AVIATION MAINTENANCE TECHNOLOGY (AMT)

The Aviation Maintenance Technology (AMT) program at College of Alameda provides the opportunity for students to qualify for the Federal Aviation Administration (FAA) Airframe and Powerplant Certificate upon successful completion of our two-year Diamond Award-winning program. An airframe and powerplant mechanic (A&P) is certified and responsible to inspect and maintain aircraft. Job opportunities are available literally all over the world.

The aviation program is offered at the College of Alameda aviation facility located at the north end of the Oakland International Airport. Our state-of-the-art facility includes five aircraft, aircraft system mockup trainers, and a computer lab. This is a two-year evening-only program each class runs five days a week, 3 hours a night. All F.A.A. testing soon be done on site. Mandatory attendance is required for this program to comply with F.A.A. regulations. Any time missed must be made up. The AMT student will need to purchase ranging from $150 to $400 dollar worth of tools during the course of this program.

The AMT faculty and staff are dedicated to helping each and every student through this program. College of Alameda graduates are recognized throughout the aviation industry for their acquired skills and knowledge. There are programs at the College that offer financial aid and assistance to student of needs or with learning difficulties. Feel free to visit us at any time, or speak with our well qualified college’s counselors, ask questions, and tour the aviation facility. Come join us for an exciting career in aviation.

These are the Program Learning Outcomes:
1. Student will interpret and assess aircraft systems as to airworthy condition. Student will demonstrate an ability to maintain these aircraft systems. Student will apply their knowledge of systems to evaluate FAA publications as to airworthy standard. Maintenance record recording will be completed to FAA standards.
2. Personal Development and Management – Prepare for personal, educational and/or career goals.
3. Communication: Perceive, understand, and engage in verbal and nonverbal communication.
4. Responsibility: Understand and demonstrate personal, civic, social, environmental responsibility and cooperation in order to become a productive local and global citizen.

Evening Program – Airframe and Powerplant
There is an evening program for both the Airframe and Powerplant certificates in which each class is a semester long and five nights a week. There is a lecture course and a laboratory course offered each night. By enrolling in both courses the student may complete the program in two years. If the student has a time constraint only one class may be taken each night with a corresponding addition of time required to complete the program. Regular attendance is mandatory for AMT students. Students are required to clock in and out for courses and must meet minimum time requirements for each class, and pass all examinations with minimum of 70% (‘C’) to receive credit for the course since the course is FAA approved and meets FAA regulations. Students should only enroll if they can meet the published schedule.

Students will need to accumulate approximately $400 worth of tools and equipment during the program. In addition students will be required to purchase textbooks and other publications.

The AS degree will be awarded upon satisfactory completion of the major course requirements for each option and the General Education requirements listed in the Degrees and Programs section of this Catalog.

The Airframe and Powerplant Certificates of Achievement curricula include theory and practical experience in construction, inspection, overhaul, repair, and maintenance of aircraft structures, systems, and powerplants. The program is approved by the Federal Aviation Administration. Upon completion of each course with a minimum grade of “C,” the student will be eligible to apply for the FAA examination for the Airframe and Powerplant license.

Note:
If interested in joining the AMT program, please contact College Counselors at College of Alameda, or the AMT Department directly.
AIRFRAME

Degree Major/Certificate Requirements:

Evening Program Sequence:

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<tr>
<th>Dept/No.</th>
<th>Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>AMT 56L</td>
<td>Basic Science of Aviation Maintenance Technology</td>
<td>3.0</td>
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<td>AMT 56</td>
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<td>6.5</td>
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<tr>
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<tr>
<td>AMT 62L</td>
<td>Airframe Systems I</td>
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<tr>
<td>AMT 66L</td>
<td>Airframe Systems and Review</td>
<td>3.0</td>
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<tr>
<td>AMT 66</td>
<td>Airframe Systems and Review</td>
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**Total Required Units:** 43.0

POWERPLANT

Degree Major/Certificate Requirements:

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<td>AMT 70L</td>
<td>Theory of Powerplants I</td>
<td>2.5</td>
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<tr>
<td>AMT 70</td>
<td>Theory of Powerplants I</td>
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<tr>
<td>AMT 74L</td>
<td>Theory of Powerplants II</td>
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<tr>
<td>AMT 74</td>
<td>Theory of Powerplants II</td>
<td>5.0</td>
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<tr>
<td>AMT 76L</td>
<td>Theory of Advanced Powerplants I</td>
<td>3.0</td>
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<tr>
<td>AMT 76</td>
<td>Theory of Advanced Powerplants I</td>
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<tr>
<td>AMT 78L</td>
<td>Theory of Advanced Powerplants II</td>
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<tr>
<td>AMT 78</td>
<td>Theory of Advanced Powerplants II</td>
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**Total Required Units:** 50.0

Recommended:
AMT 270, Aviation Maintenance Technology Preparation (1-3) (if needed)

AMT 49
Independent Study in Aviation Maintenance
.5-5 units: .5-5 hours lecture (GR)
Acceptable for credit: CSU
See section on Independent Study. 0950.00

AMT 56
Basic Science of Aviation Maintenance Technology
6.5 units, 6.5 hours lecture (GR)
Acceptable for credit: CSU
Introduction to maintenance of both large and small aircraft: Rivet installation, basic shop math and physics, aircraft structures, aerodynamics, basic electricity, cleaning and corrosion control; and Federal Aviation Administration regulation, Part 65, Appendix D. 0950.00

AMT 58
Survey of Aviation Maintenance Technology
6.5 units, 6.5 hours lecture (GR)
Acceptable for credit: CSU
Survey of aviation maintenance technology: Federal Aviation Administration regulations, weight and balance, non-destructive testing, aircraft drawings, fluid lines and fittings, maintenance publications and forms and records, materials and processes, ground operations, aircraft finishes, and plastic and bonded structures. 0950.00

AMT 56L
Basic Science of Aviation Maintenance Technology
3 units, 9 hours laboratory (GR)
Acceptable for credit: CSU
Introduction to maintenance of both large and small aircraft: Rivet installation, basic shop math and physics, aircraft structures, aerodynamics, basic electricity, and cleaning and corrosion control. 0950.00

AMT 76L
Survey of Aviation Maintenance Technology
3 units, 9 hours laboratory (GR)
Acceptable for credit: CSU
Survey of aviation maintenance technology: Federal Aviation Administration regulations, weight and balance, non-destructive testing, aircraft drawings, fluid lines and fittings, maintenance publications and forms and records, materials and processes, ground operations, aircraft finishes, and plastic and bonded structures. 0950.00

AMT 48AA-FZ
Selected Topics in Aviation Maintenance
.5-9 units, 0-9 hours lecture, 0-27 hours laboratory (GR or P/NP)
Acceptable for credit: CSU
See section on Selected Topics. 0950.00
AMT 62
Airframe Systems I
6.5 units, 6.5 hours lecture (GR)
Acceptable for credit: CSU
Introduction to airframe systems: Advanced airframe electrical systems, sheet metal structures; aircraft instrument, cabin environmental control, ice and rain control, and pneumatic systems. 0950.10

AMT 62L
Airframe Systems I
3 units, 9 hours laboratory (GR)
Acceptable for credit: CSU
Introduction to airframe systems: Advanced airframe electrical systems, sheet metal structures; aircraft instrument, cabin environmental control, ice and rain control, and pneumatic systems. 0950.10

AMT 64
Airframe Systems II
6.5 units, 6.5 hours lecture (GR)
Acceptable for credit: CSU
Continuation of airframe systems: Assembly and rigging; hydraulic, fuel, and landing gear systems. 0950.10

AMT 64L
Airframe Systems II
3 units, 9 hours laboratory (GR)
Acceptable for credit: CSU
Continuation of airframe systems: Assembly and rigging; hydraulic, fuel, and landing gear systems. 0950.10

