



## MASTER COURSE OUTLINE

Prepared By: Kent Dannenberg

Date: April 2016

## COURSE TITLE

AMT Airframe Electricity

## GENERAL COURSE INFORMATION

Dept.: AMT

Course Num: 149

(Formerly: )

CIP Code: 47.0607

Intent Code: 21

Program Code: 718

Credits: 3

Total Contact Hrs Per Qtr.: 33

Lecture Hrs: 33

Lab Hrs:

Other Hrs:

Distribution Designation: General Elective (GE)

## COURSE DESCRIPTION (as it will appear in the catalog)

Student will perform operation of AC and DC electrical systems used on large and small aircraft, generating and starting systems, AC and DC electric motors, wiring, controls, switches, indicators, and protective devices, and constant speed and integrated drive generators.

## PREREQUISITES

Instructor Approval

## TEXTBOOK GUIDELINES

Airframe & Powerplant Mechanics, General Textbook, FAA-H-8083-30

Airframe & Powerplant Mechanics, General Workbook, FAA-H-8083-30

Airframe & Powerplant Mechanics, General FAA Airmen Knowledge Test Guide

AC 43.13-1B & -2B Acceptable Methods, Technique, and Practices/Alterations.

Federal Aviation Regulation Handbook for Aviation Maintenance Technicians.

## COURSE LEARNING OUTCOMES

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

1. Repair and inspect aircraft electrical system components; crimp and splice wiring to manufacturer's specifications; and repair pins and sockets of aircraft connectors.
2. Install, check, and service airframe electrical wiring, controls, switches, indicators, and protective devices.
3. Inspect, check, troubleshoot, service, and repair alternating current and direct current electrical systems.
4. Inspect, check, and troubleshoot, service and repair constant speed and integrated speed drive generators
5. Inspect, check, and troubleshoot autopilot servos and approach coupling system.
6. Inspect, check, and service electronic communication and navigation systems, including VHF passenger address interphones and static discharge devices, aircraft VOR, ILS, Omega, flight management computers, and GPWS.
7. Inspect and repair antenna and electronic equipment installations.

## 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. Aircraft Electrical Systems
2. Communication and Navigation Systems

## DEPARTMENTAL GUIDELINES *(optional)*

Student grades are based on the following items:

- |                                  |     |     |
|----------------------------------|-----|-----|
| 1. Classroom/lecture assignments |     | 50% |
| a. Written assignments           | 25% |     |
| b. Tests                         | 25% |     |
| c. Final exam                    | 50% |     |

Examinations will be given to ensure the understanding and/or retention of the subject material. An appropriate exam will be given to each student who completes each subject area. A quarter final review exam will be given during the last three days of each quarter. Any other testing or quizzes may be given at the instructor's discretion. Each student is given only 3 attempts at passing an exam. The first exam attempt must be passed with a 70% or better, 75% or better for the second and 80% on the third attempt. If the student fails to pass any exam with an acceptable score after three attempts the student will be required to surrender all credits, hours, lab projects, and classroom theory for the subject or subjects failed. The final recorded score will be that of the first attempted exam. Missed or failed exams will be given only with prior arrangements with the instructor.

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|--|-----|
| 2. Performance completing lab/shop assignments | 50% |
| a. Quality of work                             | 50% |
| b. Work habits                                 | 50% |
| i. Follows instructions.                       |     |
| ii. Follow safety rules                        |     |
| iii. Completes assignments in a timely manner. |     |
| iv. Stays productive.                          |     |

Laboratory performance will be graded at the completion of each practical assignment by observation, oral examination, or written examination. Practical projects must be completed in a timely manner. A minimum passing grade of 80% must be obtained by each student in order to receive a final Letter of Completion from this course.

Letter Grade	%	Numeric Grade
A	97-100	3.8-4.0
A-	93-96	3.5-3.7
B+	89-92	3.2-3.4
B	85-88	2.9-3.1
B-	81-84	2.5-2.8
C+	77-80	2.2-2.4
C	73-76	1.9-2.1
C-	69-72	1.5-1.8
D+	65-68	1.2-1.4
D	61-64	.9-1.1
D-	58-60	.7-.8
F	0-57	0.0

## ATTENDANCE:

The AMT Airframe Mechanics Course is offered as scheduled below.

07:30 to 16:00 Monday through Thursday.

A minimum of 400 hours of attendance is mandatory for the completion of the AMT General program at BBCC. Upon successful completion of 1150 hours of instruction (which includes 400 hours of General and 750 hours of Airframe/Powerplant), a certificate of completion is granted and the student is eligible to take the FAA written exams for the Airframe/Powerplant Mechanic certificate.

The Instructor will monitor absenteeism by use of the student time cards. A student enrolled in the AMT program at BBCC will be allowed to miss a maximum of twenty-four (24) hours of class time per quarter. Those students who miss more than 24 hours of class time may be required to reduce their credits for that quarter.

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**DIVISION CHAIR APPROVAL**

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**DATE**