MEMO

From: Dr. Brooke Wheeler, Division Director
Thru: Dr. Ulleen Jones, Interim Dean
To: Dr. Mark Archambault, Chair, Undergraduate Curriculum Committee
Subject: ANM-- Change name of Human Factors and Safety BS degrees

22 January 2020

The College of Aeronautics requests a change in the name of two B.S. degrees as follows starting with Catalog 2020-2021:

- Human Factors and Safety (7234) will be changed to Aviation Human Factors & Safety (new major code)
- Human Factors and Safety – Flight (7235) will be changed to Aviation Human Factors & Safety – Flight (new major code)

There will be no change to the programs or assessment plans: the degree requirements and courses will remain the same as the 2019-2020 Catalog listing. The only change is to add “Aviation” to the degree name and use “&” to minimize the number of characters.

The ANM forms and catalog program plans are attached.
ADDITION A NEW MAJOR OR MINOR TO THE CURRICULUM

Please provide the following information when requesting a new major or minor (program or option) to be added to the curriculum. Only new majors, minors and options are assigned a new code and print on the diploma. The code will be assigned by the Office of the Registrar and information emailed to all appropriate personnel.

COLLEGE: Aeronautics

DEPARTMENT: Aeronautics

DELIVERY MODE(S): Classroom (classroom, online)

CAMPUS/SITE(S): Main Campus - Melbourne

PROGRAM TO BE ADDED: [ ] Major [ ] Minor [ ] Option for (existing degree program)

NOTE: Only Majors, Minors and Options receive new codes and print on the diploma; use Option for new program name to appear with existing degree name.

☐ Associate of Arts (A.A.) ☐ Master of Education (M.Ed.) ☐ Doctor of Business Administration (D.B.A.)
☐ Associate of Science (A.S.) ☐ Master of Public Administration (M.P.A.) ☐ Doctor of Philosophy (Ph.D.)
☐ Bachelor of Arts (B.A.) ☐ Master of Science (M.S.) ☐ Doctor of Psychology (Psy.D.)
☐ Bachelor of Science (B.S.) ☐ Master of Science in Aviation (M.S.A.) ☐ Graduate Certificate
☐ Master of Arts (M.A.) ☐ Educational Specialist (Ed.S.) ☐ Undergraduate Certificate
☐ Master of Business Administration (M.B.A.) ☐ Doctor of Aviation (Av.D.)

OTHER ADDITIONS TO THE CURRICULUM NOTE: Only Majors, Minors and Options receive new codes and print on the diploma; use the Adding a New Concentration or Specialization form if the new program represents less than a full degree curriculum.

PROGRAM TITLE Restricted to 30 characters, including spaces

Aviation Human Factors & Safety - Flight

ACADEMIC YEAR TO BE INITIATED: FALL 2020 ADVISOR FOR NEW PROGRAM: Carroll

New programs are available beginning with the fall term in which they appear in the University Catalog.

ROUTING APPROVALS: 1) Department head/program chair and college dean approve and sign form. 2) Accreditation Liaison reviews and signs the form. 3) The director of APAC reviews the assessment plan for the program and signs form. 4) The chief academic officer reviews and approves business plan of the program in terms of financial viability and impact on the university mission and signs form. 5) Graduate Council or Undergraduate Curriculum Committee approves academic and signs form. 6) The chief academic officer approves and signs form, and forwards to the Catalog & Curriculum Manager.

1) [Signature] 1/22/2020
   Department Head/Program Chair

2) [Signature] 1/22/2020
   Dean or Associate Dean

3) [Signature] 1/22/2020
   Accreditation Liaison*

4) [Signature] 1/22/2020
   Chief Academic Officer

5) [Signature] Date
   Chair, Graduate Council
   OR
   Chair, Undergraduate Curriculum Committee

6) [Signature] Date
   Chief Academic Officer

* Requests to add minor programs to the curriculum do not need Accreditation Liaison review.

