage in the airline industry, pilot candidates will be sought after for years to come. WHMA-GIF recognizes the advanced flight training and experience Polk State College will be providing to produce quality, professional, airline-ready pilots. WHMA-GIF salutes Polk State College's willingness to fill this industry void.

Please accept this letter as evidence of WHMA-GIF support of Polk State College's Bachelor of Science in Aerospace Sciences degree program.

Sincerely,

Debbie Murphy

Debbie Murphy
Airport Division Director

The City of Winter Haven, founded 1911
P. O. Box 2277 ♦ 2073 US Highway 92, West ♦ Winter Haven, FL 33883-2277
Telephone 863.298.4551 ♦ Fax: 863.298.4553 ♦ www.mywinterhaven.com