FACULTY:

Michael Robertson  
Transportation Education Center  
Room 286J  
618-453-9264  
mrobertson@aviation.siu.edu  
Office Hours: By appointment

TIME AND LOCATION:

MW 3:00 p.m. – 4:30 p.m.  
TEC 180

COURSE DESCRIPTION:

Provide the student specialized instruction in the areas of: physiological aspects of aviation, aeronautical decision making, and crew resource management. This course is writing intensive and reflects the College's Communication-Across-the-Curriculum initiative. Prerequisite: AF 202, ENGL 101

COURSE PREREQUISITES:

AF202 – Flight-Basic and Intermediate Theory  
ENGL101 – English Composition I

REQUIRED MATERIALS:

Federal Aviation Administration. (2010). Pilot’s Handbook of Aeronautical Knowledge  
2013 FAR/AIM  

REFERENCES:

COURSE OBJECTIVES:

Upon completion of this course, a student will:

1.) Explain the importance and effects of the physiological processes that occur in aviation.
2.) Apply the principles of aeronautical decision making to a given situation.
3.) Judge their own strengths and weaknesses to improve the “human side” of their flying through a self-assessment.
4.) Explain the concepts of command roles, leadership roles, and management of resources as they relate to Crew Resource Management.
5.) Explain the importance of and identify proper communication and standard phraseology.

ATTENDANCE POLICY:

Attendance is not required. However, a large portion of the total points is from in class assignments. Therefore, you are encouraged to attend all classes. Tardiness is unacceptable. Respect for others and personal respect, responsibility and accountability are expected in this course just as they are out in the industry.

COURSE FORMAT AND GRADING:

Grading scale is as follows:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>90-100 %</td>
</tr>
<tr>
<td>B</td>
<td>80-89.99</td>
</tr>
<tr>
<td>C</td>
<td>70-79.99</td>
</tr>
<tr>
<td>D</td>
<td>60-69.99</td>
</tr>
<tr>
<td>F</td>
<td>&lt;60</td>
</tr>
</tbody>
</table>

Grades will be based on tests, notebook assignments, and written assignments as listed below.

- Tests (4, 100 pts ea.) = 400
- Take home writing assignments (2, 25 pts ea.) = 50
- Final Project (Paper – 100) = 100
- Accident Case Studies (1, 50 pts.) = 50
- Investigation project (50 pts) and presentation (40 pts) = 90
- In-class writing assignments(14, 10 pts ea) = 140

Total = 830 points

Tests will cover reading assignments, lecture notes, in-class activities, i.e. anything covered in class is fair game. Opportunities to earn extra credit will be made available.

Late assignments will not be accepted.

More and more, employers emphasize the importance of written communication skills in order to be competitive and successful in the workforce. To enhance the development of students’ writing skills, this course has been designated...
as a Writing Intensive Course. Therefore, this course includes the following writing assignments, designed not only to increase your knowledge of human factors issues, but to also meet or exceed a minimum standard set by the College. This course partially fulfills the College’s Communication Across the Curriculum requirement.

**In-class writing assignments:**
At the end of some class periods, the instructor will provide a quote, question, or scenario to which you are to respond in writing. Entry lengths will be specified (generally expect one page) and 15-20 minutes will be allotted for writing. The purpose of these writing-to-learn assignments is to promote thought about aviation human factors issues and how they relate to your own aviation experience. Entries are graded on coherence and logic, proper application of knowledge, length, and whether all questions are addressed.
In other cases, workbook questions will be answered in essay format in class, either individually or in groups. These will also be writing-to-learn assignments and graded as stated above.

**Take home writing assignments:**
During the semester learning-to-write assignments will be given. These required assignments will be taken home for preparation, and will be graded on format, mechanics (spelling, punctuation, grammar), length, whether correct information is included, etc.

**Accident Case Studies:**
Case studies will be given as an in class assignment. Groups will be defined by the instructor. Case studies will use an accident causation model discussed in class to analyze an accident.

**Final Project:**
The final project for AF 210 is a 2-3 page paper researching a current accident. A current accident is defined as an accident that has occurred in the last 5 years. The paper will be written using APA 6th edition guidelines. The paper will consist of 4 parts.

- **Synopsis** – In this section of the report you will provide a brief summary of the accident.
- **NTSB Findings and Recommendations** - This is a summary of the recommendations to the FAA and are these recommendations being carried out. How are other entities or interest groups reacting?
- **Lessons Learned** – What personal lessons did you learn from researching this accident that you will carry forward in your future career as a pilot?
- **Application** – How (and why) do you continue to apply current events / accidents after you leave this course / program.