REGISTRAR'S USE ONLY

FSA ATLAS: [ ] SORREF: [ ] SMAPREL: [ ]
STVMA: JR: [ ] SOACURR: [ ] Major Code Assigned [ ]
GWVDSAX: [ ] CIPC Code [ ] Operator Initials/Date:

DISTRIBUTION
Original – Registrar
Copy – Academic Unit

Florida Institute of Technology • Office of the Registrar
150 West University Boulevard, Melbourne, FL 32901-6975 • 321-674-8114 • Fax 321-674-7827

RGR-447-1019
Aviation Human Factors & Safety - Flight, B.S.

Major Code: 7xxx
Degree Awarded: Bachelor of Science
Delivery Mode(s): Classroom, Flight
Admission Status: Undergraduate
Location(s): Main Campus - Melbourne

The curriculum for the aviation human factors and safety with flight major prepares the graduate for a career in the global aeronautical science and technology industry and government regulatory agencies. The graduate is provided a strong foundation in mathematics, physics, aeronautical sciences, aeronautical technology and the regulated international aviation industry.

Curriculum

Candidates for the degree must successfully complete the following curriculum.

Freshman Year

Fall (16 credit hours)

- AVF 1001 Flight 1
- AVS 1201 Aviation Meteorology
- AVT 1001 Aeronautics 1
- COM 1101 Composition and Rhetoric
- FYE 1000 University Experience
- MTH 1000 Precalculus

Private Pilot Written Examination

Spring (17 credit hours)

- AVF 1002 Flight 2
• AVT 1002 Aeronautics 2
• COM 1102 Writing About Literature
• CSE 1301 Introduction to Computer Applications

• MTH 1603 Applied Calculus and Statistics
  or
• MTH 1702 Applied Calculus

• PSY 1411 Introduction to Psychology

Private Pilot Flight Test

Sophomore Year

Fall (16 credit hours)

• AHF 1101 Introduction to Aviation Psychology
• AVF 2001 Flight 3
• AVT 2001 Aeronautics 3
• AVT 2303 Aviation Career Planning
• PSY 2512 Psychology Research Methods and Statistics 1

Select first HUM Core Course:

• HUM 2051 Civilization 1: Ancient Through Medieval
• HUM 2053 Introduction to Asian Civilization
• HUM 2141 World Art History 1: Pre-History to Early Global Awareness
• HUM 2211 British Literature and Culture
• HUM 2212 British and American Literature 1
• HUM 2331 American History: Pre-Columbian to Civil War Era
• HUM 2551 Survey of Ancient and Medieval Philosophy

Instrument Rating Written Examination
Spring (15 credit hours)

- AHF 3101 Introduction to Human Factors
- AVF 2102 Flight 4 Commercial Pilot-Airplane Multiengine Land
- AVS 2101 Aviation Physical Science
- AVT 2002 Aeronautics 4
- BUS 3501 Management Principles
- COM 2012 Research Sources and Systems

Junior Year

Fall (15 credit hours)

- AHF 3102 Advanced Human Factors
- AHF 3104 Human-Machine Systems
- AVS 2102 Aerodynamics
- AVT 1200 Introduction to Aircraft Systems
- Humanities Elective (HU) 3000-level or higher recommended Credit Hours: 3

Commercial Pilot Written Examination

Multiengine Commercial Pilot Flight Test

Spring (15 credit hours)

- AHF 3103 Sensation and Perception
- AHF 4001 Research Methods in Human Factors
- COM 2223 Scientific and Technical Communication
- Restricted Elective (Advisor Approval) Credit Hours: 3

Select second HUM Core Course:

- HUM 2052 Civilization 2: Renaissance Through Modern
- HUM 2054 Introduction to Asian Civilization 2
- HUM 2142 World Art History 2: Early Modern to Post-Colonial
Senior Year

Fall (15 credit hours)

- AHF 4304 Applied Ergonomics
- AVT 4201 Advanced Aircraft Systems
- AVT 4202 Advanced Aircraft Operations
- AVT 4301 Aviation Safety
- BUS 4502 Organizational Behavior and Theory

Spring (16 credit hours)

- AHF 4301 Human Performance 1
- AHF 4302 Interaction Design and Usability
- AVS 4302 Fundamentals of Aviation Safety Management Systems
- AVS 4999 Aviation Systems Safety
- AVT 4002 Aviation Research (Q)

Total Credits Required: 125
ADDITION OF A NEW MAJOR OR MINOR TO THE CURRICULUM

Please provide the following information when requesting a new major or minor (program or option) to be added to the curriculum. Only new majors, minors and options are assigned a new code and print on the diploma. The code will be assigned by the Office of the Registrar and information emailed to all appropriate personnel.

