

San Jose State University
College of Engineering
Department of Aviation and Technology

Aviation 194
Pilot Avionics and General Aviation Systems

Lecturer: Paul Kelly
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Online

Prerequisite: Aviation 42 and Aviation 43.

Required Texts: Avionics Training: Systems, Installation and Troubleshooting By Len Buckwalter
The Turbine Pilot's Flight Manual second edition by Gregory N. Brown and Mark J. Holt.
System Handouts (to be handed out in class)

Catalog Description: Operations of avionics as found on general aviation aircraft and turboprop/turbofan aircraft. Major systems used on general aviation aircraft including GPS, FMS, navigational systems, fuel systems, hydraulic systems, environmental systems, and landing gear. Prerequisite Avia 42, Avia 43

Course Content: Today's professional pilots fly in a demanding environment that necessitates the use and understanding of all the available resources that can be provided. These resources include ground based and aircraft based systems. This course will cover electronic ground and aircraft based resources as well as the workings of major aircraft systems that will help the pilot operate in a demanding environment.

Course Objectives: This course objective is to familiarize the student with the operation and use of electronic resources, and major aircraft systems available in today's aircraft. Upon the completion of the course the student will be able to describe the operation and use of several electronic resources available to the pilot. The student will be able to describe the operation and use of major aircraft systems as installed on a modern aircraft.

Evaluation: The course grade will be based on the following factors:

3 Midterm tests:
& 1 final exam: 400 points total.
Review Questions 100 points
And Class Participation

The final Grade will be determined by the following scale:

A: 400-360 points B: 359-320 points, C: 319-280, D: 279-240 F: below 239 points.
Missing an in-class examination will result in a grade of zero. Only exception will be documented illness/injury or a significant personal life event. When possible, arrangements must be made before the assigned date. The lowest midterm will be dropped.

University, college, or department policy information

Academic integrity statement (from the office of judicial affairs):

“Your own commitment to learning, as evidenced by your enrollment at San Jose 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 Judicial Affairs. The policy on academic integrity can be found at <http://www.2sjsu.edu/senate/S04-12.pdf>

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.”

You will be required to answer all of the discussion questions and reply to posts as necessary. On weeks that there is a discussion you will be required at least 2 posts for each discussion question.

WK	Lecture:	Text
1	Introduction, Green Sheet, Course material, Assign reading, History	
2	VHF, HF, ACARS, Selcal	Ch 1,2,3,4,6,7 AT
3	ELT ILS, ADF,VOR	Ch 8,9,10,12 AT
4	DME, Radar Alt, Enhanced GPWS, Review	Ch 13,15,18, AT handout
5	Midterm 1, CVR SatCom	
6	GPS. EFIS, ECAM.	Ch 16,17 AT Ch 13 TPFM
7	IRS, TCAS, FMS	Ch 20 AT Pg 171-184
8	WX Radar, Windshear warning systems. Midterm review. !	TPFM Ch 19 AT Ch 14 TPFM
9	Midterm 2,	
10	Fuel Systems/ Engine operation	Ch 5, pg 96-102 Ch 1, pg 10-21
11	Hydraulic Systems/ Flight Controls	Ch 4, pg 60-69 Ch 5, pg 75-81
12	Environmental Systems/ Pneumatic Systems Review	Ch5, pg 82-96 TPFM
13	Midterm # 3	
14	Electrical Systems,	Ch 4 pg 46-60 Ch 10 pg 137-140
15	Performance, Take off, Enroute, Landing	
16	Final Review	