Aviation Maintenance Technology

A.S. DEGREE: 110-114 units
CERTIFICATE OF ACHIEVEMENT: 72 units

DESCRIPTION

Students will have job entry skills for the following occupations: aviation mechanic, aircraft service person, repair or sales of aircraft accessories, airframe specialist. Courses in the Aviation Technology Department are currently offered only during the day. Students who have completed all of the AMT coursework will have satisfied Area B-1 of the general education requirements for the associate degree using the Gavilan College and CSU Breadth General Education patterns or the IGETC (Areas 2 and 5) for an associate degree only.

PROGRAM LEARNING OUTCOMES FOR THE CERTIFICATE

Upon successful completion of this program, students will be able to:

- Successfully demonstrate the ability to pass the Federal Aviation Administration (FA.A.) knowledge, oral, practical and written examinations in Powerplant subjects. Leading to obtaining FA.A. powerplant mechanic certification.
- Demonstrate a working knowledge and mechanical ability to identify and select aircraft hardware and materials, clean aircraft and perform corrosion control, heat treating, nondestructive testing, inspect welds, fluid lines and fittings, and aircraft weight and balance.
- Demonstrate the ability to solve and explain aviation related mathematical equations and physics concepts.
- Communicate both in writing and verbally about aircraft general maintenance concepts and processes using technical terms, to both professional and administrative audiences.
- Demonstrate the ability to display and apply proper behavior reflecting satisfactory safe work habits and ethics to fulfill program requirements and confidence to prepare for employment.

ADDITIONAL PROGRAM LEARNING OUTCOMES FOR THE ASSOCIATE DEGREE

- Demonstrate a working knowledge and mechanical ability to inspect, maintain, service and repair reciprocating and turbine aircraft engines, and associated systems as specified by Federal Aviation Regulation Part 147.
- Demonstrate the ability to research and determine applicability of maintenance and regulatory data as it relates to aircraft powerplants and their airworthiness.
- Communicate both in writing and verbally about aircraft powerplant maintenance concepts and processes using technical terms, to both professional and administrative audiences.
- Successfully demonstrate the ability to pass the Federal Aviation Administration (FA.A.) knowledge, oral, practical and written examinations in General subjects. Leading to a certificate to take the General FA.A. written and practical tests.
- Successfully demonstrate the ability to pass the Federal Aviation Administration (FA.A.) knowledge, oral, practical and written examinations in Airframe subjects. Leading to a certificate to take the Airframe FA.A. written and practical tests.
- Demonstrate a working knowledge and mechanical ability with metal aircraft structures, cabin atmospherice control systems, aircraft instruments, naviagation systems, fuel systems.

PROGRAM REQUIREMENTS: (72 UNITS)

AMT100	General Aircraft Technology	9
AMT101	General Aircraft Technology	9
AMT110	Airframe Maintenance Technology	13.5
AMT111	Airframe Structures	13.5
AMT120	Aviation Powerplant Technology	13.5
AMT121	Aviation Powerplant Systems Technology	13.5

RECOMMENDED ELECTIVES:

CSIS1	Computer Literacy - MS Office	2

FOR ASSOCIATE DEGREE, COMPLETE GENERAL EDUCATION REQUIREMENTS: (35 - 39)

A student may complete the Gavilan College A.A./A.S. general education, the CSU-GE Breadth or the IGETC pattern, plus sufficient electives to meet a 60 unit total. See a counselor for details.

NOTE: A course may be used to satisfy both general education and major requirements. See "Double Counting Rule".

Airframe

CERTIFICATE OF ACHIEVEMENT: *45 units*

DESCRIPTION

Students receiving the certificate will have job entry skills for the following occupations: Aviation mechanic; aircraft service person; repair or sales of aircraft accessories; airframe specialist. The skills learned in the program also prepare graduates for employment in fields such as aircraft manufacturing, electronics, hydraulics, welding, sheet metal, electrical systems, pneumatics, fuel systems, automotive repair, civil and military defense. This certificate is designed to prepare students to qualify for the airframe certificate issued by the Federal Aviation Administration. These courses include the following subjects: sheet metal structures, wood and fabric structures, aircraft airframe inspection, assembly and rigging, hydraulic and pneumatic systems, aircraft electrical systems, cabin atmosphere

controls, fuel systems, ice and rain systems, fire protection systems, instrument systems, position and warning systems, landing gear systems, and navigation and communication systems. All individuals will have to complete the General Aircraft Maintenance requirements in order to receive the FM Aircraft Airframe Certificate of completion.

PROGRAM REQUIREMENTS: (45 UNITS)

AMT100	General Aircraft Technology	9
AMT101	General Aircraft Technology	9
AMT110	Airframe Maintenance Technology	13.5
AMT111	Airframe Structures	13.5

RECOMMENDED ELECTIVES:

AMT190	Occupational Work Experience/Aviation	1-4

Powerplant

CERTIFICATE OF ACHIEVEMENT: 45 units

DESCRIPTION

Students receiving the certificate will have job entry skills for the following occupations: Aviation mechanic; aircraft service person; repair or sales of aircraft accessories; powerplant specialist. The skills learned in the program also prepare graduates for employment in fields such as aircraft manufacturing, electronics, hydraulics, welding, sheet metal, electrical systems, pneumatics, fuel systems, automotive repair, civil and military defense. This certificate is designed to prepare students to qualify for the Powerplant certificate issued by the Federal Aviation Administration. These courses include the following subjects: reciprocating engines, turbines, lubrication systems, engine fuel systems, fuel metering systems, induction systems, ignition systems, engine electrical systems, engine cooling systems, engine exhaust system, engine instrument systems, engine control systems, engine fire protection systems and propellers. Students will have the opportunity to test run the engine that they repair. Students that complete this program may apply immediately to take the exams needed to obtain FA.A. Powerplant mechanic certificate.

PROGRAM LEARNING OUTCOMES

Upon successful completion of this program, students will be able to:

- Successfully demonstrate the ability to pass the Federal Aviation Administration (FA.A.) knowledge, oral, practical and written examinations in Powerplant subjects. Leading to obtaining FA.A. powerplant mechanic certification.
- Demonstrate a working knowledge and mechanical ability to inspect, maintain, service and repair reciprocating and turbine aircraft engines, and associated systems as specified by Federal Aviation Regulation Part 147
- Demonstrate the ability to research and determine applicability of maintenance and regulatory data as it relates to aircraft powerplants and their airworthiness.
- Communicate both in writing and verbally about aircraft powerplant maintenance concepts and processes using technical terms, to both professional and administrative audiences.
- Demonstrate the ability to display and apply proper behavior reflecting satisfactory safe work habits and ethics to fulfill program requirements and confidence to prepare for employment.

PROGRAM REQUIREMENTS: (45 UNITS)

AMT100	General Aircraft Technology	9
AMT101	General Aircraft Technology	9
AMT120	Aviation Powerplant Technology	13.5
AMT121	Aviation Powerplant Systems Technology	13.5

RECOMMENDED ELECTIVES:

AMT190	Occupational Work Experience/Aviation	1 - 4