

AIRWAY SCIENCE (AWS)

AWS 101 Intro To Aviation (3 Credits)

Lecture: 3, **Lab:** 0

Introduction to Aviation (3) Introduction to operational parts of an airplane, meteorology, aircraft navigation systems, radio procedures, cockpit instrumentation, flight physiology, and FAA regulations governing flight activity of a private pilot. Preparation for FAA private pilot written examination. Three hours of lecture per week.

College/School: Col of Science, Engr & Tech

Department: Dept of TransportStud

AWS 101L Intro To Aviation Lab (1 Credits)

Lecture: 0, **Lab:** 2

Introduction to Aviation Laboratory (1) Introduction to rudimentary flight procedures and techniques required for basic flight. Two hours of laboratory per week. Corequisite: AWS 101.

College/School: Col of Science, Engr & Tech

Department: Dept of TransportStud

AWS 102 Aviation History (3 Credits)

Lecture: 3, **Lab:** 0

Aviation History (3) This course covers an overview of aviation history with a focus on the United States. Additionally, the course will discuss the origin of aircraft equipment. Three hours of lecture per week.

College/School: Col of Science, Engr & Tech

Department: Dept of TransportStud

AWS 103 Private Pilot Ground (3 Credits)

Lecture: 3, **Lab:** 2

Private Pilot Ground (3) Private pilot ground covers the cockpit instruments and system, fundamentals of flight, aircraft performance charts, and cross country planning. Three hours of lecture per week.

College/School: Col of Science, Engr & Tech

Department: Dept of TransportStud

AWS 105 Private Pilot Flight (3 Credits)

Lecture: 3

Private Pilot Flight (3) This course prepares the student for the FAA Private Pilot Practical Examination. Successful completion of this course will permit the student to perform as a pilot in command of single engine aircraft transport of passengers or property; excluding fees or employment. Three hours of lecture per week. FAA approved.

Prerequisite: AWS 103, Corequisite: 105L

College/School: Col of Science, Engr & Tech

Department: Dept of TransportStud

AWS 105L Private Pilot Flight Lab (3 Credits)

Lecture: 0, **Lab:** 3

Private Pilot Flight Lab (3) Practical application of aeronautical skills in a laboratory setting. Three hours of laboratory per week. Prerequisite: AWS 103. Corequisite: AWS 105.

College/School: Col of Science, Engr & Tech

Department: Dept of TransportStud

AWS 113 Intro To Flight (3 Credits)

Lecture: 3, **Lab:** 0

Introduction to Flight (3) Aircraft engine performance charts, weight and balance limitations, cross-country flight control procedures and communication. Supervised dual and solo flight simulations provided to students. Two hours of lecture and two hours of laboratory per week.

College/School: Col of Science, Engr & Tech

Department: Dept of TransportStud

AWS 113L Intro To Flight Lab (1 Credits)

Lecture: 0, **Lab:** 2

Introduction to Flight Laboratory (1) Flight instruction directed toward the private pilot certificate. Two hours of laboratory per week. Corequisite: AWS 113.

College/School: Col of Science, Engr & Tech

Department: Dept of TransportStud

AWS 120 Transportation Survey (3 Credits)

Lecture: 3, **Lab:** 0

Transportation Survey (3) Transportation modes and their interrelationships; significance of, evolution of, social and environmental impacts of transportation systems; urban transportation problems. Three hours of lecture per week.

College/School: Col of Science, Engr & Tech

Department: Dept of TransportStud

AWS 200 Basics of Communications (3 Credits)

Lecture: 3

Basics of Communications (3) In accordance with FAA orders 7110.65 and 7110.10, the student will identify basic radio and interphone communications, ICAO phonetics, numbers usage, basic phraseology, coordination procedures, purpose and steps of the position relief briefing. Three hours of lecture per week.

College/School: Col of Science, Engr & Tech

Department: Dept of TransportStud

AWS 201 Flight Meteorology (3 Credits)

Lecture: 3, **Lab:** 0

Flight Meteorology (3) Survey of atmospheric and weather-related phenomena and their impact on flight operations, including the interface of airmen and flight service stations. Three hours of lecture per week. Corequisite: AWS 201L.

College/School: Col of Science, Engr & Tech

Department: Dept of TransportStud

AWS 201L Flight Met Lab (1 Credits)

Lecture: 0, **Lab:** 2

Flight Meteorology Laboratory (1) Introduction to the methods and techniques of flight meteorology. Two hours of laboratory per week. Corequisite: AWS 201.

College/School: Col of Science, Engr & Tech

Department: Dept of TransportStud

AWS 203 Intro To Air Traffic Control (3 Credits)

Lecture: 3

Introduction to Air Traffic Control (3) Study of the role of centers, approach towers, flight service stations, communication, and navigation procedures. Three hours of lecture per week.

College/School: Col of Science, Engr & Tech

Department: Dept of TransportStud

AWS 214 Intro to Homeland Security (3 Credits)

Lecture: 3

Introduction to Homeland Security (3) This course provides a survey of historical events, practices, and policies of the emergency management system in the aviation industry. Three hours of lecture per week.