**Investigation Project:**
The investigation project consists of two parts. The first is a group effort to produce an investigation and analysis of an accident using the data provided by the instructor.

The second part of the project is a formal presentation of the findings of your investigative analysis. The presentation will be developed using PowerPoint presentation media. Groups will be charged with presenting their findings in a concise manner to the class and the reasoning behind those findings. Grading rubrics for both the presentation and the paper will be given in class.

**EXTRA CREDIT OPPORTUNITIES**
The following opportunities for earning extra credit will be available to students this semester. Students may earn up to 10 extra credit points per activity/paper and may earn a maximum of 20 extra credit points for the semester.
FAA Safety Seminars – Students may earn extra credit by attending a FAA Safety Seminar in the Southern Illinois area, checking in with the instructor attending the seminar both before and after the seminar, and writing a paper (no less than two full pages) summarizing the presentation.

CRM Video Analysis – Several commercial videos available in video rental stores involve the application of CRM principles. Students may earn extra credit by renting and watching one of the following videos and writing a paper (no less than two full pages) summarizing the CRM principles applied in the story. Videos include: Who’s on First, Crimson Tide, The High and the Mighty, Caine Mutiny, 12 Angry Men

NTSB Accident Summary presentation – Students may choose from a list of major NTSB accident reports. On certain class dates, relevant accident summaries may be presented to the class. The presentation should be 10 – 15 minutes long and include a summary of the accident, findings, and an analysis of the sequence of events leading to the accident. A one-page summary of the accident and lessons to be learned from it should be prepared also. Each student should be provided a copy of the summary. See instructor for a sample summary.

Other opportunities to earn extra credit may come up during the semester. As stated above, the maximum points available on any project is 10. Less than satisfactory work will earn fewer points while exemplary papers will earn a full ten points. Students have the option of completing more than one project, but no more than a total of 20 points will be awarded. All extra credit work must be handed in by May 2, 2014, 5:00 p.m., NO LATER!

CLASS SPECIFIC POLICIES:

Prior to the beginning of each class session, students will turn off the ring function on any cell phone or other personal electronic device (pager, etc.)

ACADEMIC DISHONESTY POLICY:

Per the SIUC Student Conduct Code, academic dishonesty includes such prohibited acts as plagiarism, cheating, preparing someone else’s work for them that will be turned in under their name, falsifying or manufacturing scientific or educational data, providing false information regarding academic matters, and any act to conceal, aid, or attempt any of the above. Sanctions for acts of academic dishonesty include, but are not limited to, failure of an assignment, quiz, test, examination or paper; failure in a course; revocation of a degree; suspension; or expulsion from the university. You are required to do your own work in this class. Violations of the Student Conduct Code will be dealt with according to University policy. For more information, please refer to the SIUC Student Conduct Code, available at http://policies.siu.edu/documents/StudentConductCodeFINALMay32011.pdf
# AF 210 Course Schedule