COLLEGE: Aeronautics
DEPARTMENT: Aeronautics
DELIVERY MODE(S): Classroom, Online
CAMPUS/SITE(S): Main Campus - Melbourne

PROGRAM TO BE ADDED: ☐ Major ☐ Minor ☐ Option for: (existing degree program)

NOTE: Only Majors, Minors and Options receive new codes and print on the diploma; use Option for new program name to appear with existing degree name.

☐ Associate of Arts (A.A.) ☐ Master of Education (M.Ed.) ☐ Doctor of Business Administration (D.B.A.)
☐ Associate of Science (A.S.) ☐ Master of Public Administration (M.P.A.) ☐ Doctor of Philosophy (Ph.D.)
☐ Bachelor of Arts (B.A.) ☐ Master of Science (M.S.) ☐ Doctor of Psychology (Psy.D.)
☐ Bachelor of Science (B.S.) ☐ Master of Science in Aviation (M.S.A.) ☐ Graduate Certificate
☐ Master of Arts (M.A.) ☐ Educational Specialist (Ed.S.) ☐ Undergraduate Certificate
☐ Master of Business Administration (M.B.A.) ☐ Doctor of Aviation (Av.D.)

OTHER ADDITION TO THE CURRICULUM NOTE: Only Majors, Minors and Options receive new codes and print on the diploma; use Adding a New Concentration or Specialization form if the new program represents less than a full degree curriculum.

PROGRAM TITLE: Restricted to 30 characters, including spaces
Aviation Human Factors & Safety

ACADEMIC YEAR TO BE INITIATED: FALL 2020
ADVISOR FOR NEW PROGRAM: Carroll

New programs are available beginning with the fall term in which they appear in the University Catalog.

ROUTING APPROVALS: 1) Department chair/program chair and college dean approve and sign form. 2) Accreditation Liaison reviews and signs the form. 3) The director of APAC reviews the assessment plan for the program and signs form. 4) The chief academic officer reviews and approves business plan of the program in terms of financial viability and impact on the university mission and signs form. 5) Graduate Council or Undergraduate Curriculum Committee approves academics and signs form, 6) The chief academic officer reviews and signs form, and forwards to the Catalog & Curriculum Manager.

1) Department Chair/Program Chair
Date: 1/22/2020

2) Dean or Associate Dean
Date: 1/22/2020

3) Accreditation Liaison
Date: 1/22/2020

4) Chief Academic Officer
Date: 1/22/2020

5) Chair, Graduate Council
Date: 1/22/2020
OR
Chair, Undergraduate Curriculum Committee
Date: 1/22/2020

6) Chief Academic Officer
Date: 1/22/2020

* Requests to add minor programs to the curriculum do not need Accreditation Liaison review.

REGISTRAR'S USE ONLY

FSA ATLAS: SOAKREF: SMAPRIE:
STVMJR: SOACURR: Major Code Assigned:
GWVSDAX: CIPRC Code: Operator Initials/Date:

Florida Institute of Technology • Office of the Registrar
150 West University Boulevard, Melbourne, FL 32901-6975 • 321-674-8114 • Fax 321-674-7827

RGR-447-1019
Aviation Human Factors & Safety, B.S.

Major Code: 7xxx
Degree Awarded: Bachelor of Science
Delivery Mode(s): Classroom
Admission Status: Undergraduate
Location(s): Main Campus - Melbourne

The curriculum for the aviation human factors and safety major prepares the graduate for a career in the global aeronautical science and technology industry and government regulatory agencies. The graduate is provided a strong foundation in mathematics, physics, aeronautical sciences, aeronautical technology and the regulated international aviation industry.

Curriculum

Candidates for the degree must successfully complete the following curriculum.

