GAVILAN COLLEGE
5055 Santa Teresa Blvd
Gilroy, CA 95023

Course Outline

COURSE: AMT 110 DIVISION: 50 ALSO LISTED AS:

TERM EFFECTIVE: Fall 2020 CURRICULUM APPROVAL DATE: 10/13/2020

SHORT TITLE: AIRFRAME MAINT

LONG TITLE: Airframe Maintenance Technology

Units	Number of Weeks	Type	Contact Hours/Week	Total Contact Hours/Units
13.5	18	Lecture:	9	162 / 9 Units of Lecture
		Lab:	13.5	243 / 4.5 Units of Lab
		Other:	0	0
		Total:	22.5	405

Out of Class Hrs:	324.00
Total Learning Hrs:	729.00

COURSE DESCRIPTION:

This course is an FAA Part 147 course designed to prepare the student for their FAA Airframe certificate. The course will provide the student with a thorough understanding of airframe structures; metal structural repair; aircraft welding; aircraft instruments; communications and navigation systems; fuel systems; and cabin environmental systems. Both theory and practical application to aircraft systems is taught. COREQUISITE: AMT 100, General Aircraft Technology. ADVISORY: Mathematics 430 or math skills equivalent to elementary algebra.

COREQUISITES:
AMT 100

CREDIT STATUS: D - Credit - Degree Applicable

GRADING MODES
L - Standard Letter Grade

REPEATABILITY: N - Course may not be repeated

SCHEDULE TYPES:

02 - Lecture and/or discussion

03 - Lecture/Laboratory

04 - Laboratory/Studio/Activity

04A - Laboratory - LEH 0.65

STUDENT LEARNING OUTCOMES:

By the end of this course, a student should:

1. Demonstrates the ability to meet the written test standards outlined in FAA AC 147-3 ? Certification and Operation of Aviation Maintenance Technician Schools.

2. Demonstrates the ability to meet the oral/practical test standards outlined in FAA AC 147-3 ? Certification and Operation of Aviation Maintenance Technician Schools.

3. Demonstrate the ability to inspect and determine if components and aircrafts meet airworthy standards outlined in FAA AC 43.13-1B ? Acceptable Methods, Techniques, and Practices ? Aircraft Inspection and Repair.

COURSE CONTENT:

Curriculum Approval Date: 10/13/2020

LECTURE CONTENT:

18 Hours

AIRCRAFT WELDING

Content: The design and creation of aircraft grade weld joints. The inspection of weld joints to insure they meet FAA standards. Welding safety procedures.

Student Performance Objective: Demonstrate welding safety procedures, the operation of welding equipment, and creation of welding joints that meet FAA standards. Use FAA standards to inspect welds and determine their airworthiness.

Create and inspect FAA quality welds.

61 Hours

AIRCRAFT SHEET METAL CONSTRUCTION AND REPAIR

Content: Operation of sheet metal tools. Computation of rivet length, diameter and properly driven dimension. The design, creation and inspection of FAA acceptable rivet joints. The design and creation of FAA acceptable sheet metal joints. The design and creation of FAA acceptable sheet metal repairs. The completion off FAA forms to submit major structural repair.

Student Performance Objective: Create and inspected FAA quality rivet joints, sheet metal repairs and sheet metal bents. Complete the supporting FAA repair forms.

27 Hours

AERODYNAMICS, RIGGING AND ASSEMBLY OF AIRCRAFT STRUCTURES

Content: Physic and geometry behind airfoil lift, wings and aircraft control surface. Helicopter aerodynamics. Installation, inspection, adjustment and repair of aircraft control surfaces.

Student Performance Objective: Explain how an aircraft generates lift and uses aircraft control surfaces to direct flight. Disassemble an aircraft?s control system and return the control system to proper rigging that meets FAA and manufacturer?s specification.

18 Hours

CABIN ENVIRONMENTAL SYSTEMS

Content: Aircraft pressurization, heat and air conditioning systems.

Student Performance Objective: Explain the operation and diagram aircraft pressurization, heat and air conditioning systems.

COURSE CONTENT(CONTINUED):

18 Hours

AIRCRAFT FUEL SYSTEMS

Content: Aircraft fuel types. Fuel system operations and components including tanks, pumps, filters and measuring devices.

Student Performance Objective: Explain the operation and diagram aircraft fuel systems.

18 Hours

AIRCRAFT INSTRUMENT SYSTEMS

Content: Operation and testing of aircraft flight instruments

Student Performance Objective: Explain the operation and diagram aircraft flight instrument systems.

