

**ART**

-See **COMMERCIAL ART**

**AVIATION MAINTENANCE TECHNOLOGY**

The Aviation Maintenance Technology program is divided into five areas: Airframe, Powerplant, Airframe and Powerplant, Avionics, and Helicopters.

The Aviation Maintenance Technology fields are of continuing growth and opportunity. The opportunities vary from field to field depending on the population's need for travel, business, and pleasure. Overall, the opportunities and availability outlooks are good to excellent. Each program prepares students in a specific area of aviation and will enable them to seek entry-level or higher levels of employment in the aviation industry.

The Aircraft Maintenance Technology program mission, following counsel of local community and industry leaders, is to provide quality instruction to promote student success with comprehensive training for those interested in entering the aviation maintenance profession and for professionals in the aviation maintenance field striving to improve their knowledge and skills in the areas comprising of Airframe, Powerplant, Avionics and Helicopter Maintenance

**Program Outcomes**

Students successfully completing the Orange Coast College Aviation Maintenance Technology program will have the necessary skills and training for proficiency in taking written, oral and practical exams for certification which may be required for employment.

Working craftsmen will be able to improve or develop additional proficiencies required for professional growth or advancement in their current employment. All qualification training and tests are prescribed and follow the guide of the Federal Aviation.

**The following job titles include senior positions earned after beginning in an entry-level position and advancing upward:**

- Airframe & Powerplant Technician**      **U.S. Military Aircraft Mechanic**
- Airframe Mechanic**                              **FAA Repair Station Technician**
- Powerplant Mechanic**                              **Helicopter Mechanic**
- Avionics Technician**                              **Executive Aviation Mechanic**
- Airline Maintenance Mechanic**              **Aircraft Inspector**
- General Aviation Maintenance Mechanic**      **Engine Overhaul Mechanic (Turbine or Recips.)**
- Aircraft Manufacturer Flight Test Mechanic**      **Aircraft Hydraulic, Pneumatic, Electrical Technician**
- Civil Defense Aircraft Mechanic**

*Note: Although the courses are sequenced, they may be started at any time.*

**AIRFRAME**

This program provides training for the student who desires to be an Airframe Technician. The training received enables the technician to return to service an airplane, related part, and appliance after performing, supervising or inspecting its maintenance or alterations. This Certificate of Achievement can be acquired in two semesters, one intersession, and one summer school session.

This certificate would enable students to achieve employment at local aircraft manufacturing and repair facilities.

**CERTIFICATE OF ACHIEVEMENT**

**Required Courses**

<b>Course</b>			<b>Units</b>
<b>FALL</b>			
General Maintenance Records	AMT	A150	(4)
General Electricity	AMT	A151	(3)
Gen Airfrm/Pwrplnt Fuel	AMT	A152	(2)
Gen Mat/Processes/Weld	AMT	A153	(3)
Gen Wgt/Bal/Math/Physcs	AMT	A154	(3)
<b>INTERSESSION</b>			
Gen Blueprint Read/Drft	AMT	A155	(2)
Airframe & Powerplant Instrument	AMT	A180	(2.5)
<b>SPRING</b>			
Airframe & Pwerplnt Elec	AMT	A160	(6)
Airframe Sheet Mtl/Cmposte	AMT	A161	(5.5)
Airframe Asmbly/Rig/ECS	AMT	A162	(3)
Airframe Comm/Nvgation Sys	AMT	A181	(2)
<b>SUMMER</b>			
Airframe Hyd & Lndg Gear	AMT	A163	(4.5)
<b>Total:</b>			<b>(40.5)</b>

Program approved by the Federal Aviation Administration (FAA).

Completion of the above enables the student to take the FAA Airframe written examination.

**ASSOCIATE DEGREE**

Complete the Certificate of Achievement and Associate in Science Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

## POWERPLANT

This program provides training for the student who desires to be a Powerplant Technician. The training received enables the technician to return to service an aircraft powerplant and propeller after performing, supervising or inspecting its maintenance, overhaul or alterations.

This certificate would enable a student to achieve employment in local powerplant and propeller overhaul facilities and repair stations.

### CERTIFICATE OF ACHIEVEMENT

#### Required Courses

Course			Units
<b>FALL</b>			
Gen Maintenance Records	AMT	A150	(4)
General Electricity	AMT	A151	(3)
Gen Airfrm/Pwrplnt Fuel	AMT	A152	(2)
Gen Mat/Processes/Weld	AMT	A153	(3)
Gen Wgt/Bal/Math/Physcs	AMT	A154	(3)
<b>INTERSESSION</b>			
Gen Blueprint Read/Drft	AMT	A155	(2)
Airframe & Powerplant Instrument	AMT	A180	(2.5)
<b>SPRING</b>			
Airframe & Pwrplnt Elec	AMT	A160	(6)
<b>FALL</b>			
Powerplant Recip Engines	AMT	A170	(6)
Powerplant Fuel/Mtr/Exhst	AMT	A171	(4)
<b>INTERSESSION</b>			
Powerplant Ignition Sys	AMT	A174	(2.5)
<b>SPRING</b>			
Pwrplnt Prplr/Lube Sys	AMT	A172	(4)
Powerplant Gas Turbine Eng	AMT	A173	(6)
<b>Total:</b>			<b>(50)</b>

Program approved by the Federal Aviation Administration (FAA).

Completion of the above enables the student to take the FAA Powerplant written examination.

### ASSOCIATE DEGREE

Complete the Certificate of Achievement and Associate in Science Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

## AIRFRAME & POWERPLANT

This program provides students with the technical skills and systems analysis necessary for entry-level positions as Airframe and Powerplant Certificated Mechanics in the aviation industry, such as airframe inspection, powerplant inspection, maintenance, and return-to-flight status of all types of U.S. Certificated aircraft.

Trained technicians are also successful in related fields of aircraft manufacturing, electronics, hydraulics, pneumatics, welding, sheet metal, quality control, civil and military defense. Additionally, students who have followed this program may earn an engineering degree at any one of several four-year institutions.

### CERTIFICATE OF ACHIEVEMENT

#### Required Courses

Course			Units
<b>FALL</b>			
Gen Maintenance Records	AMT	A150	(4)
General Electricity	AMT	A151	(3)
Gen Airfrm/Pwrplnt Fuel	AMT	A152	(2)
Gen Mat/Processes/Weld	AMT	A153	(3)
Gen Wgt/Bal/Math/Physcs	AMT	A154	(3)
<b>INTERSESSION</b>			
Gen Blueprint Read/Drft	AMT	A155	(2)
Airframe & Powerplant Instrument	AMT	A180	(2.5)
<b>SPRING</b>			
Airframe & Pwrplnt Elec	AMT	A160	(6)
Airframe Sheet Mtl/Cmposte	AMT	A161	(5.5)
Airframe Asmbly/Rig/ECS	AMT	A162	(3)
Airframe Comm/Nvgation Sys	AMT	A181	(2)
<b>SUMMER</b>			
Arfrm Hyd & Lndg Gear	AMT	A163	(4.5)
<b>FALL</b>			
Powerplant Recip Engines	AMT	A170	(6)
Powerplant fuel/Mtr/Exhst	AMT	A171	(4)
<b>INTERSESSION</b>			
Powerplant Ignition Sys	AMT	A174	(2.5)
<b>SPRING</b>			
Powerplant Prplr/Lube Sys	AMT	A172	(4)
Powerplant Gas Turbine Eng	AMT	A173	(6)
<b>Total:</b>			<b>(63)</b>

Program approved by the Federal Aviation Administration (FAA).