Freshman Year

Fall (17 credit hours)

- AHF 1101 Introduction to Aviation Psychology
- AVM 1000 Introduction to Aviation
- AVS 1201 Aviation Meteorology
- COM 1101 Composition and Rhetoric
- FYE 1000 University Experience
- MTH 1000 Precalculus

Spring (15 credit hours)

- COM 1102 Writing About Literature
- CSE 1301 Introduction to Computer Applications
- MTH 1603 Applied Calculus and Statistics

or

- MTH 1702 Applied Calculus

- PSY 1411 Introduction to Psychology

- Free Elective Credit Hours: 3

---

**Sophomore Year**

---

**Fall (15 credit hours)**

- AVT 2201 National Airspace System
- AVT 2303 Aviation Career Planning
- COM 2012 Research Sources and Systems
- PSY 2512 Psychology Research Methods and Statistics 1

- Free Elective Credit Hours: 3

Select first HUM Core Course:

- HUM 2051 Civilization 1: Ancient Through Medieval
- HUM 2053 Introduction to Asian Civilization
- HUM 2141 World Art History 1: Pre-History to Early Global Awareness
- HUM 2211 British Literature and Culture
- HUM 2212 British and American Literature 1
- HUM 2331 American History: Pre-Columbian to Civil War Era
- HUM 2551 Survey of Ancient and Medieval Philosophy

**Spring (15 credit hours)**

- AHF 3101 Introduction to Human Factors
- AVS 2101 Aviation Physical Science
- BUS 3501 Management Principles
- COM 2223 Scientific and Technical Communication

Select second HUM Core Course:
- **HUM 2052 Civilization 2: Renaissance Through Modern**
- **HUM 2054 Introduction to Asian Civilization 2**
- **HUM 2142 World Art History 2: Early Modern to Post-Colonial**
- **HUM 2212 British and American Literature 1** (may not be repeated for credit)
- **HUM 2213 British and American Literature 2**
- **HUM 2332 American History: From Reconstruction to the Present**
- **HUM 2552 Survey of Modern and Contemporary Philosophy**

### Junior Year

#### Fall (15 credit hours)

- **AHF 3102 Advanced Human Factors**
- **AHF 3104 Human-Machine Systems**
- **AVT 3203 Air Traffic Control 1**
- Restricted Elective (Advisor Approval) Credit Hours: 3
- Humanities Elective (HU) 3000-level or higher recommended Credit Hours: 3

#### Spring (15 credit hours)

- **AHF 3103 Sensation and Perception**
- **AHF 4001 Research Methods in Human Factors**
- **COM 3070 Professional Communication for Executives**
- Restricted Electives (Advisor Approval) Credit Hours: 6

### Senior Year

#### Fall (12 credit hours)

- **AHF 4304 Applied Ergonomics**
- **AVT 4301 Aviation Safety**
- **BUS 4502 Organizational Behavior and Theory**
- Free Elective Credit Hours: 3

#### Spring (16 credit hours)
- AVT 4002 Aviation Research (Q)
- AHF 4301 Human Performance 1
- AHF 4302 Interaction Design and Usability
- AVS 4302 Fundamentals of Aviation Safety Management Systems
- AVS 4999 Aviation Systems Safety

Total Credits Required: 120
Memo

To: Dr. Korhan Oyman, Interim Provost and Chief Academic Officer  
From: Dr. Ulreen Jones, Interim Dean  
Date: January 22nd, 2020  
Subject: New College of Aeronautics Undergraduate Certificate – Aviation Ground Operations

I am writing to request your review and approval of a new College of Aeronautics undergraduate certificate, namely Aviation Ground Operations. Please see underfoot to this memo:

- Attachment 1 – Adding a New Major or Minor to the Curriculum form
- Attachment 2 – Certificate Overview
- Attachment 3 – Business Plan/Case Statement
- Attachment 4 – Financial Plan and Pro Forma Cash Flow Analysis

I kindly request your approval and signature on Attachment 1, Adding a New Major or Minor to the Curriculum form.

Sincerely,

[Signature]

Ulreen Jones  
Interim Dean, College of Aeronautics
FLORIDA TECH

ADDING A NEW MAJOR OR MINOR TO THE CURRICULUM

Please provide the following information when requesting a new major or minor (program or option) to be added to the curriculum. Only new majors, minors, and options are assigned new codes and print on the diploma. The code will be assigned by the Office of the Registrar and information emailed to all appropriate personnel.

