

Engineering and Technology Education Department

Semester Course Syllabus

AV 2430 - AIRCRAFT ELECTRICAL SYSTEMS AND COMPONENTS

2 Credits

I. Catalog Description

Aircraft electrical power generating systems. Theory of generators, alternators, regulation and control systems with laboratory application of principles and systems studied. **Prerequisite: ITE 2300.**

II. Course Objectives

This course is designed to provide the student an opportunity for in-depth study of aircraft electrical systems and the components that are a part of these systems.

Teaching Level

A. AIRCRAFT ELECTRICAL SYSTEMS AND COMPONENTS

- (2) 1. Basic Electrical Systems and Components
- (2) 2. Electrical Power Production
- (2) 3. Utilization of electrical power
- (3) 4. Repair of engine electrical system components
- (3) 5. Install, check and service engine electrical wiring, controls, switches, indicators, and protective devices.
- (3) 6. Read and Interpret Electrical Circuits Diagrams
- (3) 7. Batteries
- (3) 8. Inspect and Service Batteries
- (2) 9. Install and inspect electrical connector pins and sockets
- (1) 10. Inspect, check, and troubleshoot constant and integrated speed generators

III. Text:

Aircraft Electricity & Electronics, 5th Edition, Eisman

Reference:

Airframe Section textbook by Jeppeson

AC 43.13-1B & 2A, Aircraft Inspection and Repair/Aircraft Alterations

General Section textbook by Jeppeson

IV. Grades

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

90% - 100%	A
80% - 89%	B
70% - 79%	C
60% - 69%	D
Below 55%	F

V. Examination Schedule

Two Examinations	400 points
Quizzes	150 points
Presentations	150 points
Final examination	<u>300 points</u>
	1,000 total points

VI. Presentations

Students will be divided into groups (no more than 5 per group) and assigned specific systems / equipment to research and present in class during the last two weeks of the semester. A summarization paper will be turned in by each group prior to the scheduled presentation, along with a minimum of 10 multiple choice test questions on the system / equipment assigned. Group members will individually evaluate each others participation / performance, and the evaluation used in grade calculations.

VII. Attendance

Each student is expected to be in attendance for the full lecture and all lectures held. Students coming late will be graded accordingly with all lates 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** are required in this course.

Classes are held on Tuesdays and Thursdays from 10:30 to 11:45. A roll will be passed and signed each day for a record of attendance. Two holidays that will be observed by the University are Human Rights Day, January 19th, and President's day, February 16th, both on a Monday. Tuesday, February 17th will follow the schedule for a Monday so that two Monday schedules will not be missed. Spring break March 9th – 13th. The final for 2430 will be on Thursday, April 30th, from 9:30 - 11:20.

VIII. Course Fee

There is a \$20.00 fee for this course which is used for training aids and training videos used during the class.

IX. Accommodation for Persons With Disabilities

Students with ADA-documented physical, sensory, emotional or medical impairments may be eligible for reasonable accommodations. Veterans may also be eligible for services. All accommodations are coordinated through the Disability Resource Center (DRC) in Room 101 of the University Inn, (435)797-2444 voice, (435)797-0740 TTY, or toll free at 1-800-259-2966. Please contact the DRC as early in the semester as possible. Alternate format materials (Braille, large print or digital) are available with advance notice.