

Engineering and Technology Education Department
Semester Course Syllabus
Fall 2008

AV 2180 - Aircraft Hydraulics and Pneumatic Systems
2 credits

Charles Larsen

I. Catalog Description

Theory and operation of aircraft hydraulic, pneumatic, landing gear and brake systems.

II. Course Objectives

Upon completion of this course, each student will develop an understanding of and be able to perform maintenance and servicing of the following components and systems to the specified teaching levels as indicated by the number in parentheses.

Teaching Level

- A. Hydraulic and Pneumatic Power Systems
 - (3) 1. Hydraulic Fluids and Plumbing Maintenance
 - (2) 2. Hydraulic Power Section Components
 - (2) 3. Hydraulic Actuating Components
 - (3) 4. Hydraulic Testing and Support Equipment
 - (3) 5. Troubleshooting Complete Hydraulic Systems
 - (2) 6. Pneumatic Systems

- B. Aircraft Landing Gear Systems
 - (3) 1. Classification of Landing Gear

- C. Aircraft Brake Systems
 - (3) 1. Hydraulic Units for Braking Systems
 - (3) 2. Aircraft Brake Construction

- D. Wheels and Tires
 - (3) 1. Wheel and Tire Maintenance

III. Text

Required: Airframe Section Textbook and Workbook by Jeppesen
RJ Ground Manual

References: General Section Textbook, FAA AC43:13-1A, "Aircraft Inspection and Repair"

IV. Grades

Determined by the total points of examinations, quizzes, and lab assignments. At least two major exams will be given.

90% - 100%	=	A
80% - 89%	=	B
70% - 79%	=	C
60% - 69%	=	D
Below 59%	=	F

V. Examination Schedule

Quizzes/Problems	300 pts
Examinations	400 pts
Final Examination	<u>300 pts</u>

Total: 1,000 possible points

VI. Attendance

Attendance is required for all students and a daily roll will be kept as required by FAR 147. If a student does not meet the attendance requirements, he/she will not be permitted to take the FAA Airframe Exams. All absences must be made up. A minimum of 30 clock hours is required in this course. More than 3 absences, if not made up, will result in an F grade being given. Absences may be made up by a one-page typed report of the text material missed. This paper is due one week following the absence.

VII. Accommodations

If a student has a disability that will likely require some accommodation by the instructor, the student must contact the instructor and document the disability through the Disability Resource Center, preferably during the first week of the course. Any requests for special considerations relating to attendance, pedagogy, taking of examinations, etc., must be discussed with and approved by the instructor. In cooperation with the Disability Resource Center, course materials can be provided in alternative formats--large print, audio, diskette, or Braille.