COLLEGE: College of Aeronautics
DEPARTMENT: N/A
DELIVERY MODE(S): Classroom (classroom, online)

PROGRAM TO BE ADDED: □ Major □ Minor □ Option for ________________________________ (existing degree program)

NOTE: Only Majors, Minors, and Options receive new codes and print on the diploma; use Option for new program name to appear with existing degree name.

☐ Associate of Arts (A.A.)
☐ Associate of Science (A.S.)
☐ Bachelor of Arts (B.A.)
☐ Bachelor of Science (B.S.)
☐ Master of Arts (M.A.)
☐ Master of Business Administration (M.B.A.)
☐ Master of Education (M.Ed.)
☐ Master of Public Administration (M.P.A.)
☐ Master of Science (M.S.)
☐ Master of Science in Aviation (M.S.A.)
☐ Doctor of Philosophy (Ph.D.)
☐ Doctor of Psychology (Psy.D.)
☐ Educational Specialist (Ed.S.)
☐ Doctor of Aviation (Av.D.)
☐ Undergraduate Certificate
☐ Graduate Certificate

OTHER ADDITIONS TO THE CURRICULUM: Note: Only Majors, Minors, and Options receive new codes and print on the diploma; use Adding a New Concentration or Specialization form if the new program represents less than a full degree curriculum.

PROGRAM TITLE: Restricted to 30 characters, including spaces

Aviation Ground Operations

ACADEMIC YEAR TO BE INITIATED: FALL 2020

ADVISOR FOR NEW PROGRAM: BROWNING

New programs are available beginning with the fall term in which they appear in the University Catalog.

ROUTING APPROVALS: 1) Department head/program chair and college dean approve and sign form. 2) Accreditation Liaison reviews and signs the form. 3) The director of APAC reviews the assessment plan for the program and signs form. 4) The chief academic officer reviews and approves business plan of the program in terms of financial viability and impact on the university mission and signs form. 5) Graduate Council or Undergraduate Curriculum Committee approves academics and signs form. 6) The chief academic officer reviews and signs the form, and forwards to the Catalog & Curriculum Manager.

1) Department Head/Program Chair
   Date
  签字
   Dean or Associate Dean
   Date

2) Accreditation Liaison*
   Date

3) Director, APAC
   Date

4) Chief Academic Officer
   Date

5) Chair, Graduate Council
   Date
   OR
   Chair, Undergraduate Curriculum Committee
   Date

6) Chief Academic Officer
   Date

* Requests to add minor programs to the curriculum do not need Accreditation Liaison review.

REGISTRAR’S USE ONLY

FSA ATLAS
SOXREF
SMAFLE

STVMajor
SOACURR

GWVSOAX
CIPC Code

Operator Initials/Date

Florida Institute of Technology • Office of the Registrar

150 West University Boulevard, Melbourne, FL 32901-6975 • 321-674-8114 • Fax 321-674-7827

RGR-447-1019
AVIATION GROUND OPERATIONS CERTIFICATE (AVGOC)

The AVGOC will comprise 30 credit hours to be completed in three consecutive semesters. It is designed to start in the fall and end in the summer of each academic year. The proposed flowsheet consists of courses currently offered by Florida Tech as shown below.

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Name</th>
<th>Semester</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>AVT 1001</td>
<td>Aeronautics 1</td>
<td>Fall</td>
<td>3</td>
</tr>
<tr>
<td>CSE 1301</td>
<td>Introduction to Computer Applications</td>
<td>Fall</td>
<td>3</td>
</tr>
<tr>
<td>BUS 3601</td>
<td>Marketing Principles</td>
<td>Fall</td>
<td>3</td>
</tr>
<tr>
<td>AHF 3101</td>
<td>Introduction to Human Factors</td>
<td>Fall</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>12</strong></td>
</tr>
<tr>
<td>AVT 3501</td>
<td>Special Topics in Aviation Technology ¹</td>
<td>Spring</td>
<td>3</td>
</tr>
<tr>
<td>BUS 3605</td>
<td>Consumer Behavior</td>
<td>Spring</td>
<td>3</td>
</tr>
<tr>
<td>BUS 3612</td>
<td>Hospitality and Tourism Marketing</td>
<td>Spring</td>
<td>3</td>
</tr>
<tr>
<td>AVS 4304*</td>
<td>Aviation Security</td>
<td>Spring</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>12</strong></td>
</tr>
<tr>
<td>AVM 3501</td>
<td>Special Topics in Aviation Management ²</td>
<td>Summer</td>
<td>3</td>
</tr>
<tr>
<td>AVT 3501</td>
<td>Special Topics in Aviation Technology ³</td>
<td>Summer</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>6</strong></td>
</tr>
</tbody>
</table>

Total: **30 credit hours**

Note: *This is a standalone course. The prerequisite of a Junior with good standing in the CoA will be waived for non-degree seeking students.

¹ Special topics of interest in aviation ground operations will include aircraft and airport characteristics/codes, aircraft weight and balance, GSE equipment, fueling, communications, operations on the ramp, flight documentation and passenger, baggage, and cargo handling.

² Special topics of interest in aviation ground operations management will include roles and responsibilities of aviation stakeholders, responding to emergencies, factors guiding operational decision making by personnel to minimize exposure to legal liability, airport terminal functions and facilities, airside operations safety compliance, effective safety cultures, and safety management systems.

³ Special topics of interest in practical aviation ground operations will include passenger handling, ground handling, airport ramp and baggage handling services, as well as, aircraft turnaround coordination, managing passenger interactions, and best practices for customer service.
Attachment 2
Certificate Overview

In addition to the courses listed above, two optional electives may be added to the Spring and Summer semesters. These electives will provide students with the ability to expand their aviation industry knowledge, should they choose to do so.

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Name</th>
<th>Semester</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>AVM 4501**</td>
<td>Air Transportation Management</td>
<td>Spring</td>
<td>3</td>
</tr>
<tr>
<td>AVT 4301**</td>
<td>Aviation Safety</td>
<td>Summer</td>
<td>3</td>
</tr>
</tbody>
</table>

Note: **These are standalone courses. The prerequisites of Junior/Senior standings will be waived for non-degree seeking students.
Attachment 3
Aviation Ground Operations Certificate Business Plan

Case Statement

Introduction
The Aviation Ground Operations Certificate (AVGOC) program is proposed for students who wish to pursue non-flight careers with airlines. This certificate will provide these students with the fundamental education and skills required to function effectively as ticketing/gate agents, ground operations agents, and customer service representatives. The College of Aeronautics (CoA) will attract additional students by offering this certificate program.

Program Relevance
The proposed Aviation Ground Operations Certificate program is consistent with the mission of CoA and Florida Tech. CoA’s mission is as follows: To prepare students for success and advancement in the aviation professions; advance aviation knowledge through faculty and student research, scholarly activity and projects; and encourage and enable student and faculty service to the university, community and aviation professions. The curriculum developed for this certificate will prepare graduates to take up new aviation professions thus meeting our mission statement.

Program Demand
What is the market for this program?
The aviation industry is estimated to grow at approximately 3.0% on average annually over the next 20 years (FAA). We were approached by Saudia Airlines who are looking to hire well-educated aviation ground operations personnel about offering this certificate. They have sent us over 90 flight and aircraft dispatcher students over the past three years. Several of their students in the ELS pipeline, could apply for this certificate program.

How many new students are expected to enroll in the first year?
We anticipate a minimum of six students in the first year, followed by approximately eight students in the following years. Saudia Airlines is the largest potential market for this degree program. However, as with our successful aircraft dispatcher certificate program, we anticipate that existing students in the College of Aeronautics may choose to complete this certificate program.

What other universities offer this program?
At the time of this writing, we are not aware of any universities in the U.S. that offer this specific certificate program.

Are there current trends or forecasts for interest in this program?
There is an existing shortage in aviation professionals that is projected to continue for at least another decade. Furthermore, this proposed certificate program does not require a significant increase in resources to start or implement because the courses already exist and are being offered. This program also will be a marketing tool to attract students to Florida Tech.
Attachment 3
Aviation Ground Operations Certificate Business Plan

Will this program be offered to a “non-traditional” audience?
Part-time students – No
Evening/weekend classes - No
Distance Learning – No
Other – No

What are employment opportunities after graduation?
The main employment opportunities with this major are in airlines as ticketing/gate agent, ramp and ground handlers, and customer service representative.

If this is an undergraduate program, what are the graduate program opportunities?
Graduate program opportunities are unlikely. However, because the degree is compatible with other CoA programs, there are opportunities for students to complete other Associate’s degree programs.

Is internship part of the program?
No.

Competition
Do other competitive universities offer this program?
The Aviation Ground Operations Certificate program itself is unique to CoA. Our major competitors who provide similar training through their degree programs are as follows:
* Everglades University
* Embry Riddle Aeronautical University

In addition, the International Air Transport Association (IATA)/Regional Training Centers provide a number of training certificates that include similar content.

How is this proposed program different if different?
The proposed Aviation Ground Operations Certificate has been carefully constructed to round out the student’s understanding of the human factors and safety aspects of aviation ground operations, as well as, the legal issues and the roles and responsibilities of various aviation stakeholders during emergencies.

Academic Requirements
The academic requirement for admission is that the student be enrolled and eligible to register for the required courses. The graduation requirements for the proposed degree are shown in Attachment 2. All of the courses required for the Aviation Ground Operations Certificate program already exist and are offered at Florida Tech. This certificate program will be added and it will not replace or interfere with our existing Aircraft Dispatcher Certificate program.
Attachment 3
Aviation Ground Operations Certificate Business Plan

Student-Learning Assessment (see the APAC Policies and Procedures document at www.fit.edu/apac for the required number and type of assessment items. These must be approved by the APAC before the program is reviewed by any curriculum committees.):

In what courses will the students be assessed for program-level student learning?
Not required for a certificate program.

List the program-level student-learning Outcomes, Measures, and expected Targets for this program.
Not required for a certificate program.

Is the proposed program a substantive change according to SACS?
No.

Is the proposed program in line with departmental/college accreditation?
Yes

What impact will the program have on existing programs?
- Does it replace an existing program?
  No.
- Does it complement or compete with another program?
  Yes, complements existing CoA 4-year degrees. It does not compete with the existing Aircraft Dispatcher certificate program.

How will the new program be assessed (outcomes, accreditation, financial)?
Normal AABI and SACS assessment procedures will be employed.

Is program accreditation required or proposed for the program?
No.

Financial Resources/Uses
Can the program support itself financially (provide detailed estimates)?
Yes, the projected net cash flow for this degree program is in excess of $230,000 in the first year, and up to approximately $300,000 annually, should our assumptions hold in future years. Please refer to Attachment 4, Financial Plan and Pro Forma Cash flow Analysis.

- Will there be any assistants, fellowships available in this program
  No.
- What new courses, if any, will be required
  None.
- Service courses
  None.
- What new faculty, if any, will be required
Attachment 3
Aviation Ground Operations Certificate Business Plan

- Will new support staff be required
  
  No.

- Will new GSA's or adjuncts be required
  
  Yes, a maximum of two adjunct professors may be required for opening additional sections of existing courses, if necessary. Please refer to Attachment 4, Financial Plan and Pro Forma Cash Flow Analysis.

- What type of new equipment, labs, or other facilities are required
  
  One laptop computer.

- What new library resources will be required
  
  None
Administrative Processes

- New Major Code: A new certificate code will be required.

- University Catalog Changes: Minimal changes to university catalog will be necessary. Appropriate changes will be sent to University Publications promptly after necessary approval.

- Proposed Tuition Structure: This will be same as undergraduate tuition rate in other engineering disciplines.

- Bursar’s Office: It is anticipated that the billing and payment process will work in the standard manner.
## Pro Forma Cash Flow Analysis

