

**ENGINEERING AND TECHNOLOGY EDUCATION DEPT.
SEMESTER COURSE SYLLABUS
SPRING 2009**

AV 2170 - Aircraft Systems

2 credits

Instructor: Charles B. Larsen

I. Catalog Description

Theory and operation of aerospace environmental systems, communication, navigation and guidance systems, fuel and propellant systems, fire detection, and warning.

II. Course Objective

This course is intended to provide the student with an understanding of the systems necessary, on present day aircraft, for the proper and safe operation procedures of those aircraft. Upon completion, each student will be able to achieve the level of proficiency indicated by the number in parenthesis.

Teaching Level

A. Aircraft Cabin Atmospheric Control Systems

- (1) 1. Physiology of Flight
- (1) 2. Aircraft Oxygen Systems
- (2) 3. Oxygen Systems and Components
- (2) 4. Oxygen System Servicing
- (1) 5. Aircraft Pressurization Systems
- (1) 6. Aircraft Heaters
- (1) 7. Aircraft Air Conditioning Systems

B. Aircraft Instrument Systems

- (1) 1. Classification of Instruments
- (1) 2. Engine Instruments

C. Communications and Navigation Systems

- (1) 1. The Place of Avionics in Aviation Maintenance
- (1) 2. A Brief History of Avionics
- (1) 3. Radio Communications
- (1) 4. Radio Navigation
- (1) 5. Automatic Flight Control

D. Position and Warning Systems

- (1) 1. Position Indication Systems
- (3) 2. Warning Systems

E. Aircraft Fuel Systems

- (1) 1. Importance of the Aircraft Fuel System
- (1) 2. Types of Aviation Fuel
- (2) 3. Aircraft Fuel Systems
- (2) 4. Aircraft Fuel System Components
- (3) 5. Fuel Tank Repair and Testing
- (3) 6. Fuel System Servicing

F. Ice and Rain Control Systems

- (2) 1. Ice Control Systems

G. Fire Protection Systems

- (1) 1. Principles of Fire Protection Systems
- (3) 2. Fire Detection Systems
- (2) 3. Fire Extinguishing Systems

III. Text

Jeppesen A&P Technician Airframe Textbook
Jeppesen A&P Technician Airframe Workbook
RJ Manual

IV. Grades

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

V. Examination Schedule

Letter grades will be determined by:

Quizzes (total)	300 points
Test #1	200 points
Test #2	200 points
Final Exam	300 points
Total	1,000 points

VI. Attendance

Each student is expected to be in attendance for the full lecture and all lectures held. Students coming late or leaving early will be graded accordingly with all tardiness and absences recorded. Federal Aviation Certification requires full attendance. If an absence becomes necessary due to illness, etc., make-up arrangements should be made with the instructor immediately. A minimum of 30 clock hours is required in this course. More than 3 absences, if not made up, will result in 25 point reduction in 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. Accommodation for Persons With Disabilities

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 discuss 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.