

**OHIO UNIVERSITY DEPARTMENT OF AVIATION
AVIATION COURSES**

- 1000 INTRODUCTION TO AVIATION (3 CREDITS)
Prereq: none. Survey of civil aviation. Overview of aviation history, general aviation, types of air carrier aircraft, and the importance of the air transportation industry. Develops understanding of an airline flight from takeoff to landing.
- 1100 BASIC AERONAUTICS (3 CREDITS)
Prereq: none. FAA mandated ground instruction covering radio navigation, meteorology, FAA regulations, communications, aircraft construction, and performance data to meet requirements of Private Pilot-Airplane Knowledge Test.
- 2400 PRIVATE PILOT FLIGHT (3 CREDITS)
Prereq/Coreq: AVN 1100. FAA written passed and permission. Meets FAA mandated requirements for Private Pilot Certificate.
Course fee
- 2403 PRIVATE PILOT FLIGHT TRANSFER (1 CREDIT)
Prereq: permission. Dual and solo flight instruction in cross-country navigation by pilotage, dead reckoning, and use of VOR, NDB, and HSI. Flight test preparation for private pilot certification included.
Course fee
- 3000 AVIATION LAWS AND REGULATIONS (3 CREDITS)
Prereq: AVN1000 & AVN 1100. Student obtains knowledge, background, and understanding of aviation laws and regulations. Emphasis is placed upon areas of legal concepts of operation, contracts, insurance and liability, regulatory statutes, and case law. In addition, various regulations of FAA, DOT, NTSB, and ICAO will be covered.
- 3050 AVIATION WEATHER (3 CREDITS)
Prereq: AVN 1100 & GEOG 3010. Identification of aviation weather hazards that affect pilots, dispatchers, and airport and airline management; familiarization with aviation weather products and providers; and application of weather interpretation to flight scenarios.
- 3100 INSTRUMENT PILOT GROUND (3 CREDITS)
Prereq: AVN 1100. FAA mandated ground instruction covering various navigation systems and procedures, aircraft radios and communications, instrument flying, and air traffic control procedures. Includes functions of ATC centers, approach control, towers, and flight service stations. FAA regulations included. Meets all requirements for FAA Instrument Pilot Airplane Knowledge Test.
- 3150 AVIATION SAFETY (3 CREDITS)
Prereq: AVN 1100. Overview of aviation safety from management and pilot perspectives, including fundamental aviation safety concepts, risk theory and management, safety terms, prevention methodology, effective safety program organization, human factors, inspection programs, data and analytical information systems, and regulatory requirements.

- 3400 CROSS COUNTRY FLIGHT (3 CREDITS)
Prereq: Private pilot certificate & permission. Flight training consisting of VFR cross-country flights and basic attitude instrument flying.
Course fee
- 3500 COMMERCIAL PILOT GROUND (3 CREDITS)
Prereq: AVN 1100 & AVN 3100. FAA mandated ground instruction covering advanced aerodynamics, radio navigation, FAA regulations, aircraft construction and performance, theories of flight, weight and balance, and instruments to meet requirements of Commercial Pilot Airplane Knowledge Test.
- 3600 THE NATIONAL AIRSPACE SYSTEM (3 CREDITS)
Prereq: AVN 1100. Air Traffic Control (ATC) Procedures used to separate aircraft, flow control, ATC phraseology, and navigation in the National Airspace System (NAS).
- 3700 AIRCRAFT SYSTEMS & POWERPLANTS (4 CREDITS)
Prereq: AVN 3500. In-depth study of simple and complex aircraft powerplants, fuel, electrical, hydraulic, and environmental systems.
- 3800 GENERAL AVIATION OPERATIONS & MANAGEMENT (3 CREDITS)
Prereq: AVN 1000 & 1100 & MGT 2020 & (JR OR SR). A study of General Aviation including FBO's, marketing, sales, and management techniques. Marketing and management concepts applicable to FBO's and other general aviation enterprises are studied. Travel analysis is performed to determine the need for a business aircraft.
- 3900 AIRLINE OPERATIONS & MANAGEMENT (3 CREDITS)
Prereq: AVN 1000 & 1100 & MGT 2020 & (JR OR SR). To give a broad understanding of the air transportation industry and the major management functions with an airline. Topics cover economics of airlines, managerial aspects, international aviation, and career planning.
- 4000 INSTRUMENT FLIGHT (3 CREDITS)
Prereq: Private Pilot Certificate & Permission. Instruction in flight by sole reference to instruments. Preparation for instrument rating.
Course fee
- 4050 ADVANCED CROSS COUNTRY FLIGHT (3 CREDITS)
Prereq: AVN 4000. Dual and solo Visual and Instrument cross country flight.
Course fee
- 4100 AVIATION GROUND INSTRUCTOR GROUND SCHOOL (3 CREDITS)
Prereq: 3500 or permission. Comprehensive course covering aeronautical knowledge required of FAA Advanced Ground Instructors and Instrument Ground Instructors. Subjects to include, but not limited to, private pilot, navigation, weather, federal regulations, theory of flight, aircraft performance, radio communications and navigation, and fundamentals of instruction for teachers of aviation ground instruction courses. Guided self-study. Exam fees required.
- 4150 INSTRUMENT REFRESHER - SIMULATOR (1 CREDIT)
Prereq: Instrument rating. Provides review of instrument procedures to meet FAA current requirements.
Course fee

- 4200 COMMERCIAL FLIGHT (2 CREDITS)
Prereq: AVN 4050 & AVN 3500. Flight instruction in single engine complex airplane. Preparation for Commercial Pilot Certificate ASEL.
Course fee
- 4300 MULTI-ENGINE FLIGHT (2 CREDITS)
Prereq: Commercial Pilot's certificate. FAA mandated instruction to meet FAA Practical Test Standards (PTS) for certification as Commercial Pilot AMEL. Procedures will include, but are not limited to; those with both engines operative, with 1 engine inoperative (feathered), single-engine speeds, effects of airplane configuration on engine-out performance, en route operations, and single-engine approaches and landings.
Course fee
- 4350 FLIGHT ENGINEER (3 CREDITS)
Prereq: Commercial Pilot Certificate & Permission. Comprehensive course covering aeronautical knowledge required for the flight engineer rating, including federal aviation regulation, aerodynamics, meteorology, aircraft manuals, and aircraft systems. Guided self-study for FAA Flight Engineer Knowledge Test. Exam Fee Required.
- 4400 FLIGHT INSTRUCTOR GROUND INSTRUCTION (3 CREDITS)
Prereq: AVN 3500. FAA mandated ground instruction on FAA regulations and publications, weather, advanced flight computer operations, radio navigation, advanced aircraft and engine performance, and fundamentals of instructing. Covers requirements for FAA Fundamentals of Instructing Knowledge Test and Flight Instructor Airplane Knowledge Test.
- 4450 FLIGHT INSTRUCTOR FLIGHT (3 CREDITS)
Prereq: Commercial pilot's certificate. FAA mandated ground and flight instruction with emphasis on how to instruct, analysis of maneuvers and flight from right seat.
Course fee
- 4500 INSTRUMENT INSTRUCTOR GROUND (3 CREDITS)
Prereq: AVN 3100. Comprehensive course covering aeronautical knowledge required for the Certified Flight Instructor - Instrument rating. Guided self-study for FAA Certified Flight Instructor - Instrument Knowledge Exam.
- 4550 INSTRUMENT INSTRUCTOR FLIGHT (2 CREDITS)
Prereq: Flight Instructor Certificate. Review of instrument course with emphasis on how to instruct on instruments.
Course fee
- 4600 ATP GROUND INSTRUCTION (3 CREDITS)
Prereq: Instrument Rating & Commercial Multi-Engine Rating & Permission. Comprehensive course covering specific requirements and duties of airline transport pilots in accordance with Federal Aviation Regulations. Provides aeronautical requirements for airline transport pilot written exam. Guided self-study for FAA Airline Transport Pilot Knowledge Test.
- 4620 MULTI-ENGINE CROSS COUNTRIES (1 CREDIT)
Prereq: 4300 and major. Multi-engine cross-country flight into various controlled airports utilizing CRM techniques.
Course fee

- 4650 FLIGHT INSTRUCTOR OPERATIONS - MULTI-ENGINE (2 CREDITS)
Prereq: Flight Instructor Certificate, Instrument Certificate, Commercial Multiengine Certificate. FAA mandated flight instruction in multi-engine operations and instruction practices, analysis of maneuvers, and practice teaching of multi-engine procedures.
Course fee
- 4700 ATP MULTI-ENGINE FLIGHT (2 CREDITS)
Prereq: Commercial Pilot Certificate & Multi-Engine Rating. Comprehensive course covering aircraft systems, weight and balance, FARS, and multi-engine aerodynamics. Flight including proficiency maneuvers and instrument procedures.
Course fee
- 4750 INTERNSHIP IN AVIATION OPERATIONS (4-16 CREDITS)
Prereq: Permission - Dept. Chair. Internship program in selected fields of aviation under direction of faculty member.
- 4800 BUSINESS IN AVIATION (3 CREDITS)
Prereq: AVN 3800, AVN 3900, MGT 2020, Senior. This capstone is a study of business aviation operations, management and finance to include corporate, fractional, charter, Fixed Base Operator (FBO), and various aviation business models. Students will apply research methods to actual cases from business partners and function as aviation business consultants. The result will require a synthesis of ideas and suggested solutions presented to the business partners.
- 4850 ADVANCED AIRCRAFT AND FLIGHT CREW OPERATIONS (3 CREDITS)
Prereq: AVN 4300. Introduction to advanced flight crew concepts and procedures with emphasis on professional pilot development, safety standardization, and crew resource management (CRM) techniques. The practical portion includes simulated industry-oriented flight training (air carrier instrument approach procedures, interview and training/qualification simulator profiles, and line-oriented Flight Training -- LOFT). Includes lectures and simulator instruction in Simulator/FTD.
Course fee
- 4860 PRINCIPLES OF CORPORATE FLIGHT OPERATIONS (3 CREDITS)
Prereq: AVN 4850. Corporate pilot standards and practices with in-depth review of safety, standardization, and CRM concepts as applied to corporate flight operations. Will also cover aircraft systems, preflight, performance calculations, weight and balance, and emergency procedures in various piston and turbo-prop aircraft.
- 4870 CORPORATE FLIGHT OPERATIONS INTERNSHIP (3 CREDITS)
Prereq: AVN 4860. An internship working for Ohio University Air Transport Service (A.T.S.) and/or Avionics Research Institute. Duties include flying as co-pilot in corporate flight operations in single-engine or multi-engine aircraft, as well as ground duties as part of a corporate flight management team.
- 4890 TRANSITION TO AVIATION INDUSTRY (3 CREDITS)
Prereq: AVN major/minor & (JR or SR). Discussions and exercises to improve communication and networking skills while increasing knowledge of student's area of focus in the aviation industry. Topics include resume writing, interviewing, goal setting, report writing, presentation skills, public relations, and professional responsibilities.