



MASTER COURSE OUTLINE

Prepared By: D Berry-Guerin/K Dannenberg

Date: January 2018

COURSE TITLE

Aircraft Electronic Fundamentals

GENERAL COURSE INFORMATION

Dept.: AVIO&

Course Num: 102

(Formerly:)

CIP Code: 47.0609

Intent Code: 21

Program Code: 660

Credits: 8

Total Contact Hrs Per Qtr.: 121

Lecture Hrs: 55

Lab Hrs: 66

Other Hrs:

Distribution Designation: General Elective (GE)

COURSE DESCRIPTION (as it will appear in the catalog)

Fundamentals, troubleshooting, and experiments with fundamental aircraft electronics; diodes; power supplies; rectifiers; voltage regulators; transistors; amplifiers; oscillators and multivibrator circuits; latches and flip-flops; transmitters; synchro systems; gyroscopes.

PREREQUISITES

AVIO101 or AMT149

TEXTBOOK GUIDELINES

Avionics text as decided by AMT/AVIO Faculty

COURSE LEARNING OUTCOMES

Upon successful completion of the course, students should be able to demonstrate the following knowledge or skills:

1. Accurately describe, measure current of, and troubleshoot electronic diodes, including limiter and clamper operations, rectifiers, voltage regulators, and voltage doublers.
2. Describe, conduct appropriate measurements, and troubleshoot transistors and amplifiers.
3. Describe, conduct appropriate measurements, and troubleshoot oscillators, multivibrator circuits, and latches and flip-flops.
4. Describe and troubleshoot synchros, synchro systems, differential transmitters, and stabilized platforms.
5. Integrate acquired knowledge of topics using system schematics.

INSTITUTIONAL OUTCOMES

IO3 **Human Relations/Workplace Skills:** Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills

COURSE CONTENT OUTLINE

1. Electronic diodes
2. Transistors and amplifiers
3. Oscillators, multivibrator circuits, and latches and flip-flops
4. Synchros, synchro systems, differential transmitters, and stabilized platforms
5. System schematics

DEPARTMENTAL GUIDELINES *(optional)*

DIVISION CHAIR APPROVAL

DATE