

Aviation 212
Human Factors for Aviators
Fall 2009
2 Credits

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Course Section: A

Course Description:

Explains and understands how human factors relate to the aviation system and how crucial their understanding is to the aviator. Understanding why accidents happen and how human reacts to different situations, such as emotional stress and fatigue can adversely affect the safety of flight. The effects of different flight environments can affect human physiology such as the eyes and ears, the brain and the body, where these effects on human physiology can cloud judgment of flight crews. Cockpit and dispatch resource managements are also crucial in the development of good communication skills between flight personnel and the ground crew. A good interpersonal relationship between these groups promotes a safe and efficient environment for the aviation industry.

Materials for Course:

Text: Human Factors for General Aviation, Jeppesen Sanderson

Learning Objectives:

To develop the student understands of human factors and how they relate to the aviation system. The knowledge gained through this course will prepare the student for the standards set by the aviation industry and government regulations for the understanding of how human reactions and communications skills are the framework for team effort and cooperation. By understanding the subjects in this course, it is hoped that a greater awareness of safety and self-evaluation becomes part of every aviator and ground personnel

Instructional method: Lecture, video presentation, computer data projection and discussion. Study assignments may be done on in-class computers or at home.

Student Code of Conduct:

Refer to GRCC Student Handbook (2006-2008) pages 215 – 224.

Course Outline:

Chapter 8 – Pilot Judgment

Chapter 9 – Cockpit Resource Management

Chapter 1 – Why Accidents happen

Chapter 2 – Learning to Fly

Chapter 3 – Cockpit design

Chapter 4 – The Eyes and Ears(Optional)

Chapter 5 – The Brain(Optional)

Chapters 4 and 5 will be discussed time permitting

Campuswide Outcomes: Green River Community College has identified ability areas that we believe encompass knowledge and are the most important skills, behaviors, attitudes, and values that students will need in order to be successful after leaving the college. Among these ability areas, this class will address Responsibility, Quantitative/Symbolic Reasoning, Critical Thinking, and Written & Oral Communications. Outcomes in these ability areas and where they will be demonstrated in your work are listed below.

Responsibility:

1. Student demonstrates a knowledge of and a willingness to accept stated/agreed upon expectations, policies, behavior, and procedures.
2. Student demonstrates accountability (punctual and ready to learn), integrity (does own work and pulls own weight in collaborative tasks), initiative (seeks help when needed), and tolerance (develops awareness of own biases).
3. Student actively and appropriately interacts with others respecting everyone's opinion.

Demonstrated by preparedness for lectures and discussions, handing assignments in on time, and group accountability.

Quantitative/Symbolic Reasoning:

1. Student evaluates and interprets information / data.
2. Student recognizes which processes or methods are appropriate for solving a given problem, and correctly implements those processes.
3. Student demonstrates the ability to estimate a solution to a presented problem
4. Student translates data into various formats such as graphs, tables, formulas, and sentences.

Demonstrated through your answers in class, on projects, homework, and tests.

Critical Thinking:

1. Student provides reasons for the conclusions they reach and assess the relevance and adequacy of those reasons.
2. Student connects past learning with current topics.

Demonstrated through your explanations in class, on projects, assignments, and tests.

Written & Oral Communications:

1. Student demonstrates involvement with the material by expressing a clear sense of purpose, unity, and focus in their writing or speaking.

2. Student demonstrates clear organization of their thoughts in written and oral communications.
3. Student demonstrates well-organized and logical writing with correct grammar and spelling.

Demonstrated in projects, test answers, and class and group participation.

Special Needs:

If you need course adaptations or special accommodations because of a disability, if you have emergency medical information, or if you have special accommodations that need to be shared with me in the event that the building needs to be evacuated, please contact me. If you use an alternate medium for communicating please let me know as soon as possible so that appropriate accommodations can be made. Disability support services is located in LSC 277 and may be contacted at: 253-833-9111, ext. 2631 or TDD at 253-288-3359.

Attendance/Tests:

| | |
|----------------------------------|----------------------------------|
| Test 1 (chapter 8) | 100 points |
| Test 2 (chapter 9) | 100 points |
| Test 3 (chapter 1, 2, 3) | 100 points |
| <u>Test 4 (chapters 4&5)</u> | <u>100 points(Optional)</u> |
| Final | <u>100 points</u> |
| <u>Total</u> | <u>400 points (500 Optional)</u> |

Grading Policy:

| | | | |
|--------|-----|----|-----|
| 99-100 | 4.0 | 79 | 2.4 |
| 97-98 | 3.9 | 78 | 2.3 |
| 95-96 | 3.8 | 77 | 2.2 |
| 93-94 | 3.7 | 76 | 2.1 |
| 91-92 | 3.6 | 75 | 2.0 |
| 90 | 3.5 | 74 | 1.9 |
| 89 | 3.4 | 73 | 1.8 |
| 88 | 3.3 | 72 | 1.7 |
| 87 | 3.2 | 71 | 1.6 |
| 86 | 3.1 | 70 | 1.5 |
| 85 | 3.0 | 69 | 1.4 |
| 84 | 2.9 | 68 | 1.3 |
| 83 | 2.8 | 67 | 1.2 |
| 82 | 2.6 | 66 | 1.1 |
| 81 | 2.6 | 65 | 1.0 |
| 80 | 2.5 | | |

Attendance/Absence/Tardiness Policy:

Attendance is expected. Any absence must be approved by the instructor. Students will find that their academic standing in a situation where absences are incurred is jeopardized. However, students WILL NOT be penalized because of sickness/emergency or college approved absence. An absence will not excuse a student from completing all prescribed class and course requirements. One point from your final grade will be deleted for each unexcused class absence. Students who are habitually late or absent from class may be penalized the class participation percentage of their final grade.

Exams

All exams must be taken on the assigned date. Unless a prior arrangement is agreed with the instructor, a no-show will be considered a failing grade for that particular exam. Any exam taken late, will be penalized 10 points for every late day.

Makeup Examinations/Quizzes:

Makeup examinations/quizzes are provided for excused absence only. The student is responsible to coordinate with the instructor to take any examination or quiz missed. If an examination/quiz is not made up the student WILL NOT receive credit for that examination/quiz in the computation of the final grade (it will be designed a grade of "0" in the computation). All examinations/quiz materials will be retained by the instructor.

Class Notes:

- **Cell phones will not be allowed to be "ON" in class.**
- **Chatting or laughing about subjects other than those pertaining to class will not be tolerated. Please respect your fellow students.**
- **If you are late, please come in quietly and sit at your station.**
- **Browsing the internet while a lecture or other instructional activity is in progress will not be permitted. One letter grade will be deducted if caught playing or doing work not related to class.**
- **No food will be allowed in the classroom.**
- **Avoid surfing the internet while lecture is in progress**
- **There will be no use of computers while the class is in session unless computer work is required**