2 Hours

Final

LAB CONTENT:

27 Hours

AIRCRAFT WELDING

Lab Projects: Demonstrate the able to follow welding safety procedures, create welded joints and inspect welded joints. The FAA standards will be used to determine joint acceptability.

94.5 hours

AIRCRAFT SHEET METAL CONSTRUCTION AND REPAIR

Lab Projects: Complete universal riveting, flush riveting, bending and metal repair.

40.5 hours

AERODYNAMICS, RIGGING AND ASSEMBLY OF AIRCRAFT STRUCTURES

Lab Projects: Disassemble an aircraft’s control system and return the control system to proper rigging that meets FAA and manufacturer’s specification.

27 Hours

CABIN ENVIRONMENTAL SYSTEMS

Lab Projects: Service and inspect aircraft environmental systems and components.

27 Hours

AIRCRAFT FUEL SYSTEMS

Lab Projects: Service and inspect aircraft fuel systems and components.

27 Hours

AIRCRAFT INSTRUMENT SYSTEMS

Lab Projects: Install and test the operation of aircraft flight instruments.

METHODS OF INSTRUCTION:

Instruction will be done by: Classroom lecture with the use of visual aids and laboratory demonstration. Evaluation will be done by written exams, oral and practical examination, lab project sheets and by satisfactory completion of lab projects.

METHODS OF EVALUATION:
Writing assignments
Percent of total grade: 30.00 %
Category 1 - 20% to 40% Written homework, Lab reports, Term or other papers
Problem-solving assignments
Percent of total grade: 20.00 %
Category 2 - 15% to 30% Field Work, Quizzes, Exams
Skill demonstrations
Percent of total grade: 10.00 %
Category 3 - 10% to 20% Class Performance/s Field Work
Objective examinations
Percent of total grade: 40.00 %
Category 4 - 35% to 50% Multiple Choice, True/False, Matching Items

OUT OF CLASS ASSIGNMENTS:
Required Outside Hours: 36
Assignment Description:
AIRCRAFT WELDING
Homework: Complete reading assignments and answer question sheets.

Required Outside Hours: 122
Assignment Description:
AIRCRAFT SHEET METAL CONSTRUCTION AND REPAIR
Homework: Complete reading assignments and answer question sheets.

Required Outside Hours: 54
Assignment Description:
AERODYNAMICS, RIGGING AND ASSEMBLY OF AIRCRAFT STRUCTURES
Homework: Complete reading assignments and answer question sheets.

Required Outside Hours: 36
Assignment Description:
CABIN ENVIRONMENTAL SYSTEMS
Homework: Complete reading assignments and answer question sheets.

Required Outside Hours: 38
Assignment Description:
AIRCRAFT FUEL SYSTEMS
Homework: Complete reading assignments and answer question sheets.

Required Outside Hours: 38
Assignment Description:
AIRCRAFT INSTRUMENT SYSTEMS
Homework: Complete reading assignments and answer question sheets.

REPRESENTATIVE TEXTBOOKS:

F.A.A.. Acceptable Methods, Techniques, and Practices - Aircraft Inspection, and Repair AC43.13-1B/2B. ASA,2008.

This is the most current version of the FAA standard.

ISBN: 978-1619540217

Reading Level of Text, Grade: Reading level of text, Grade: 12th Verified by: Verified by: MS Word

F.A.A.. Airframe and Powerplant Mechanics - Airframe Volume 1: FAA-H-8083-31A. Aircraft Technical Book Company,2018.

FAA updated the book

ISBN: 978-1619548268

Reading Level of Text, Grade: Reading level of text, Grade: 12th Verified by: Verified by: MS Word

F.A.A.. Airframe and Powerplant Mechanics - Airframe Volume 2: FAA-H-8083-31A. ASA,2018.

The FAA updated the book

ISBN: 978-1619548312

Reading Level of Text, Grade: Reading level of text, Grade: 12th Verified by: Verified by: MS Word

ARTICULATION and CERTIFICATE INFORMATION

CSU TRANSFER:

Transferable CSU

UC TRANSFER:

Not Transferable

SUPPLEMENTAL DATA:

Basic Skills: N
Classification: Y
Noncredit Category: Y
Cooperative Education:
Program Status: 1 Program Applicable
Special Class Status: N
CAN:
CAN Sequence:
CSU Crosswalk Course Department:
CSU Crosswalk Course Number:
Prior to College Level: Y
Non Credit Enhanced Funding: N
Funding Agency Code: Y
In-Service: N
Occupational Course: B
Course Control Number: CCC000260506
Sports/Physical Education Course: N
Taxonomy of Program: 095010
CIP: