



MASTER COURSE OUTLINE

Prepared By: Erik Borg

Date: April 2016

COURSE TITLE

Airframe Mechanic I

GENERAL COURSE INFORMATION

Dept.: AMT

Course Num: 151

(Formerly:)

CIP Code: 47.0607

Intent Code: 21

Program Code: 718

Credits: 4-22

Total Contact Hrs Per Qtr.: 66-352

Lecture Hrs: 22-132

Lab Hrs: 44-220

Other Hrs:

Distribution Designation: General Elective (GE)

COURSE DESCRIPTION (as it will appear in the catalog)

This course will cover aircraft airframe structures, including wood, fabric and sheet metal, airframe inspection, application of finishes and assembly of fixed wing and rotary wing components and structures, balancing and rigging of airframe structures and components. This course is FAA approved under 14 CFR part 147.

PREREQUISITES

Instructor Approval

TEXTBOOK GUIDELINES

Airframe & Powerplant Technician Airframe Textbook (FAA H-8083-31-ATB)

Airframe & Powerplant Mechanics, Airframe Workbook (FAA H-8083-31-ATB)

Airframe & Powerplant Mechanics, Airframe FAA Airmen Knowledge Test (FAA H-8083-ATB)

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

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

Airframe & Powerplant Mechanics, General FAA Airmen Knowledge Test Guide

AC 43.13-1B & -2B Acceptable Methods Technique/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. Service and repair wood structures
2. Identify wood defects
3. Inspect wood structures
4. Select and apply fabric and fiberglass covering material
5. Inspect, test and repair fabric and fiberglass
6. Apply trim, letters, and touchup paint
7. Identify and select aircraft finishing material
8. Apply finishing materials
9. Inspect finishes and identify defects
10. Select, install and remove special fasteners for metallic, bonded, and composite structure.
11. Inspect bonded structures

12. Inspect, test, and repair fiberglass plastics, honeycomb, composite, and laminated primary and secondary structures
13. Inspect, check, service, and repair windows doors, and Interior furnishings
14. Inspect and repair sheet-metal structures
15. Install conventional rivets
16. Form, lay out, and bend sheet metal
17. Rig rotary-wing aircraft
18. Rig fixed-wing aircraft
19. Check alignment of structures
20. Assemble aircraft components, including flight controls surfaces
21. Balance, rig, and inspect movable primary and secondary flight control surfaces
22. Jack aircraft
23. Perform airframe conformity and airworthiness inspection

INSTITUTIONAL OUTCOMES

- IO1 **Communication:** Students will be able to identify and explain a variety of airframe and/or powerplant systems and components as evaluated by the completion of the FAA written, oral and practical exams
- 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. Wood Structures
2. Aircraft Covering
3. Aircraft Finishes
4. Sheet Metal and Non-Metallic Structures
5. Assembly and Rigging
6. Airframe Inspection

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.

DIVISION CHAIR APPROVAL

DATE