AMT 66
Airframe Systems and Review
3 units, 3 hours lecture (GR)
Acceptable for credit: CSU
Review in preparation for the Federal Aviation Administration examination: Airframe, communication and navigation, and take-off warning systems; welding, and airframe inspection. 0950.10

AMT 66L
Airframe Systems and Review
2 units, 6 hours laboratory (GR)
Acceptable for credit: CSU
Review in preparation for the Federal Aviation Administration examination: Airframe, communication and navigation, and take-off warning systems; welding, and airframe inspection. 0950.10

AMT 70
Theory of Powerplants I
5 units, 5 hours lecture (GR)
Acceptable for credit: CSU
Basic powerplant theory and systems: Reciprocating engine overhaul, operation, installation and removal; powerplant lubrication, and engine fuel and cooling systems. 0950.20

AMT 70L
Theory of Powerplants I
2.5 units, 7.5 hours laboratory (GR)
Acceptable for credit: CSU
Basic powerplant theory and systems: Reciprocating engine overhaul, operation, installation and removal; powerplant lubrication, and engine fuel and cooling systems. 0950.20

AMT 74
Theory of Powerplants II
5 units, 5 hours lecture (GR)
Acceptable for credit: CSU
Continuation of basic powerplant theory and systems: Fuel metering, induction and exhaust, powerplant electrical, and engine instrument systems. 0950.20

AMT 74L
Theory of Powerplants II
2.5 units, 7.5 hours laboratory (GR)
Acceptable for credit: CSU
Continuation of basic powerplant theory and systems: Fuel metering, induction and exhaust, powerplant electrical, and engine instrument systems. 0950.20

AMT 76
Advanced Powerplants I
5 units, 5 hours lecture (GR)
Acceptable for credit: CSU
Advanced powerplant systems: Propeller systems, reciprocating engine inspection and troubleshooting, engine fire protection systems, and powerplant inspection. 0950.20

AMT 76L
Advanced Powerplants I
3 units, 9 hours laboratory (GR)
Acceptable for credit: CSU
Advanced powerplant systems: Propeller systems, reciprocating engine inspection and troubleshooting, engine fire protection systems, and powerplant inspection. 0950.20

For all program degree and certificate updates, please visit:
http://alameda.peralta.edu
**AVIATION MAINTENANCE TECHNOLOGY (AMT)**

**AMT 78**  
**Advanced Powerplants II**  
5 units, 5 hours lecture (GR)  
Acceptable for credit: CSU  
Continuation of advanced powerplant systems: Ignition systems; gas turbine engine classification, construction, nomenclature, installation and operation, overhaul, inspection and repair; turboprop engines; helicopter powerplants and installation; auxiliary power units; and review in preparation for FAA written examinations. 0950.20

**AMT 78L**  
**Advanced Powerplants II**  
3 units, 9 hours laboratory (GR)  
Acceptable for credit: CSU  
Continuation of advanced powerplant systems: Ignition systems; gas turbine engine classification, construction, nomenclature, installation and operation, overhaul, inspection and repair; turboprop engines; helicopter powerplants and installation; auxiliary power units; and review in preparation for FAA written examinations. 0950.20

**AMT 248AA-FZ**  
**Selected Topics in Aviation Maintenance**  
.5-9 units: 0-9 hours lecture, 0-27 hours laboratory  
(GR or P/NP)  
See section on Selected Topics. 0950.00

**AMT 270**  
**Aviation Maintenance Technology Preparation**  
1-3 units, 3-9 hours laboratory (GR)  
Course partially meets certification requirements of Part 147 of Federal Aviation Administration regulations covering airframe and powerplant mechanics.  
Non-degree applicable  
Course study under this section may be repeated two times for a maximum of 3 units.  
Preparation for the oral, practical, and written portions of the Federal Aviation Administration examination: Covers the general, airframe, and powerplant sections of the examination. 0950.00