### ASSOCIATE DEGREE

Complete the Certificate of Achievement and Associate in Science Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

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## AVIONICS

The Avionics program is designed to prepare students for entry-level positions as installation, maintenance, and repair technicians for avionic equipment in private, corporate, and commercial aircraft.

The aircraft industry is quickly evolving its level of sophisticated navigational and communications systems to include microprocessor-based systems in all areas of the airframe. This requires a new competent work force capable in the state-of-the-art technology of the future.

This two-semester certificate program combines theory and laboratory practices with hands-on application in actual aircraft. Upon completion, the student will be ready for employment in this fast growing and exciting field.

### CERTIFICATE OF SPECIALIZATION

#### Required Courses

Course			Units
<b>FALL</b>			
General Electricity	AMT	A151	(3)
Aircraft Avionics Circuits	AMT	A182	(4)
Avionics Rules & Regulations	AMT	A188	(1.5)
<b>INTERSESSION</b>			
Airframe & Powerplant Instrument	AMT	A180	(2.5)
<b>SPRING</b>			
Airframe Comm/Nvgation Sys	AMT	A181	(2)
Aircraft Avionics Systems	AMT	A184	(4)
<b>Total:</b>			<b>(17)</b>

### ASSOCIATE DEGREE

Complete the Certificate of Achievement and Associate in Science Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

## HELICOPTER THEORY AND MAINTENANCE

This program provides students with the general knowledge of rotary wing development, technology, construction, and a general survey of the helicopter industry.

This program also provides a good understanding of the helicopter type aircraft to interested individuals, technicians, and pilots.

### CERTIFICATE OF SPECIALIZATION

#### Required Courses

Course			Units
<b>FALL</b>			
Theory and Operations	AMT	A140	(3)

### SPRING

Helicopter Maintenance	AMT	A290	(4)
<b>Total:</b>			<b>(7)</b>

## AVIATION PILOT TRAINING

This program of study academically prepares men and women of all ages for entry into the world of commercial aviation. In addition to airline flying many positions are available worldwide for trained commercial pilots. Businesses large and small hire corporate pilots for executive transport. Government agencies, both federal and state, hire commercial pilots for law enforcement, land management, wildlife management and staff logistics. Pilots are also in demand for fire suppression, emergency medical transportation and charter.

The curriculum is designed for students with no flying experience. Courses will systematically prepare individuals academically for the certificates and ratings required to operate aircraft as a commercial pilot. In addition, flight lab courses are offered as suggested electives enabling the student to complete all aspects of their training under the auspices of the college and to accrue the flight hours necessary for licensing as a commercial pilot.

The course of study can be tailored to individual requirements. The small business owner who only needs to use an aircraft for personal transportation can end their training with the Private Pilot Certificate of Achievement (semester 1) or continue on through semester 2 and preparation for the Instrument rating. A student seeking a career as a professional pilot would progress through the curriculum to earn a Commercial Pilot Certificate of Specialization along with a Turbine Transition Skill Certificate. All training is conducted in accordance with Federal Aviation Regulation (FAR) Part 61 and Part 141. All flight training labs are conducted in accordance with an approved FAR Part 141 syllabus.

### CERTIFICATE OF ACHIEVEMENT

#### Required Courses

Course			Units
<b>Required Courses</b>			
Private Pilot Ground School	APT	A130	(5)
Aviation-Navigation	APT	A132	(3)
Aviation-Meteorology	APT	A133	(3)
Instrument Ground School	APT	A134	(3)
Aerodynamics	APT	A138	(3)
Commercial Pilot Ground School	APT	A139	(3)
Turbine Transition	APT	A145	(3)
Basic Air Transportation	APT	A180	(3)
Human Factors/Crew Mgmt	APT	A192	(3)

#### Select six (6) units from the following:

Private Pilot Flight Lab	APT	A120	(2)
Instrument Pilot Flight Lab	APT	A121	(2)
Commercial Pilot Flight Lab	APT	A122	(2)
Advanced Private Pilot Flight Lab	APT	A124	(2)
Flight Instructor Ground School	APT	A140	(3)
Flight Simulator Lab	APT	A141	(3)

**Total:** **(35)**

### ASSOCIATE DEGREE

Complete the Certificate of Achievement and Associate in Science Graduation Requirements as outlined in the Graduation Requirements section of the catalog.

