Memorandum

Date: 10/16/09

To: Undergraduate Curriculum Committee

From: College of Aeronautics, Dr. John H. Cain

Subject: Request Approval for Four New Courses

The College of Aeronautics has developed four new courses to satisfy QEP requirements. The QEPIC has endorsed the courses from a QEP perspective.

The four new courses are:

- AVT 3999 Planning Aviation Research 1 ch
- AVT 4000 Conducting Aviation Research 1 ch
- AVT 4001 Reporting Aviation Research 1 ch
- AVT 4002 Aviation Research 3 ch

The three one credit hour courses are to be completed in sequence over three semesters. The three credit hour course is a combination of the three one hour courses.

Request UGCC approval.

John H. Cain, Ph.D.
CoA Curriculum Committee Chair
CoA QEP committee Chair
CoA QEPIC Representative
Florida Institute of Technology

ADDING A NEW COURSE TO THE CURRICULUM

This course is available for student registration only after the approval process has been completed.

SUBJECT AVT
COURSE NO. 3999
CREDIT HOURS 1
TERM TO BE ADDED TO THE FILE Spring 2010
CLASS HOURS 15
LECTURE HOURS 15
LAB HOURS 0
CONTACT HOURS (CEU ONLY)
DEPARTMENT College of Aeronautics
SCHEDULE TYPE Lecture
COMPUTER TITLE Restricted to 25 characters, including spaces Plan Aviation Research
CATALOG TITLE Planning Aviation Research
CATALOG DESCRIPTION OF COURSE Limited to 350 characters, including spaces

Allows students to plan, conduct and report on aviation research. Includes development of a three-semester plan of specific objectives, tasks, resources and time lines for planning, conducting and reporting research phases. First course in a three-course sequence. (Q)

In addition, you may attach a course syllabus and/or more detailed description.

RESTRICTIONS

☐ Prerequisite ________________ Course Number
☐ Corequisite ________________ Course Number

☐ Prerequisite ________________ Course Number
☐ Corequisite ________________ Course Number

☐ Prerequisite ________________ Course Number
☐ Corequisite ________________ Course Number

GRADES TO BE ISSUED
☑ A, B, C, D, F
☐ A, B, C, D, F, CEU
☐ CEU
☐ S, U
☐ P, F
☐ Other

ADDITIONAL RESTRICTION

Requirement: Junior standing.

If this course replaces a course currently offered in BANNER, please indicate old course information

SUBJECT Alpha Prefix (e.g., CSE) ________________ COURSE NO. (e.g., 1301) ________________

APPROVALS: Upon completion of appropriate department approvals, submit form to Chair, Graduate Council, or Chair, Undergraduate Curriculum Committee for approval below and forward to Catalog Director.

Grader ___________________________ Date 9/23/09
Chair, Graduate Council ___________________________ Date

Department Head/Program Chair ___________________________ Date 9/23/09
Dean or Associate Dean ___________________________ Date

Chair, Undergraduate Curriculum Committee ___________________________ Date

CATALOG DIRECTOR

These changes/additions have been made for the University/Extended Studies Catalog and entered into the BANNER term named above.

Catalog Director ___________________________ Date

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SCARIES ___________________________ Operator Init. ___________________________ Date

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MASTER COURSE SYLLABUS

AVT 3999 Planning Aviation Research

Spring 2010

Catalog Course Description

**AVT 3999 Planning Aviation Research** (1 credit).
Allows students to plan, conduct and report on aviation research. Includes development of a three-semester plan of specific objectives, tasks, resources and time lines for planning, conducting and reporting research phases. First course in a three-course sequence. (Q) (Requirement: Junior standing.)

Course Objectives

During this course, the student will:

Communications

1. C1. Prepare a written plan for the research experience (e.g., a project proposal).
2. C2. Document progress on the research experience regularly and communicate that progress to others in a suitable form.
3. C3. Present the results of the experience as both (a) one or more documents that include correctly designed and executed graphics, and (b) an oral presentation that includes effectively designed and executed graphics.
4. C4. Communicate all elements of the experience using (a) Standard English conventions and (b) a report format and style appropriate to the academic/professional field, including text citations and bibliographic references.
5. C5. Handle all aspects of the experience with a professional demeanor, to include interacting with team members responsibly, meeting deadlines, and preparing and presenting project materials in their final form.

Problem Solving/Critical Thinking

6. P1. Delimit and describe the purposes/objectives to be accomplished.
7. P2. When appropriate, conduct a search for published work on theory, research, and practices related to stated purposes/objectives.
8. P3. Prepare a plan to achieve the objectives, to include a timetable, description of methods, and description of required resources (e.g., a project proposal, a preliminary design).
9. P4. When appropriate, adjust the plan to overcome barriers and/or capitalize on opportunities that arise (e.g., availability of funding, materials, equipment, or work space).

Lead Instructor

TBD

Curriculum Coordinator

K. O. Oyman, Ph.D., Associate Dean.

Texts and References


Online databases through the Evans Library Research Librarians

Student Materials Beyond Texts, References, and Common Student Materials

As identified by the student or student teams and subject to CoA resource availability.

Topical Content

<table>
<thead>
<tr>
<th>Topics</th>
<th>Approximate Classroom Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction to planning, conducting, and reporting aviation research and scholarly activity</td>
<td>0.5</td>
</tr>
<tr>
<td>Student learning outcomes (SLOs) and assessments</td>
<td>0.5</td>
</tr>
<tr>
<td>Elements of and format for the research plan</td>
<td>0.5</td>
</tr>
<tr>
<td>Methodologies and deliverables</td>
<td>1.0</td>
</tr>
<tr>
<td>Developing the timetable and required resources</td>
<td>0.5</td>
</tr>
<tr>
<td>Problem selection and refinement</td>
<td>3.0</td>
</tr>
<tr>
<td>Progress reports and class discussions</td>
<td>2.0</td>
</tr>
<tr>
<td>Modifying the research plan</td>
<td>2.0</td>
</tr>
<tr>
<td>Research plan presentation and defense</td>
<td>3.0</td>
</tr>
<tr>
<td>Examinations</td>
<td>2.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>
Grading Weights by Course Element (Typical)

Class participation and professionalism  15%
Quizzes and examinations  20
Written research plan  35
Oral presentation  30

Teaching Media and Delivery Methods

Lecture, class discussion, text and graphic projections, videos, guest lecturers, Internet references projections, quizzes, exams, student presentations.

Laboratory Use

As identified by the student or student teams and subject to CoA resource availability and limitations.

Teamwork Applications in the Course

Research teams are highly encouraged but not required. When research teams are utilized, a method must be established in which individual team members assess the other member’s participation level and contribution significance.

Assessment Components

Instructors are to perform traditional student assessment for academic course grades.

Instructors are also to perform the QEP assessment requirements as described in the CoA QEP.
Florida Institute of Technology

ADDING A NEW COURSE TO THE CURRICULUM

This course is available for student registration only after the approval process has been completed.

SUBJECT_ AVT COURSE NO. 4000 CREDIT HOURS 1 TERM TO BE ADDED TO THE FILE Spring 2010
Number Choice (e.g., 1301)
(e.g., Fall 2006)
CLASS HOURS 15 LECTURE HOURS 15 LAB HOURS 0 CONTACT HOURS (CEU ONLY) ____________
DEPARTMENT College of Aeronautics SCHEDULE TYPE Lecture
(e.g., Computer Sciences) (e.g., Lecture, Lab or Special Project)
☑ COLLEGE OF AERONAUTICS-23 ☐ COLLEGE OF PSYCHOLOGY AND LIBERAL ARTS-25
☐ COLLEGE OF BUSINESS-24 ☐ COLLEGE OF SCIENCE-26
☐ COLLEGE OF ENGINEERING-01 ☐ UNIVERSITY COLLEGE EXTENDED STUDIES-27

COMPUTER TITLE Restricted to 25 characters including spaces Conducting AV Research

CATALOG TITLE Conducting Aviation Research

CATALOG DESCRIPTION OF COURSE Limited to 350 characters, including spaces

Continues AVT 3999. Includes planning, conducting and reporting aviation research. Requires students to produce a draft research report that overcomes barriers and capitalizes on opportunities in accordance with the research plan and instructor guidance. May be repeated for a maximum of two credits. Second in a three-course sequence. (Q)

In addition, you may attach a course syllabus and/or more detailed description.

