

AVIATION AND AEROSPACE SCIENCES: AIR TRAFFIC CONTROL, ASSOCIATE IN SCIENCE DEGREE

The Air Traffic Control program at Orange Coast College prepares students for exciting and high-responsibility careers in aviation safety and airspace management. This two-year program follows Federal Aviation Administration (FAA) Air Traffic Collegiate Training Initiative (AT-CTI) standards, combining classroom instruction with hands-on radar and tower simulations that mirror real-world air traffic operations. Students learn FAA procedures, communication protocols, radar identification, vectoring, and conflict-resolution techniques, gaining the knowledge and situational awareness essential for controlling an aircraft safely and efficiently. The curriculum integrates FAA Air Traffic Basics (Course 50110) and FAA Orders JO 7110.65 and JO 7210.3, ensuring graduates are well prepared for FAA Academy training or careers in aviation operations, flight dispatch, or airport management. Emphasizing professionalism, teamwork, and safety culture, the program provides an inclusive, affordable pathway into the national aviation workforce. Graduates earn an Associate of Science degree in Air Traffic Control (ATC) and are positioned to continue into FAA, military, or private-sector ATC training environments that sustain the safety and efficiency of the aviation industry.

Program Learning Outcomes

1. Demonstrate proficiency in FAA air traffic procedures, communication phraseology, and separation standards.
2. Apply aeronautical decision-making and human factors principles to ATC scenarios.
3. Identify the structure and function of the National Airspace System (NAS) and ATC facilities.
4. Interpret aviation weather data and apply it to operational decision-making.
5. Demonstrate technical proficiency using ATC radar and tower simulation systems.

Review Graduation Requirements (<https://catalog.cccd.edu/orange-coast/graduation-requirements/associate-degree/>) and General Education (<https://catalog.cccd.edu/orange-coast/general-education-patterns/>).

Course	Title	Units
Major Courses		
APT A130	Private Pilot Aviation Ground School	5
APT A132	Aviation Navigation	3
APT A133	Aviation-Meteorology	3
APT A134	Instrument Pilot Aviation Ground School	3
APT A138	Aerodynamics	3
APT A139	Commercial Pilot Aviation Ground School	3
APT A145	Airline Transport Pilot Ground	3
APT A180	Basic Air Transportation	3
APT A192	Human Factors and Crew Resource Management	3

Course	Title	Units
Does not include required General Education Courses for A.S. Degree		
Total Units		29

Course	Title	Units
Required Courses for ATC Concentration		
APT A143	Introduction to Air Traffic Control	2
APT A173	Aircraft Recognition and Performance	3
APT A204	Terminal Air Traffic Control	3
APT A205	Terminal Air Traffic Control Lab	1
APT A210	Enroute Air Traffic Control	3
APT A211	Enroute Air Traffic Control Lab	1
Total Units		13

Year 1		
Semester 1		Units
APT A130	Private Pilot Aviation Ground School	5
APT A133	Aviation-Meteorology	3
APT A143	Introduction to Air Traffic Control	2
APT A173	Aircraft Recognition and Performance	3
OCC AS GE AREA 3 - CHOOSE ONE		3
Units		16
Total Units		16

Year 1		
Semester 2		Units
APT A134	Instrument Pilot Aviation Ground School	3
APT A132	Aviation Navigation	3
APT A204	Terminal Air Traffic Control	3
APT A205	Terminal Air Traffic Control Lab	1
OCC AS GE AREA 1A - CHOOSE ONE		3-4
OCC AS GE AREA 4 - CHOOSE ONE		3
Units		16-17
Summer		
OCC AS GE AREA 1B - CHOOSE ONE		3-4
Units		3-4
Total Units		19-21

Year 2		
Semester 1		Units
APT A139	Commercial Pilot Aviation Ground School	3
APT A192	Human Factors and Crew Resource Management	3
APT A210	Enroute Air Traffic Control	3
APT A211	Enroute Air Traffic Control Lab	1
OCC AS GE AREA 2 - CHOOSE ONE		3-5
Units		13-15
Total Units		13-15

Year 2		
Semester 2		Units
APT A138	Aerodynamics	3
APT A145	Airline Transport Pilot Ground	3

APT A180	Basic Air Transportation	3
OCC AS GE AREA 5 - CHOOSE ONE		3-4
OCC AS GE AREA 6 - CHOOSE ONE		3
Units		15-16
Total Units		15-16