MASTER COURSE OUTLINE
Prepared By: Dan Moore Date: April 2016

COURSE TITLE
AMT Powerplant Electricity

GENERAL COURSE INFORMATION
Dept.: AMT Course Num: 249 (Formerly:)
CIP Code: 47.0608 Intent Code: 21 Program Code: 718
Credits: 2
Total Contact Hrs Per Qtr.: 22
Lecture Hrs: 22 Lab Hrs: Other Hrs:
Distribution Designation: General Elective (GE)

COURSE DESCRIPTION (as it will appear in the catalog)
Students will develop an understanding of the operation of generators, alternators, DC motors, and AC motors, and their repair and overhaul. Students will also learn the special requirements of electrical components operating in high temperature areas and how to install wiring, controls, switches, and indicators and protect them from its effects. This course is FAA approved under, 14 CFR Part 147.

PREREQUISITES
Instructor Approval

TEXTBOOK GUIDELINES
BBCC AMT LAP Workbook
AC 43-13-1B & 2 Acceptable Methods and Practices
FAR Handbook For Aviation Maintenance Technicians
Appropriate powerplant textbook as chosen by Aviation Maintenance Faculty (Example: Aircraft Powerplants, by Kroes/Wild)

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

1. Repair engine electrical system components.
2. Install, check, and service electrical wiring, controls, switches, indicators, and protective devices.
3. Inspect, check, troubleshoot, service, and repair alternating current and direct current electrical systems and constant speed and integrated drive generators

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. Engine Electrical systems
2. Engine Electrical components

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.

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 courses are 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.

MAKE-UP PROVISIONS

Make-up time must be arranged with the appropriate instructor and will be completed by the student on his/her own time under the instructor's supervision at the end of the quarter. Make-up hours will be documented through the use of time cards, using time clock procedures, and must be signed by the appropriate instructor. Make-up time and projects will be related directly to those areas of instruction missed by the students.

If time missed is due to school closure caused by weather, power outages, or other unforeseen events, the missed time must be made up during scheduled make-up days at the end of the quarter.

When a student is dropped from a class due to excessive absenteeism, failing grades, or not making up missed time in accordance with the above policies, all recorded attendance hours will be forfeited from the class and considered non-transferable if the student repeats the class.

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DIVISION CHAIR APPROVAL **DATE**