RESTRICTIONS ☑ Prerequisite AVT 3999 ☐ Corequisite Course Number  
Course Number ☐ Prerequisite Course Number
Course Number
Course Number

GRADATES TO BE ISSUED  ☑ A, B, C, D, F  ☐ A, B, C, D, F, CEU
☐ CEU
☐ S, U
☐ P, F
☐ Other

ADDITIONAL RESTRICTION Requirement: Junior standing.  
(e.g., Major, Class Level, Department Head Approval)

If this course replaces a course currently offered in BANNER, please indicate old course information

SUBJECT Alpha Prefix (e.g., CSE) COURSE NO. (e.g., 1301)

APPROVALS: Upon completion of appropriate department approvals, submit form to Chair, Graduate Council,  
or Chair, Undergraduate Curriculum Committee for approval below and forward to Catalog Director.

Organizer 9/23/09

Date Chair, Graduate Council Date

OR

Department Head/Program Chair

Date 9/23/09

Chair, Undergraduate Curriculum Committee Date

CATALOG DIRECTOR

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Catalog Director Date

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Florida Institute of Technology
College of Aeronautics

MASTER COURSE SYLLABUS

AVT 4000 Conducting Aviation Research

Summer 2010

Catalog Course Description

AVT 4000 Conducting Aviation Research (1 credit).
Continues AVT 3999. Includes planning, conducting and reporting aviation research.
Requires students to produce a draft research report that overcomes barriers and
capitalizes on opportunities in accordance with the research plan and instructor guidance.
May be repeated for a maximum of two credits. Second in a three-course sequence. (Q)
(Requirement: Junior standing.)

Course Objectives

During this course, the student will:

Communications
1. C2. Document progress on the research experience regularly and
   communicate that progress to others in a suitable form.
2. C4. Communicate all elements of that experience using (a)
   Standard English conventions and (b) a report format and style appropriate
   to the academic/professional field, including text citations and
   bibliographic references.
3. C5. Handle all aspects of the experience with a professional
   demeanor, to include interacting with team members responsibly, meeting
   deadlines, and preparing and presenting project materials in their final
   form.

Problem Solving/Critical Thinking
4. P4. When appropriate, adjust the plan to overcome barriers and/or
   capitalize on opportunities that arise (e.g., availability of funding,
   materials, equipment, or work space).
5. P5. Collect and analyze pertinent information and data called for in
   the plan.

Lead Instructor

TBD.
Curriculum Coordinator

K. O. Oyman, Ph.D., Associate Dean.

Texts and References


Online databases through the Evans Library Research Librarians

Student Materials Beyond Texts, References, and Common Student Materials

As identified by the student or student teams and subject to CoA resource availability.

Topical Content

Collecting and analyzing relevant information and data as outlined in the research plan.

Reporting progress to the class and/or instructor.

Adjusting the research plan to overcome barriers and/or capitalize on opportunities that arise.

Writing the draft research report.

Grading Weights by Course Element

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Progress reports</td>
<td>50%</td>
</tr>
<tr>
<td>Draft research report</td>
<td>50</td>
</tr>
</tbody>
</table>

Teaching Media and Delivery Methods

Seminars and/or instructor discussions, written progress reports, and a draft research report.

Laboratory Use

As identified by the student or student teams and subject to CoA resource availability and limitations.

Teamwork Applications in the Course
Research teams are highly encouraged but not required. When research teams are utilized, a method must be established in which individual team members assess the other member’s participation level and contribution significance.

**Assessment Components**

Instructors are to perform traditional student assessment for academic course grades.

Instructors are also to perform the QEP assessment requirements as described in the CoA QEP.
Florida Institute of Technology

ADDING A NEW COURSE TO THE CURRICULUM

This course is available for student registration only after the approval process has been completed.

SUBJECT AVT  
COURSE NO. 4001  
CREDIT HOURS 1  
TERM TO BE ADDED TO THE FILE Spring 2010  

CLASS HOURS 15  
LECTURE HOURS 15  
LAB HOURS 0  
CONTACT HOURS (CEU ONLY)  

DEPARTMENT College of Aeronautics  
SCHEDULE TYPE Lecture  

☐ COLLEGE OF AERONAUTICS–23  ☐ COLLEGE OF PSYCHOLOGY AND LIBERAL ARTS–25  
☐ COLLEGE OF BUSINESS–24  ☐ COLLEGE OF SCIENCE–26  
☐ COLLEGE OF ENGINEERING–01  ☐ UNIVERSITY COLLEGE EXTENDED STUDIES–27  

COMPUTER TITLE Restricted to 25 characters including spaces  
Reporting Av Research  

CATALOG TITLE Reporting Aviation Research  

CATALOG DESCRIPTION OF COURSE Limited to 350 characters, including spaces  
Continues research planned and started in AVT 3999 and AVT 4000. Requires (1) completing the research analysis and conclusions, (2) delivering a written final report and (3) presenting an oral and graphic summary and defense. Third in a three-course sequence. (Q)  

In addition, you may attach a course syllabus and/or more detailed description.  

REQUIREMENTS  
☐ Prerequisite AVT 4000  
☐ Corequisite  

☐ Prerequisite  
☐ Corequisite  

☐ Prerequisite  
☐ Corequisite  

☐ Prerequisite  
☐ Corequisite  

GRADABLE CREDITS TO BE ISSUED  
☐ A, B, C, D, F  
☐ A, B, C, D, F, CEU  
☐ CEU  
☐ S, U  
☐ P, F  
☐ Other  

ADDITIONAL RESTRICTION Requirement: Senior standing.  
(e.g., Major, Class Level, Department Head Approval)  
If this course replaces a course currently offered in BANNER, please indicate old course information  

SUBJECT Alpha Prefix (e.g., CSE)  
COURSE NO. (e.g., 1301)  

APPROVALS: Upon completion of appropriate department approvals, submit form to Chair, Graduate Council, or Chair, Undergraduate Curriculum Committee for approval below and forward to Catalog Director.  

Originator  
Department Head/Program Chair  
Dean or Associate Dean  

9/23/09  
9/23/09  

Chair, Graduate Council  
Date  

OR  

Chair, Undergraduate Curriculum Committee  
Date  

CATALOG DIRECTOR  

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Catalog Director  

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College of Aeronautics  

MASTER COURSE SYLLABUS  

AVT 4001 Reporting Aviation Research  

Fall 2010  

Catalog Course Description  

AVT 4001 Reporting Aviation Research (1 credit). Continues research planned and started in AVT 3999 and AVT 4000. Requires (1) completing the research analysis and conclusions, (2) delivering a written final report and (3) presenting an oral and graphic summary and defense. Third in a three-course sequence. (Q) (Requirement: Senior standing.)  

Course Objectives  

During this course, the student will:  

Communications  
1. C2. Document progress on the research experience regularly and communicate that progress to others in a suitable form.  
2. C3. Present the results of the experience as both (a) one or more documents that include correctly designed and executed graphics, and (b) an oral presentation that includes effectively designed and executed graphics.  
3. C4. Communicate all elements of the experience using (a) standard English conventions and (b) a report format and style appropriate to the academic/professional field, including text citations and bibliographic references.  
4. C5. Handle all aspects of the experience with a professional demeanor, to include interacting with team members responsibly, meeting deadlines, and preparing and presenting project materials in their final form.  

Problem Solving/Critical Thinking  
5. P5. Collect and analyze pertinent information and data called for in the plan  
6. P6. Discuss the results and conclusions as they pertain to the objectives and present recommendations for future endeavors (e.g., lessons learned).  

Lead Instructor
TBD

Curriculum Coordinator

K. O. Oyman, Ph.D., Associate Dean.

Texts and References


Online databases through the Evans Library Research Librarians

Student Materials Beyond Texts, References, and Common Student Materials

As identified by the student or student teams and subject to CoA resource availability.

Topical Content

Analyzing relevant information and data as outlined in the research plan.

Reporting progress to the class and/or instructor.

Producing results and conclusions as they pertain to the objectives and present recommendations for future endeavors.

Writing the final research report.

Presenting research results and defending them.

Grading Weights by Course Element (Typical)

Class participation and professionalism 10%
Progress reports 10%
Final research report 40%
Presentation and defense 40%

Teaching Media and Delivery Methods

Seminars and/or instructor discussions, written progress reports, final written research report, and final presentation and defense.

Laboratory Use
As identified by the student or student teams and subject to CoA resource availability and limitations.

**Teamwork Applications in the Course**

Research teams are highly encouraged but not required. When research teams are utilized, a method must be established in which individual team members assess the other member’s participation level and contribution significance.

**Assessment Components**

Instructors are to perform traditional student assessment for academic course grades.

Instructors are also to perform the QEP assessment requirements as described in the CoA QEP.
FLORIDA INSTITUTE OF TECHNOLOGY

ADDING A NEW COURSE TO THE CURRICULUM

This course is available for student registration only after the approval process has been completed.

SUBJECT AVT COURSE NO. 4002 CREDIT HOURS 3 TERM TO BE ADDED TO THE FILE Spring 2010
(Area Prefix e.g., CSE) Number Choice (e.g., 1301)

CLASS HOURS 45 LECTURE HOURS 45 LAB HOURS 0 CONTACT HOURS (CEU ONLY)

DEPARTMENT College of Aeronautics SCHEDULE TYPE Lecture
(e.g., Computer Sciences) (e.g., Lecture, Lab or Special Project)

☐ COLLEGE OF AERONAUTICS-23 ☐ COLLEGE OF PSYCHOLOGY AND LIBERAL ARTS 25
☐ COLLEGE OF BUSINESS-24 ☐ COLLEGE OF SCIENCE-26
☐ COLLEGE OF ENGINEERING-01 ☐ UNIVERSITY COLLEGE EXTENDED STUDIES-27

COMPUTER TITLE Restricted to 25 characters, including spaces Aviation Research

CATALOG TITLE Aviation Research

CATALOG DESCRIPTION OF COURSE Limited to 350 characters, including spaces

Requires students to plan, conduct and report on aviation research or scholarly activity. Includes a research plan, progress reports, a final research report and an oral and graphic summary and defense. May be repeated for a maximum of six credits. (Q)

In addition, you may attach a course syllabus and/or more detailed description.

RESTRICTIONS ☐ Prerequisite Course Number ☐ Corequisite Course Number

☐ Prerequisite Course Number ☐ Corequisite Course Number

☐ Prerequisite Course Number ☐ Corequisite Course Number

GRADES TO BE ISSUED ☐ A, B, C, D, F ☐ A, B, C, D, F, CEU
☐ CEU ☐ S, U ☐ P, F ☐ Other

ADDITIONAL RESTRICTION Requirement: Senior standing.

If this course replaces a course currently offered in BANNER, please indicate old course information.

SUBJECT Alpha Prefix (e.g., CSE) COURSE NO. (e.g., 1301)

APPROVALS: Upon completion of appropriate department approvals, submit form to Chair, Graduate Council,
or Chair, Undergraduate Curriculum Committee for approval below and forward to Catalog Director.

Chair, Graduate Council Date

Chair, Undergraduate Curriculum Committee Date

CATALOG DIRECTOR

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Florida Institute of Technology  
College of Aeronautics  

MASTER COURSE SYLLABUS  

AVT 4002 Aviation Research  

Spring Fall 2010  

Catalog Course Description  

AVT 4002 Aviation Research (3 credits).  
Requires students to plan, conduct and report on aviation research or scholarly activity. 
Includes a research plan, progress reports, a final research report and an oral and graphic 
summary and defense. May be repeated for a maximum of six credits. (Q) (Requirement: Senior standing.)  

