

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

COURSE: AMT 2205 Propellers

CREDITS: 2

CLASS HOURS PER WEEK: 9

PREREQUISITES: AMT 1103

DESCRIPTION OF COURSE

In this course, the principles of operation, governing systems, and ice control will be covered for all types of aircraft propellers. Focus will be placed on propeller inspection, lubrication, service, repair, removal, and installation.

COURSE GOALS

- Propeller Theory & Fixed Pitch Propellers
- Adjustable Pitch & Turboprop Propellers
- Propeller Inspection and Maintenance
- Propeller Auxiliary Systems
- Scientific Literacy
- Technological Competence

STUDENT LEARNING OUTCOMES

Student will demonstrate a knowledge of propeller operating theory, design and construction.

Student will demonstrate knowledge of the operation of adjustable pitch propellers and governing system components

Student will demonstrate the ability to maintain propellers and propeller governing systems.

Student will demonstrate knowledge regarding the maintenance of propeller synchronizing and ice control systems.

INSTITUTIONAL LEARNING GOALS

Columbus State Community College's Institutional Learning Goals are an integral part of the curriculum and central to the mission of the college. The faculty at Columbus State has identified the following institutional learning goals:

- Critical Thinking
- Scientific Literacy

COURSE MATERIALS REQUIRED

All tools on the Columbus State Community College Aviation Maintenance Technology Minimum Required Tool List are required.

TEXTBOOKS—REQUIRED AND OPTIONAL READINGS

Powerplant 8083-32

Powerplant Workbook

A&P Powerplant Test Guide

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:

V-R: Propellers

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	45%			Propeller Remove & Install		
Quiz	10%			Propeller Inspection and		

				Maintenance		
Final	25%			Aluminum Blade Repair		
Participation & Safety	10%					
Other	10%					
Total	100%					
Course Letter Grade						

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 2205

ASSIGNMENT	LEARNING OBJECTIVES/GOALS	ASSESSMENT METHODS	ASSIGNMENTS	
Assignment 1	Propeller Theory and Fixed Pitch Propellers	Test, Quizzes, Worksheets	Read:	FAA-H-8083-32 Powerplant Handbook Chapter 7 pg 2-9, 13, 14
			Labs:	Measure blade angle, TCDS Research
			Test:	Theory and Fixed Pitch Propellers
Assignment 2	Adjustable Pitch and Turboprop Propellers	Test, Quizzes, Worksheets	Read:	FAA-H-8083-32 Powerplant Handbook Chapter 7 pg 9-12, 14-16, 30-41
			Labs:	None
			Test:	Adjustable Pitch Propellers and Controls
Assignment 3	Propeller Inspection, Maintenance and Installation	Test, Quizzes, Worksheets	Read:	FAA-H-8083-32 Powerplant Handbook Chapter 7 pg 20-30
			Labs:	Remove and Reinstall Propeller Inspect, Service and Repair Propeller Repair Aluminum Blade
			Test:	Test with assignment 4
Assignment 4	Auxiliary Propeller Systems	Test, Quizzes, Worksheets	Read:	FAA-H-8083-32 Powerplant Handbook Chapter 7 pg 17-20
			Labs:	None
			Test:	Maintenance & Auxiliary Systems