

**Columbus State Community College
Engineering and Transportation Technologies
Aviation Maintenance Technology**

COURSE: AMT 1104 AMT Regulations & Inspections

CREDITS: 3 CLASS HOURS PER WEEK: 18 PREREQUISITES: ENG 1100 & MATH 1050 or 1099

DESCRIPTION OF COURSE

This course is an in-depth study of Title 14 of the Code of Federal Regulations, Aeronautics and Space, as they pertain to the Aviation Maintenance Technician. Focus will be on history of the FAR's, certification of mechanics, certification of aircraft, engines and propellers. In addition, students study the regulatory maintenance requirements of aircraft and regulatory requirements of aircraft records. The format of FAA and manufacturer's publications is studied with emphasis on aircraft technical publication research. The students will also be introduced to Human Factors in Aviation Maintenance

COURSE STUDENT LEARNING OUTCOMES

Student will demonstrate an understanding of the FAA Regulations, Privileges and Limitations of the FAA certificated mechanic. Demonstrate the ability to read, comprehend, and apply technical data. Write descriptions of work performed including aircraft discrepancies and corrective actions using typical aircraft maintenance reports.

PROGRAM OUTCOMES

Upon completion of the Aviation Maintenance Technology curriculum, the graduate will be able to: • Service, inspect, and complete repairs and alterations on airframes, engines, propellers, and associated systems (including environmental, electrical, fuel, hydraulic, and pneumatic systems) • Utilize the regulations and technical manuals to complete inspections, repairs, and alterations of aircraft safely and to complete the required maintenance entries after finishing inspection, repair and/or alteration • Properly use precision measuring equipment for the accuracy demanded by the aviation industry • Understand blueprints used for the repair and alteration of aircraft and utilize them to affect the repair or alteration • Identify aircraft materials and hardware and their structural properties. Correctly identify corrosion and the proper treatment and prevention methods and techniques • Identify and use nondestructive testing methods used in the aviation industry • Meet FAA certification requirements for the Airframe and Powerplant Certificates.

OUTCOMES BASED ASSESSMENT OF STUDENT LEARNING

For this course, students are expected to demonstrate the skills associated with the Institutional Learning Goals (ILG) identified below:

- Ethical Reasoning
- Communication Competence
- Cultural and Social Awareness

In class, students are assessed on their achievement of these outcomes. Names will not be used when reporting results. Outcomes-based assessment is used to improve instructional planning and design and the quality of student learning throughout the college.

COURSE MATERIALS REQUIRED

TI 30 Calculator or equivalent

TEXTBOOK, MANUALS, REFERENCES, AND OTHER READINGS

General 8083-30-ATB

General Workbook

General Test Guide

AC 43.13 1B/2B

ASA/FAR/AMT 2015 by ASA

Aviation Mechanic Handbook

AVIATION MAINTENANCE TECHNOLOGY SYLLABUS STATEMENTS

Aviation Maintenance Technology required College Syllabus Statements on **Assessment, Participation and Safety**, and **Attendance** can be found at <http://www.csc.edu/academics/departments/aviation-maintenance/requirements.shtml> or on the College website –Search ‘Aviation’; click on ‘Aviation Maintenance’; click on ‘Requirements’ tab.

SPECIAL COURSE REQUIREMENTS

Part 147 Para 147.21 (d) (3) and 147.31 (b) state that tests must be given in all subject areas and that the tests given must all be passed.

As students progress through the program, they will be given subject area tests relative to the course subject areas. Students must demonstrate a 70% minimum passing score on every subject test. If a subject area test is failed, the student will be given additional opportunities to pass the subject test. All subject tests must be passed before a certificate of program completion can be issued.

FAA Subject Area Test for this course:

General-I: Maintenance Forms and Records

General-K: Maintenance Publications

General-L: Mechanic Privileges and Limitations

To be awarded a Certificate of Program Completion, in addition to subject area testing, the student must also:

Successfully pass each course required for the certificate. Requirements for passing each course include:

A 70% average evaluation for graded course elements. Instructors determine the weights of course grading.

Successful completion of all required laboratory requirements of the course.

Attendance in compliance with the attendance policy.

Students can pass a course with a grade of “D”, however students must have a minimum overall Grade Point Average of 2.0 (out a possible 4.0) to be awarded a certificate of completion. Courses can be repeated to improve grades.

Grade Area	Weight	Percentage Earned		Lab Project	Pass	Fail
Unit Tests	50%			1.3 AMT Certification		
Quizzes				2.1 Manufactures’ Publications		
Final	20%			2.2 FAA publications		
Participation & Safety	10%			3.1 Airworthiness		
Other – Homework Assignments	20%			3.4 Major Repairs and Alterations		
Total	100%			3.5 Data		
Course Letter Grade				3.6 Records		
				3.7 Form 337		

Student Resources, Rights, and Responsibilities: Columbus State Community College required College Syllabus Statements on College Policies and Student Support Services can be found at <https://www.csc.edu/academics/syllabus.shtml>.

UNITS OF INSTRUCTION – AMT 1104

ASSIGNMENT	LEARNING OBJECTIVES/GOALS	ASSESSMENT METHODS	ASSIGNMENTS	
Assignment 1	Introduction, History, and Design of the FAA and Federal Regulation	Test, Quizzes, Worksheets	Read:	Jeppesen General Text Chapt 14 Sec. A or FAA Order 8083-30 Ch 13 14CFR1
			Labs:	None
			Test:	Quiz
Assignment 2	Certification of Airman other than Flight Crew – Mechanics and Repairmen	Test, Quizzes, Worksheets	Read:	Jeppesen General Text Chapt. 15 Sec A & B or FAA Order 8083-30 Ch 13 14CFR65
			Labs:	Lab 1
			Test:	Test 1
Assignment 3	14CFR43 Maintenance, Preventative Maintenance, Rebuilding, and Alterations	Test, Quizzes, Worksheets	Read:	Jeppesen General Text Chapt.14 or FAA Order 8083-30 Ch 12 14CFR43
			Labs:	Lab 2
			Test:	Test 2
Assignment 4	Publications – Government and Manufacturers	Test, Quizzes, Worksheets	Read:	As Assigned
			Labs:	
			Test:	
Assignment 5	Airworthiness	Test, Quizzes, Worksheets	Read:	
			Labs:	
			Test:	

Assignment 6	Aircraft Inspections	Test, Quizzes, Worksheets	Read:	As Assigned	
			Labs:		
			Test:		
Assignment 7	Aircraft Records	Test, Quizzes, Worksheets	Read:		
			Labs:		
			Test:		
Assignment 8	Aircraft Parts	Test, Quizzes, Worksheets	Read:	As Assigned	
			Labs:		
			Test:		
Assignment 9	Human Factors	Test, Quizzes, Worksheets	Read:	FAA Oder 8083-30 Ch 14	
			Labs:		
			Test:		