

Engineering and Technology Education Department
Semester Course Syllabus
Fall 2008

AV 2200 - Aircraft Hydraulic and Pneumatic Systems Lab
1 credit

Charles Larsen

I. Catalog Description

Laboratory application of principles and components studied in AV 2180.

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 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. Trouble-shooting 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

Laboratory Projects

- (2) 1. Repair hydraulic and pneumatic power system components
- (3) 2. Identify and select hydraulic fluids
- (3) 3. Inspect, check, service, troubleshoot and repair hydraulic and pneumatic power systems
- (3) 4. Inspect, check, service, and repair landing gear, retraction systems shock struts, wheels, tire, and steering systems

III. Text

Required: Jeppesen Airframe Textbook and Workbook
Acceptable Methods, Techniques and Practices

References: Jeppesen General Section Textbook
FAA AC43.13 - 1B and 2A "Aircraft Inspection and Repair"
Aircraft and Component Maintenance Manuals

IV. Course Fee:

There is a \$20.00 course fee paid at registration for consumables used in class.

V. Grades

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

VI. Examination Schedule

Lab assignments	500 pts
Two examinations	200 pts
Final Exam	<u>300 pts</u>
Total:	1.000 pts

VII. Laboratory

Projects will be assigned to coincide with the material taught in AV 2180. Each student will complete all lab projects to the satisfaction of the instructor and to The level of instruction specified by FAR 147 Appendix A and C.

VIII. 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 53 clock hours is required in this course.

IX. Laboratory Equipment, Materials, Tools, Clothing, and Eye Protection

All equipment, materials, and tools will be provided if lab fees are paid by the second week Of the second week of the semester. Appropriate clothing (shop coat, coveralls, or clothes that may become soiled and oil stained are acceptable) and proper eye protection will be furnished by the student.

X. Accommodation for Persons with Disabilities

If a student has a disability that will likely require some accommodation by the instructor, the student must resolve accommodations with the instructor.

