

**Department of Aviation and Technology**  
**San Jose State University**  
**AVIATION 62** (formerly AV 192)  
**Instrument Flight Techniques**  
**Spring Semester 2015**

Classes start Thursday, Jan. 22 and last day is Wednesday, May 13, 2015

|                                     |   |                    |
|-------------------------------------|---|--------------------|
| <b>Aviation 62-01</b> (Lec 28401)   | <b>Lecture Day &amp; Hours: Meets on Tuesdays</b>   | 9:00 to 10:45 p.m. |
| <b>Aviation 62-13</b> (Lab 29456)   | <b>Laboratory Day &amp; Hours Meets on Tuesdays</b>   | 12:00 to 2:45 p.m. |
| <b>Aviation 62-11</b> (Lab 28402)   | <b>Laboratory Day &amp; Hours Meets on Thursdays</b>  | 9:00 to 11:45 p.m. |
| <b>Classrooms:</b> IS-216 (Lecture) | IS-133 (Lab)  |                    |
| <b>Units:</b>                       | 3   |                    |
| <b>Instructor:</b>                  | Glynn Falcon CFI Airplanes (single and multi-engine) & Instruments  |                    |
| <b>Office:</b>                      | IS-133C   |                    |
| <b>Phone:</b>                       | Office: (408) 924-3203, Cell: (650) 400-1523  |                    |
| <b>E-Mails:</b>                     | <a href="mailto:ProfFalcon@aol.com">ProfFalcon@aol.com</a> <a href="mailto:Glynn.Falcon@SJSU.edu">Glynn.Falcon@SJSU.edu</a> |                    |

**DO NOT USE "CANVAS" TO CONTACT ME**

**Office Hours:** My office hour is in IS-133C on Tuesdays from 10:45 to Noon. I may be working in the Sim Lab or in IS216. Face time can be arranged by prior arrangement. I am readily available at reasonable, non-class hours by email or cell phone provided that your called ID and your real name are used.

**Catalog Description:** Flight procedures, radio navigation, air traffic control, use of instrument charts. Flight simulator exercises on instrument flight maneuvers, departure and approach procedures.

**Prerequisites:** Aviation 2, but Aviation 73 (ATC), Metr 110, Aviation 141 would be very beneficial, especially for those without any flight experience. ***YOU REALLY SHOULD HAVE SOME ACTUAL FLIGHT TRAINING BEFORE YOU UNDERTAKE THIS CLASS!***

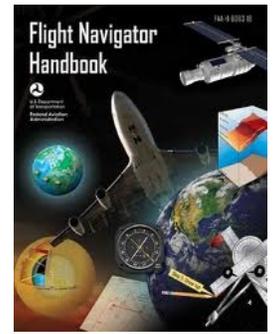
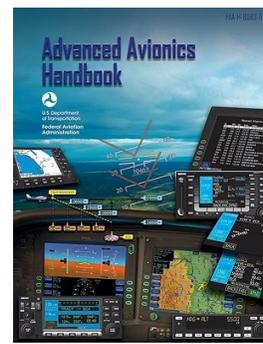
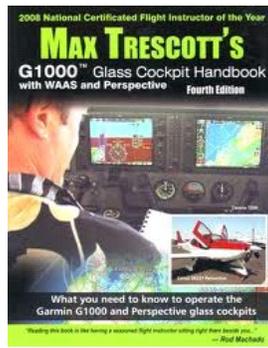
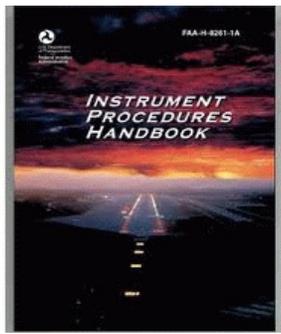
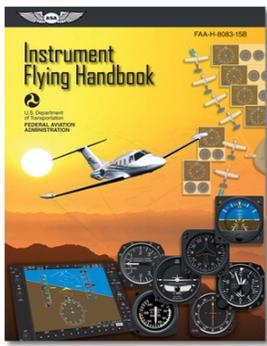
**Objective:** Upon completion of this course the student will be familiar with current operational procedures used in the instrument flight environment.

**Lecture and Lab:** Class will meet once per week for the lecture, and once per week for the lab portions of the class. For the lab portion of the class you will have lab assignments ("missions") to complete.

**(The following is subject to great change depending upon the AVTECH chair's policy towards student access to the lab, availability of student assistants, and faculty supervision)** Due to the limited number of simulators, you will be allowed into the sim lab, with your photo ID badge (which I will provide), during department office hours to complete your scheduled labs. There will be a simulator sign up sheet posted on-line allowing you to sign up for a specific time for each simulator. Simulators should be available from all day on Mondays, Wednesdays and Fridays from 9 to 4:30. The dept. may allow additional access times and supervision for the sim lab. While the simulator usage for any enrolled student is unlimited, ***no enrolled student may allow anyone not enrolled in the class into the lab or to use the simulators.***

**No food or liquids are allowed into the Gerry L. Shreve Sim Lab.**

Stay current with simulator assignments, since this clogs the availability of the simulators for the new missions. Log the Hobbs meter time and Sim # for **ALL** times you are manipulating the flight controls. You must log 15 hours of flight simulator time in the Redbird FMX, TD2's, Precision G1000, and/or Frasca's (which lack GPS), as most of the later missions are flown in those Sims.



**Required Textbooks & Equipment:** Except “MAX”, all are downloadable for free on Canvas or FAA.gov

**Thumb Drives** - I will provide a key for your missions to be flown in the Redbird on a thumb drive.

**(IPH)**            **INSTRUMENT PROCEDURES HANDBOOK** (8261-1A) FAA, ISBN: 9781560276869, (in Canvas)

**(IFH)**            **INSTRUMENT FLYING HANDBOOK** (#H-8083-15B) FAA ISBN: 9781560277064,(in Canvas)

**(MAX)**            **G1000 GLASS COCKPIT HANDBOOK**, MAX TRESCOTT, ISBN: 9780977703074, (Buy - 2013)

**Recommended Reading:** (All these texts are available online and are also found in Canvas "Files".)

*Advanced Avionics Handbook* (FAA-H-8083-6) (Canvas)

*Flight Navigator Handbook* (FAA-H-8083-18) (Canvas)

*Aeronautical Information Manual.* (Canvas)

*Aeronautical Chart Users Guide.* (Canvas)

*Airplane Flying Handbook* (FAA.gov)

**Tests and Grading:**

Your two worst quiz scores will be dropped, and the remaining quizzes will be used for grading purposes. The comprehensive Final Exam is in the classroom and is closed book. If you haven't kept pace with the studies, reading, and learned the material as we go through the semester, you will not pass the Final Exam.

You should also complete the Aircraft Owners and Pilots Association’s (AOPA) Air Safety Foundation (ASF) Safety Courses listed below. At the Final Exam time, provide me with a current copy of your ASF Course Completion Register (*transcript*), which AOPA maintains under your name and shows the dates of completion of each course, as evidence of timely completion of the assignment. Use your pilot certificate number, or SJSU student number to sign-in for the courses, which can be found in the AOPA’s web site at [http://www.aopa.org/asf/online\\_courses/](http://www.aopa.org/asf/online_courses/)

Completion of all Laboratory missions and the lab final flight check are worth 25% of your course grade.

**Grading & Weight**

| <u>Item</u>                        | <u>Weight</u> |
|------------------------------------|---------------|
| Best Quizzes (2 worst dropped)     | 25 %          |
| Midterm                            | 25 %          |
| In-Class Final Exam                | 25 %          |
| All Lab Missions & Final Checkride | 25 %          |
| <b>Total</b>                       | <b>100 %</b>  |

A grade of C- or better is required to pass Aviation classes required for the major.

**Percentage = Grade**

|            |   |
|------------|---|
| 90 – 100 = | A |
| 80 – 89 =  | B |
| 70 – 79 =  | C |
| 60 – 69 =  | D |

## LECTURE & READING SCHEDULE

| <u>Week # and Date</u>   | <u>Reading Topic</u> (does not coincide with first 4 class lectures)  | <u>Reading</u>                                | <u>Class Lesson</u> |
|--|---|---|---------------------|
| 1 Jan. 27, 2015  | Introduction  | IFH Intro pages vii-viii                      | video course        |
| 2 Feb. 3, 2015   | Human Factors   | IFH ch 3; IPH ch 1                            | video course        |
| 3 Feb. 10, 2015  | Aerodynamic Factors   | IFH ch 4                                      | video course        |
| 4 Feb. 17, 2015  | Flight Instruments  | IFH ch 5                                      | video course        |
| 5 Feb. 24, 2015  | Attitude Flight - Six Pack  | IFH ch 6 §1                                   |                     |
| 6 Mar. 3, 2015   | Attitude Flight - Glass   | IFH ch 6 §II, MAX ch 1-2                      |                     |
| 7 Mar. 10, 2015  | Basic Flight Maneuvers - Six Pack   | IFH ch 7 §I; IPH ch 3                         |                     |
| 8 Mar. 17, 2015  | <b><u>Midterm Exam - bring a laptop, iPad or PED to take exam online in class</u></b> and<br>Basic Flight Maneuvers - Glass | IFH ch 7 §II, MAX ch 3-4                      |                     |
| March 23 thru 29th <b><i>Spring Break Friday March 23 - March 29</i></b> |   |   |                     |
| 9 Mar. 31, 2015  | Nav Systems - NDB VOR DME   | IFH ch 9 pages 1-19; IPH ch 4                 |                     |
| 10 Apr. 7, 2015  | Nav Systems - RNAV, GPS, INS  | IFH ch 9 pages 20- 34, MAX 5-6                |                     |
| 11 Apr. 14, 2015   | Nav Systems - ILS proc, Radar, RNP  | IFH ch 9 pages 35-48; IPH ch 5                |                     |
| 12 Apr. 21, 2015   | Enroute Charts/Procedures<br>ATC, DP's and STAR's   | IFH ch 10, MAX 7-8<br>IFH ch 10; IPH2:1-34    |                     |
| 13 Apr. 28, 2015   | Approaches & Holding  | IFH ch 10                                     |                     |
| 14 May 5, 2015   | Regulations   | IFH vii, IPH , FAR Part 91                    |                     |
| 15 May 12, 2015  | Emergencies, Failures, and Weather  | IFH ch 11 pages1-12, IPH                      |                     |
| <b>May 21, 2015</b>  | <b>FINAL EXAM</b>   | Thursday, May 21 from 0715 to 0930 in IS-116. |                     |

**FINAL:** Written FAA style multiple-choice in-class, comprehensive exam on Thursday, May 21 from 0715 to 0930  
Bring a fully-charged Laptop, iPad, or PED to the final exam, which will be online on Canvas.

\*\*\*\* This schedule may change during the semester \*\*\*\*

### Extra Credit = Extra Knowledge (take the AOPA/ASF Safety on-line courses)

- Single-Pilot IFR*
- Do The Right Thing: Decision Making for Pilots*
- Essential Aerodynamics: Stalls, Spins, and Safety*
- Pneumatic Systems*
- VFR GPS Guide: Garmin 430/530*
- GPS for IFR Operations*
- IFR Chart Challenge: VOR Approach*
- IFR Chart Challenge: RNAV Approach*
- IFR Chart Challenge: ILS Approach*
- IFR Insights: Charts*
- Know Before You Go: Navigating Today's Airspace*
- IFR Insights: Regulations*
- A Pilot's Guide to Flight Service*
- ~ Others as they come on-line*

# University Policies

## Academic Integrity Standards and Policies

Academic honesty is expected without question in this course. Students who are found to have submitted materials that do not adhere to SJSU standards of academic integrity will suffer the following two consequences:

A grade of zero [0] will be given for the assignment in question; and

A report of the incident will be filed with the university. This report may stay on your permanent collegiate record.