Course Objectives  

During this course, students will:  
Communications  
1. C1. Prepare a written plan for the research experience (e.g., a project proposal).  
2. C2. Document progress on the research experience regularly and communicate that progress to others in a suitable form.  
3. C3. Present the results of the experience as both (a) one or more documents that include correctly designed and executed graphics, and (b) an oral presentation that includes effectively designed and executed graphics.  
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5. C5. Handle all aspects of that experience with a professional demeanor, to include interacting with team members responsibly, meeting deadlines, and preparing and presenting project materials in their final form.  
Problem Solving/Critical Thinking  
6. P1. Delimit and describe the purposes/objectives to be accomplished.  
7. P2. When appropriate, conduct a search for published work on theory, research, and practices related to stated purposes/objectives.  
8. P3. Prepare a plan to achieve the objectives, to include a timetable, description of methods, and description of required resources (e.g., a project proposal, a preliminary design).
9. P4. When appropriate, adjust the plan to overcome barriers and/or capitalize on opportunities that arise (e.g., availability of funding, materials, equipment, or work space).

10. P5. Collect and analyze pertinent information and data called for in the plan.

11. P6. Discuss the results and conclusions as they pertain to the objectives and present recommendations for future endeavors (e.g., lessons learned).

Lead Instructor

TBD

Curriculum Coordinator

K. O. Oyman, Ph.D., Associate Dean.

Texts and References


Online databases through the Evans Library Research Librarians

Student Materials Beyond Texts, References, and Common Student Materials

As identified by the student or student teams and subject to CoA resource availability.

### Topical Content

<table>
<thead>
<tr>
<th>Topics</th>
<th>Approximate Classroom Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction to planning, conducting, and reporting aviation research and scholarly activity</td>
<td>1.0</td>
</tr>
<tr>
<td>Methodologies and deliverables</td>
<td>2.0</td>
</tr>
<tr>
<td>Elements of and format for the research plan</td>
<td>1.0</td>
</tr>
<tr>
<td>Problem selection and refinement</td>
<td>7.0</td>
</tr>
<tr>
<td>Research plan presentation and defense</td>
<td>6.0</td>
</tr>
<tr>
<td>Collecting and analyzing relevant information and data as outlined in the research plan.</td>
<td>9.0</td>
</tr>
<tr>
<td>Progress reports and class discussions</td>
<td>3.0</td>
</tr>
<tr>
<td>Adjusting the research plan to overcome barriers and/or capitalize on opportunities that arise</td>
<td>2.0</td>
</tr>
<tr>
<td>Topics</td>
<td>Approximate Classroom Hours</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>------------------------------</td>
</tr>
<tr>
<td>Producing results and conclusions as they pertain to the objectives and present recommendations for future endeavors</td>
<td>3.0</td>
</tr>
<tr>
<td>Writing the final research report</td>
<td>3.0</td>
</tr>
<tr>
<td>Research report presentation and defense</td>
<td>6.0</td>
</tr>
<tr>
<td>Examinations</td>
<td>2.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>45</strong></td>
</tr>
</tbody>
</table>

**Grading Weights by Course Element (Typical)**

- Class participation and professionalism 10 %
- Quizzes and examinations 10
- Research plan 25
- Progress reports 5
- Final report 25
- Report presentation and defense 25

**Teaching Media and Delivery Methods**

Lecture, class discussion, text and graphic projections, videos, guest lecturers, Internet references projections, quizzes, exams, student presentations.

**Laboratory Use**

As identified by the student or student teams and subject to CoA resource availability and limitations.

**Teamwork Applications in the Course**

Research teams are highly encouraged but not required. When research teams are utilized, a method must be established in which individual team members assess the other member’s participation level and contribution significance.

**Assessment Components**

Instructors are to perform traditional student assessment for academic course grades.

Instructors are also to perform the QEP assessment requirements as described in the CoA QEP.