## AIRLINE AND TRAVEL CAREERS

—See *Hospitality, Travel & Tourism*

## AVIATION PILOT TRAINING

### PROFESSIONAL UPGRADE CERTIFICATES

The following Professional Upgrade Certificates are intended for the advanced student or the employed aerospace professional who desires advanced or recurrent training in a specific area. Certificates may be obtained from the Technology Division office by bringing in official records showing the successful completion of required courses.

#### Program Outcome

Students will develop the analytical and critical thinking skills necessary for completion of flight training and federally administered written examinations.

## TURBINE TRANSITION

The Turbine Transition certificate covers turbine aircraft systems, performance, weight and balance and crew resource management. Courses are intended to explore the topics that meet the aeronautical knowledge requirements for the Airline Transport Pilot rating or Flight Engineer Basic knowledge test. The student will also become familiar with crew resource management and how it is utilized in the cockpits of commuter, corporate, and airline flight decks.

### CERTIFICATE OF SPECIALIZATION

#### Required Courses

Course			Units
Aerodynamics	APT	A138	(3)
Turbine Aircraft Systems	APT	A145	(3)
Human Factors/Crew Resource Management	APT	A192	(3)
<b>Total:</b>			<b>(9)</b>

## PRIVATE PILOT

A program of study that helps to prepare students for private pilot flight instruction and the FAA Private Pilot Knowledge Test. This course meets the aeronautical knowledge requirements of Federal Aviation Regulation (FAR) Part 61.105.

### CERTIFICATE OF SPECIALIZATION

#### Required Courses

Course			Units
Private Pilot Ground School	APT	A130	(5)
Aviation-Meteorology	APT	A133	(3)
<b>Total:</b>			<b>(8)</b>

#### Suggested Electives

Private Pilot Flight Lab	APT	A120	(2)
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## INSTRUMENT PILOT

A program of study that helps to prepare a pilot, already in possession of a Private Pilot license for certification as an Instrument rated pilot. Ten hours of flight time accrued in the simulator lab can be applied towards the flight time requirements of the Instrument rating. This course meets the aeronautical knowledge requirements of Federal Aviation Regulation (FAR) Part 61.65(b).

### CERTIFICATE OF SPECIALIZATION

#### Required Courses

Course			Units
Aviation-Navigation	APT	A132	(3)
Instrument Ground School	APT	A134	(3)
Flight Simulator Lab	APT	A141	(3)
<b>Total:</b>			<b>(9)</b>

#### Suggested Electives

Advanced Private Pilot Flight Lab	APT	A124	(2)
Instrument Pilot Flight Lab	APT	A121	(2)
Private Pilot Flight Lab	APT	A120	(2)

## COMMERCIAL PILOT

A program of study that helps prepare a pilot, already in possession of a Private Pilot license flight instruction to meet the licensing requirements Commercial Pilot as well as preparing the student for the Commercial Pilot Knowledge Test. This course meets the aeronautical knowledge requirements of Federal Aviation Regulation (FAR) Part 61.125

### CERTIFICATE OF SPECIALIZATION

#### Required Courses

Course			Units
Aerodynamics	APT	A138	(3)
Commercial Pilot Ground School	APT	A139	(3)
Basic Air Transportation	APT	A180	(3)
<b>Total:</b>			<b>(9)</b>

#### Suggested Electives

Commercial Pilot Flight Lab	APT	A122	(2)
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### ASSOCIATE DEGREE

Complete the Certificate of Achievement and either the Associate in Science Graduation Requirements as outlined in the Graduation Requirements section of the catalog.