<table>
<thead>
<tr>
<th></th>
<th>Year 1 FY20</th>
<th>Year 2 FY21</th>
<th>Year 3 FY22</th>
<th>Year 4 FY23</th>
<th>Year 5 FY24</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Projected Operating Revenues</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuition Rates</td>
<td>$270,240</td>
<td>$315,280</td>
<td>$360,320</td>
<td>$360,320</td>
<td>$405,360</td>
</tr>
<tr>
<td>Program Fees</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>Total</td>
<td><strong>$270,240</strong></td>
<td><strong>$315,280</strong></td>
<td><strong>$360,320</strong></td>
<td><strong>$360,320</strong></td>
<td><strong>$405,360</strong></td>
</tr>
<tr>
<td><strong>Projected Operating Expenses</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salary Expense</td>
<td>$32,670</td>
<td>$33,977</td>
<td>$35,336</td>
<td>$36,749</td>
<td>$38,219</td>
</tr>
<tr>
<td>Operating Expenses</td>
<td>$2,500</td>
<td>$2,520</td>
<td>$2,541</td>
<td>$2,562</td>
<td>$2,585</td>
</tr>
<tr>
<td>Total</td>
<td><strong>$35,170</strong></td>
<td><strong>$36,497</strong></td>
<td><strong>$37,877</strong></td>
<td><strong>$39,312</strong></td>
<td><strong>$40,804</strong></td>
</tr>
<tr>
<td><strong>Net Cash Flow</strong></td>
<td><strong>$235,070</strong></td>
<td><strong>$278,783</strong></td>
<td><strong>$322,443</strong></td>
<td><strong>$321,008</strong></td>
<td><strong>$364,556</strong></td>
</tr>
</tbody>
</table>
### Enrollment Projection

<table>
<thead>
<tr>
<th></th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FY20</td>
<td>FY21</td>
<td>FY22</td>
<td>FY23</td>
<td>FY24</td>
</tr>
<tr>
<td>Summer</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Fall FT</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>Fall PT</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Spring FT</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Spring PT</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Program enrollment total</td>
<td>0</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>Summer enrollment avg hrs per student</td>
<td>0 hrs</td>
<td>0 hrs</td>
<td>0 hrs</td>
<td>0 hrs</td>
<td>0 hrs</td>
</tr>
</tbody>
</table>

Enter the number of Full-time (FT) and Part-time (PT) students projected to enroll in the program for each term and year. (Do not include employees and dependents.)

If Summer enrollment projected, enter avg number of credit hours per student.

### Tuition Rate and Fees

<p>| | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Summer tuition rate</td>
<td>$7,020</td>
<td>Model will assume</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fall FTE tuition rate</td>
<td>$19,010</td>
<td>1.5% rate increase per year</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spring FTE tuition rate</td>
<td>$19,010</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Special program fees per student

<p>| | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Summer</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>Fall</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>Spring</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
</tbody>
</table>

Enter the approved Tuition rate for the 1st year of the new program. (S/E or Non S/E) S/E = Science and Engineering.

Enter amount for unique program fees required for enrollment. Enter $0 if the program does not require unique fees.

### Faculty/Staff requirements

<table>
<thead>
<tr>
<th></th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FY20</td>
<td>FY21</td>
<td>FY22</td>
<td>FY23</td>
<td>FY24</td>
</tr>
<tr>
<td>Number of Full-time Faculty</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Number of Full-time Staff</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Number of Adjunct Faculty</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Number of GSA</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

For each year, enter the number of Full-time Faculty, Full-time Staff, Adjunct Faculty, and GSA's required for the program.

### Salary Expense Projection

<p>| | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Full-time Faculty</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>Staff</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>Adjunct Faculty</td>
<td>$10,890</td>
<td>$11,326</td>
<td>$11,779</td>
<td>$12,250</td>
<td>$12,740</td>
</tr>
<tr>
<td>GSA</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
</tbody>
</table>

For each year, enter the amount of salary/wages required for the employees listed in the preceding table.

### Syr Program Budget

<table>
<thead>
<tr>
<th></th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 3</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FY20</td>
<td>FY21</td>
<td>FY22</td>
<td>FY23</td>
<td>FY24</td>
</tr>
<tr>
<td>72100 - Supplies - Office</td>
<td>$500</td>
<td>$520</td>
<td>$541</td>
<td>$562</td>
<td>$585</td>
</tr>
<tr>
<td>72110 - Supplies-Computer Software</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>72156 - Supplies - Laboratory</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>72199 - Supplies - Other</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>72201 - Operating Expenses</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
</tbody>
</table>

Enter an annual operating expense budget for Years 1 - 5. Budget by expense account code for Supplies, Operating Expenses, Travel, Professional Services, Utilities, and Other Services. Prepare the forecast in a similar manner as is done for existing programs. Insert rows to add accounts as needed.