<table>
<thead>
<tr>
<th>Date</th>
<th>Unit</th>
<th>Reading Assignment</th>
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<tbody>
<tr>
<td>1/13</td>
<td>Introduction</td>
<td>BFP Chapter 1</td>
</tr>
<tr>
<td>1/15</td>
<td>Accident Causation Models: SHEL Model, Reason’s Model, 5M, HFACS</td>
<td>PHAK Chapter 17</td>
</tr>
<tr>
<td>1/22</td>
<td>Case Study: Accident Causation Model: 5M Model, NYC99MA178</td>
<td>NYC99MA178</td>
</tr>
<tr>
<td>1/27</td>
<td>Aeronautical Decision Making</td>
<td>PHAK Chapter 17</td>
</tr>
<tr>
<td>1/29</td>
<td>NO CLASS – LABOR DAY</td>
<td></td>
</tr>
<tr>
<td>2/3</td>
<td>Case Study: Decide Model: IAD96LA072, DEN01LA022, and CHI96FA073</td>
<td>IAD96LA072, DEN01LA022, and CHI96FA073</td>
</tr>
<tr>
<td>2/5</td>
<td>PAVE</td>
<td>PHAK Chapter 17</td>
</tr>
<tr>
<td>2/10</td>
<td>Risk Management</td>
<td>PHAK Chapter 17</td>
</tr>
<tr>
<td>2/12</td>
<td>TEST 1</td>
<td></td>
</tr>
<tr>
<td>2/17</td>
<td>Basic Anatomy / Gas Laws</td>
<td>BFP Chapter 2 – 3</td>
</tr>
<tr>
<td>2/19</td>
<td>Hypoxia / Hyperventilation / CO Poisoning</td>
<td>BFP Chapter 5, PHAK Chapter 16</td>
</tr>
<tr>
<td>2/24</td>
<td>Heat and Cold Extremes</td>
<td>BFP Chapter 10, PHAK Chapter 16</td>
</tr>
<tr>
<td>2/26</td>
<td>Illness/ Medications</td>
<td>BFP Chapter 9, PHAK Chapter 16</td>
</tr>
<tr>
<td>3/3</td>
<td>TEST 2</td>
<td>BFP Chapter 9, PHAK Chapter 16</td>
</tr>
<tr>
<td>3/5</td>
<td>Vision</td>
<td>BFP Chapter 7, PHAK Chapter 16</td>
</tr>
<tr>
<td>3/10</td>
<td>NO CLASS – SPRING BREAK</td>
<td></td>
</tr>
<tr>
<td>3/12</td>
<td>NO CLASS – SPRING BREAK</td>
<td></td>
</tr>
<tr>
<td>3/17</td>
<td>Hearing</td>
<td>BFP Chapter 6, PHAK Chapter 16</td>
</tr>
<tr>
<td>3/19</td>
<td>Sleep / Fatigue</td>
<td>BFP Chapter 11, PHAK Chapter 16</td>
</tr>
<tr>
<td>3/24</td>
<td>Stress / Depression</td>
<td>BFP Chapter 13, PHAK Chapter 16</td>
</tr>
<tr>
<td>3/26</td>
<td>Health Maintenance</td>
<td>BFP Chapter 16 - 17</td>
</tr>
<tr>
<td>3/31</td>
<td>TEST 3</td>
<td></td>
</tr>
<tr>
<td>4/2</td>
<td>Motivation and Attitudes</td>
<td>PHAK Chapter 17</td>
</tr>
<tr>
<td>4/7</td>
<td>CRM / Automation</td>
<td>BFP Chapter 13 and 14, PHAK Chapter 17,</td>
</tr>
<tr>
<td>4/9</td>
<td>Single Pilot CRM / Phases of Flight</td>
<td>PHAK Chapter 17</td>
</tr>
<tr>
<td>4/14</td>
<td>Situational Awareness</td>
<td>BFP Chapter 4, PHAK Chapter 17</td>
</tr>
<tr>
<td>4/16</td>
<td>Communication</td>
<td>AIM Chapter 4, Section 2</td>
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<tr>
<td>4/21</td>
<td>The Safety Equation / In-flight medical emergencies</td>
<td>BFP Chapter 15</td>
</tr>
<tr>
<td>4/23</td>
<td>Case Study: 5M Model Accident Synopsis MIA00FA103A</td>
<td>MIA00FA103A</td>
</tr>
<tr>
<td>4/28</td>
<td>Presentations and review</td>
<td></td>
</tr>
<tr>
<td>4/30</td>
<td>Presentations and review</td>
<td></td>
</tr>
<tr>
<td><strong>Finals Week</strong></td>
<td><strong>TEST 4</strong></td>
<td></td>
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</tbody>
</table>
IMPORTANT DATES *

Semester Class Begins ................................................................. 01/13/2014
Last day to add a class (without instructor permission): ...................... 01/24/2014
Last day to withdraw completely and receive a 100% refund: ................. 01/26/2014
Last day to drop a course using SalukiNet ................................ ....... 03/23/2014
Last day to file diploma application (for name to appear in Commencement program): ................................................................. 03/28/2014
Final examinations: ........................................................................ 5/5 – 5/9/2014

* Note: For outreach, online, and short course drop/add dates, visit Registrar’s Academic webpage http://registrar.siu.edu/

SPRING SEMESTER HOLIDAYS

Martin Luther King, Jr.’s Birthday 01/20/2014
Spring Vacation 03/08—03/16/2014

WITHDRAWAL POLICY ~ Undergraduate only

Students who officially register for a session may not withdraw merely by the stopping of attendance. An official withdrawal form needs to be initiated by the student and processed by the University. For the proper procedures to follow when dropping courses and when withdrawing from the University, please visit http://registrar.siu.edu/pdf/ugradcatalog1314.pdf

