

San José State University
Aviation Department
Avia 141, “Human Factors in Aviation Environment,” Fall 2017

Course and Contact Information

Instructor:	David Wood
Office Location:	Aviation 133 C
Email:	david.wood@sjsu.edu
Office Hours:	Monday 1700-1745
Class Days/Time:	Monday 1800-2045
Classroom:	BBC326

Course Format

Classroom instruction, discussion, and testing coupled with independent reading, homework and review of materials.

Faculty Web Page and MYSJSU Messaging

Course materials such as syllabus, handouts, notes, assignment instructions, etc. will be distributed in class.

Course Description

Effects of time zone change, sleep disruption, drugs on pilot performance.

Role of FAA inspectors, physicians, cabin attendants, unions. Cockpit crew coordination, pilot psychology, aviation safety and accident investigation. Experimental avionics.

Course Learning Outcomes (CLO)

Modifications to course schedule and assigned readings for the next class meeting are supplied in class. Please read the assignments **before** the appropriate class. It will greatly enhance your understanding of the lecture and make your studying much easier. Many lectures are unrelated and, generally, outside of the experience range of the typical student. Pre-reading will allow you to understand the nuances of lectures. Students will be chosen at random to answer questions in class. Human factors in the Aviation Environment is an upper division course designed to introduce students to the Human Factors that contribute to the failures of the man-machine interface leading to aviation mishaps and incidents. The purpose of reviewing these factors is to prevent future occurrences, thereby increasing safety. Upon successful completion of this course, students will be able to:

1. Investigate multi-modal transportation accidents and analyze them for human factors elements.
2. Use critical analysis skills to communicate the relationship between jet lag, shift work and human performance decrements.

Required Texts/Readings

Textbook

The assigned text is "Human Factors in Aviation", second edition, edited by Eduardo Salas and Dan Maurino. This is supposed to be available in the Bookstore and also on the Internet. Recommend you also acquire a copy of "Human Factors in Flight", Frank H. Hawkins, 1st or 2nd Edition. Available on internet commonly for \$15 dollars or less. Many of the lectures will be from different chapters in Hawkins correlated with Salas book.

Other Readings

Other readings as forwarded via email or handed out in class.

Other technology requirements / equipment / material

Access is required to internet, computer, common word processing software and SJSU email.

Course Requirements and Assignments

Pertinent testable material will come from reading material, homework assignments, and lectures.

Final Examination or Evaluation

Two examinations will be given. Tests may comprise multiple choice, true/false, matching, short or long essay questions. Essay only exams are possible and large size bluebooks should be brought to all exams. Scantron exams are likely and students should be prepared with Scantron Form 882, 50 questions per side, choices A through E. Information concerning the format of the tests will be presented in class prior to each exam. Only #2 Pencils are allowed for tests, no electronic devices (PDA, cell phones, electronic dictionaries, calculators) will be permitted during quizzes or tests.

Grading Information

Determination of Grades

Grades are determined by comparing the students' level of knowledge versus the study materials and against the students as a whole. Qualitative grades are assigned first then for each tranche of grades quantitative grades are assigned. Students will be allowed to take a lecture exam late only under unusual and extreme documented circumstances such as debilitating illness or a family emergency. Make up exams may be oral or written at the instructors' discretion and must be made up as soon as possible. It is the students' responsibility to notify the instructors as soon as possible prior to the exam or at the soonest practical opportunity at the above phone number of the need to miss an exam.

- Since the purpose of the course is to increase safety, personally we can all accomplish this by being certified in life saving skills. Therefore, you are strongly encouraged to obtain basic First Aid and Cardio-Pulmonary Resuscitation (FA/CPR) instruction. Consideration has been given as extra curricular work. Final grades will be credited an additional 2.5% out of 100% for each successful certification in either CPR or First Aid for a total of 5% out of 100% for both certifications., i.e., a B average (86%) will result in a final grade of A- (91%). Proof of current certification is required. Certification must be completed, and all documentation turned in, on the last day of regularly scheduled class.
- Each test will count **30%**; a writing assignment/project will constitute 10%; in class verbal or written quizzes, participation and leadership constitute the remaining **30%** . **Two of lowest twelve quizzes will be dropped from the grading in case a student is unwell that evening. However, you are responsible for making up class material so find a class study buddy and exchange info.**

Classroom Protocol

Please participate, attend if not sick, arrive on time safely, behave civilly, and make safety paramount. University and Department guidelines require a serious and compelling reason to drop a course.

University Policies

Per University Policy S16-9, university-wide policy information relevant to all courses, such as academic integrity, accommodations, etc. will be available on Office of Graduate and Undergraduate Programs' [Syllabus Information web page](http://www.sjsu.edu/gup/syllabusinfo/) at <http://www.sjsu.edu/gup/syllabusinfo/>

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The schedule is subject to change with fair notice given in class or via SJSU messaging.

Course Schedule

Week	Date	Topics, Readings, Assignments, Deadlines
1	Aug 28	Intro, Greensheet, "What is Human Factors?" acquire book, Learning & Memory, Homework is reading of book's Forward and Chapter 1 and Chapter 13.
2	Sept 4	Labor Day Holiday – no class this week
3	Sept 11	Quiz on Chapter 13. Accident case studies, NTSB vs FAA, Living Clock, start NASA ETM. Homework, read Chapter 2.
4	Sept 18	Chpt 6, Cactus 1549
5	Sept 25	Chpt 7, Mysterious Crash of Flight 201, Aviation Physiology (FAA)
6	Oct 2	Chpt 8, 9 Flight 111, FAA Visual Illusions
7	Oct 9	Chpt 11, 12 review, Air Disasters TBD from this point on but expect one per night.
8	Oct 16	Midterm
9	Oct 23	Chpt 3
10	Oct 30	Chpt 4
11	Nov 6	Chpt 5
12	Nov 13	Chpt 14
13	Nov 20	Chpt 15
14	Nov 27	Chpt 16, Special Projects Due, Class Presentations.
15	Dec 4	Chpt 17, Deliver questions for final exam.
16	Dec 11	Review for final exam, Last Day of Instruction.
17	Dec 18	Final Exam in BBC 326, 1715 – 1930 exam time.