You may also be subject to further disciplinary action being taken by the university.

For the SJSU policy on Academic Integrity, refer to: <http://www.sjsu.edu/senate/F06-2.pdf>

**Academic integrity statement** (from the Office of Student Conduct and Ethical Development):

“Your own commitment to learning, as evidenced by your enrollment at San José State University, and the University’s Academic Integrity Policy requires you to be honest in all your academic course work. Faculty members are required to report all infractions to the Office of Student Conduct and Ethical Development. The policy on academic integrity can be found at [http://sa.sjsu.edu/student\\_conduct](http://sa.sjsu.edu/student_conduct).”

## Campus policy in compliance with the Americans with Disabilities Act:

“If you need course adaptations or accommodations because of a disability, or if you need special arrangements in case the building must be evacuated, please make an appointment with me as soon as possible, or see me during office hours. Presidential Directive 97-03 requires that students with disabilities requesting accommodations must register with DRC to establish a record of their disability.”

## More about Cheating.

At SJSU, cheating is the act of obtaining or attempting to obtain credit for academic work through the use of any dishonest, deceptive, or fraudulent means. Cheating at SJSU includes but is not limited to:

Copying in part or in whole, from another’s test or other evaluation instrument;

Submitting work previously graded in another course unless this has been approved by the course instructor or by departmental policy.

Submitting work simultaneously presented in two courses, unless this has been approved by both course instructors or by departmental policy.

Altering or interfering with grading or grading instructions;

Sitting for an examination by a surrogate, or as a surrogate;

any other act committed by a student in the course of his or her academic work which defrauds or misrepresents, including aiding or abetting in any of the actions defined above.

**More about Plagiarism.** At SJSU plagiarism is the act of representing the work of another as one’s own (without giving appropriate credit) regardless of how that work was obtained, and submitting it to fulfill academic requirements.

Plagiarism at SJSU includes but is not limited to

the act of incorporating the ideas, words, sentences, paragraphs, or parts thereof, or the specific substances of another’s work, without giving appropriate credit, and representing the product as one’s own work; and

representing another’s artistic/scholarly works such as musical compositions, computer programs, photographs, painting, drawing, sculptures, or similar works as one’s own.

## Students With Disabilities

Campus policy. In compliance with the Americans with Disabilities Act:

*“If you need course adaptations or accommodations because of a Disability, or if you need special arrangements in case the building must be evacuated, please make an appointment with your instructor as soon as possible, or see your instructor during office hours. Presidential Directive 97-03 requires that students with disabilities register with DRC to establish a record of disability.”*

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### **Cell Phones**

Students should turn their cell phones off or put them on vibrate mode while in class. Should you have to take a cell phone call during class, simply leave the classroom and complete the call.

### **Computer Use**

In the classroom, you may use computers only for class-related activities such as taking notes on the lecture underway, following the lecture on Web-based Power Point slides that the instructor has posted, and finding Web sites to which the instructor directs students at the time of the lecture. Students who use their computers for other activities or who abuse equipment in any way, at a minimum, will be asked to leave the class and lose participation points for the day, and may be referred to the Judicial Affairs Officer of the University for prohibited uses of campus computers (Such referral can lead to suspension from the University). Students are urged to report to their instructors computer use that they regard as inappropriate (i.e., used for activities that are offensive or not class related).

### **Attendance**

Students will sign in on the attendance record sheet for each laboratory class. If you miss a class you are responsible for any material discussed or assignments given. Since this is an activity course, it is very important to attend the lab periods and use the sims regularly to complete your projects. If you miss class, it could be difficult to complete the projects. Make up time is not guaranteed to any student, and is by policy not provided to students who have missed more than two lab sessions.