INCOMPLETE POLICY ~ Undergraduate only

An INC is assigned when, for reasons beyond their control, students engaged in passing work are unable to complete all class assignments. An INC must be changed to a completed grade within one semester following the term in which the course was taken, or graduation, whichever occurs first. The student fail to complete the course within the time period designated, that is, by no later than the end of the semester following the term in which the course was taken, or graduation, whichever occurs first, the incomplete will be converted to a grade of F and the grade will be computed in the student’s grade point average. For more information please visit: http://registrar.siu.edu/grades/incomplete.html

REPEAT POLICY

An undergraduate student may, for the purpose of raising a grade, enroll in a course for credit no more than two times (two total enrollments) unless otherwise noted in the course description. For students receiving a letter grade of A, B, C, D, or F, the course repetition must occur at Southern Illinois University Carbondale. Only the most recent (last) grade will be calculated in the overall GPA and count toward hours earned. See full policy at http://registrar.siu.edu/pdf/ugradcatalog1314.pdf

GRADUATE POLICIES

Graduate policies often vary from Undergraduate policies. To view the applicable policies for graduate students, please visit http://gradschool.siu.edu/about-us/grad-catalog/index.html

DISABILITY POLICY

Disability Support Services provides the required academic and programmatic support services to students with permanent and temporary disabilities. DSS provides centralized coordination and referral services. To utilize DSS services, students must come to the DSS to open cases. The process involves interviews, reviews of student-supplied documentation, and completion of Disability Accommodation Agreements.

http://disabilityservices.siu.edu/

STUDENT CONDUCT CODE

http://policies.siu.edu/other_policies/chapter3/conduct.html

SALUKI CARES

The purpose of Saluki Cares is to develop, facilitate and coordinate a university-wide program of care and support for students in any type of distress—physical, emotional, financial, or personal. By working closely with faculty, staff, students and their families, SIU will continue to display a culture of care and demonstrate to our students and their families that they are an important part of the community. For Information on Saluki Cares: (618) 453-5714, or siucares@siu.edu, http://salukicares.siu.edu/index.html

EMERGENCY PROCEDURES

Southern Illinois University Carbondale is committed to providing a safe and healthy environment for study and work. We ask that you become familiar with the SIU Emergency Response Plan and Building Emergency Response Team (BERT) programs. Emergency response information is available on posters in buildings on campus, available on BERT’s website at www.bert.siu.edu, Department of Safety’s website at www.dps.siu.edu (disaster drop down) and the Emergency Response Guideline pamphlet. Instructors will provide guidance and direction to students in the classroom in the event of an emergency affecting your location. It is important that you follow these instructions and stay with your instructor during an evacuation or sheltering emergency.

INCLUSIVE EXCELLENCE

SIU contains people from all walks of life, from many different cultures and sub-cultures, and representing all strata of society, nationalities, ethnicities, lifestyles, and affiliations. Learning from and working with people who differ is an important part of education as well an essential preparation for any career. For more information please visit: http://www.inclusiveexcellence.siu.edu/

MORRIS LIBRARY HOURS

http://www.lib.siu.edu/about

LEARNING AND SUPPORT SERVICES

Help is within reach. Learning support services offers free tutoring on campus and math labs. To find more information please visit the Center for Learning and Support Services website:

Tutoring : http://tutoring.siu.edu/
Math Labs http://tutoring.siu.edu/math_tutoring/index.html

WRITING CENTER

The Writing Center offers free tutoring services to all SIU students and faculty. To find a Center or Schedule an appointment please visit http://write.siu.edu/

AFFIRMATIVE ACTION & EQUAL OPPORTUNITY

Our office’s main focus is to ensure that the university complies with federal and state equity policies and handles reporting and investigating of discrimination cases. For more information visit: http://diversity.siu.edu/

Additional Resources Available:

SALUKINET: https://salukinet.siu.edu/pvcaasiu.edu/ cp/home/displaylogin

ADVICE: http://advisement.siu.edu/

PROVOST & VICE CHANCELLOR: http://pvcaasiu.edu/
VERIFICATION OF INFORMATION:

I certify that I have received a copy of the AF210 – Human Factors for Aviators. I have read and understand the policies and grading as they pertain to class requirements. I understand that I must attend each class throughout the semester. I understand that I must be prepared through prior study for each class period. I agree to abide by the policies in the AF210 – Human Factors for Aviators, and understand that I will be graded according to this document and its contents. I will consult the instructor with any questions.

Please print your name and sign & date below:

_______________________________________________
Print Name

_______________________________________________ ________________________________
Signature       Date