Prerequisite: AWS 101, AWS 205

College/School: Col of Science, Engr & Tech

Department: Dept of TransportStud

AWS 218 Instrument Ground/Flight (3 Credits)**Lecture:** 3, **Lab:** 0

Instrument Ground (3) The course is designed to prepare students to successfully complete the FAA Instrument Knowledge Test. Topics of the course include FARs and AIM, ATC system and procedures, IFR navigation and approaches, enroute and instrument approach charts, weather, safe and efficient aircraft operations, and CRM. Three hours of lecture per week. Prerequisite: AWS 103, AWS 105 Corequisite: AWS 218L

College/School: Col of Science, Engr & Tech**Department:** Dept of TransportStud**AWS 218L Instrument Flight Lab (2 Credits)****Lecture:** 0, **Lab:** 2

Instrument Flight (1) Students will attain the knowledge and skill necessary for Instrument ground and flight rating and exercise the privileges of the rating. Completion of the FAA knowledge exam is necessary for this rating. Prerequisite: AWS 103, AWS 105, Corequisite: AWS 218

College/School: Col of Science, Engr & Tech**Department:** Dept of TransportStud**AWS 310 Emer Planning and Mitigation (3 Credits)****Lecture:** 2, **Lab:** 3

Emergency Planning and Mitigation (3) Provides foundation knowledge and develops skills in emergency planning, hazard mitigation, and incident management in aviation environments. Three hours of lecture per week. Prerequisite: AWS 205

College/School: Col of Science, Engr & Tech**Department:** Dept of TransportStud**AWS 312 Commercial Pilot Certification (3 Credits)****Lecture:** 3, **Lab:** 0

Commercial Pilot Certification (3) Successful completion of the course will certify the pilot to perform as a pilot in command of single engine aircraft and hired and compensated. Course includes advanced aerodynamics, aircraft performance, precision maneuvers, extended cross-country and night flight, FAA regulations, and an introduction to advanced systems of highly developed futuristic aircraft. FAA approved. Three hours of lecture per week. Prerequisite: AWS 218, AWS 218L

College/School: Col of Science, Engr & Tech**Department:** Dept of TransportStud**AWS 312L COMMERCIAL PILOT RATING LAB (2 Credits)****Lab:** 2**College/School:** Col of Science, Engr & Tech**Department:** Dept of TransportStud**AWS 313 Int Flight Theory (3 Credits)****Lecture:** 3, **Lab:** 0

Intermediate Flight Theory (3) Aerodynamics, weight and balance computations, performance problems, flight maneuvers, aircraft power plant operations, flight physiology, cockpit instrumentation, and associated FAA regulations. Preparation for FAA commercial pilot written examination. Three hours of lecture per week.

College/School: Col of Science, Engr & Tech**Department:** Dept of TransportStud**AWS 315 Multi-Engine Rating (3 Credits)****Lecture:** 3

Multi-Engine Rating (3) This course is designed to prepare the student for the FAA Multiengine Rating Practical Examination. Successful completion of this course will permit the student to operate as a pilot in command of a multiengine airplane. FAA Approved. Three hours of lecture per week. Prerequisite: AWS 312.

College/School: Col of Science, Engr & Tech**Department:** Dept of TransportStud**AWS 321 Air Traffic Control (3 Credits)****Lecture:** 3, **Lab:** 0

Air Traffic Control (3) Study of the national air traffic control system emphasizing traffic control procedures and the role of centers, approach towers, flight service stations, communications, and navigation procedures. Three hours of lecture per week. Corequisite: AWS 321L.

College/School: Col of Science, Engr & Tech**Department:** Dept of TransportStud**AWS 321L Air Traffic Control Lab (1 Credits)****Lecture:** 0, **Lab:** 2

Air Traffic Control Laboratory (1) Practical application of air traffic control skills in a laboratory setting. Two hours of laboratory per week. Corequisite: AWS 321.

College/School: Col of Science, Engr & Tech**Department:** Dept of TransportStud**AWS 345 Principles Aviation Property (3 Credits)****Lecture:** 3

Principles of Aviation Property (3) Study of the processes of planning, organizing, directing, and controlling aviation property at fixed based operations. Three hours of lecture per week. Prerequisite: AWS 205

College/School: Col of Science, Engr & Tech**Department:** Dept of TransportStud**AWS 351 Aviation Law (3 Credits)****Lecture:** 3, **Lab:** 0

Aviation Law (3) Chronological development of aviation law, federal and state regulatory functions, rights and liabilities of aviators, commercial air carrier operations, and the traveling public. Includes FAA regulations and directives governing airport operations, air carrier safety, and aviation security. Three hours of lecture per week.

College/School: Col of Science, Engr & Tech**Department:** Dept of TransportStud**AWS 352 Aviation Business Org Mgmt (3 Credits)****Lecture:** 3

Aviation Business Organization Management (3) A study of the role of business operations and techniques at small and large airports. Three hours of lecture per week. Prerequisite: AWS 205

College/School: Col of Science, Engr & Tech**Department:** Dept of TransportStud**AWS 371 Airport Mgmt (3 Credits)****Lecture:** 3, **Lab:** 0

Airport Management (3) Origin of early legislation shaping development of present National Airport System; procedures for financing airport construction, phases of airport master planning, daily operations, and contractual provisions governing the operations of an airline. Three hours of lecture per week.

College/School: Col of Science, Engr & Tech**Department:** Dept of TransportStud

AWS 380 Flight Instruction Airplane (3 Credits)**Lecture:** 3

Flight Instruction Airplane (3) This course is a study of the fundamentals of airplane flight instruction involving educational principles of the learning and teaching process, communication, teaching methods, critiquing, evaluating, and planning instructional activity. Three hours of lecture per week. Prerequisite: AWS 315.

College/School: Col of Science, Engr & Tech**Department:** Dept of TransportStud**AWS 381 Air Carrier Mgmt (3 Credits)****Lecture:** 3, **Lab:** 0

Air Carrier Management (3) Historical development of U.S. trunk carrier operations and regulatory interfaces with the federal government, International Civil Aviation Organization (ICAO), and the International Air Transport Association (IATA). Three hours of lecture per week.

College/School: Col of Science, Engr & Tech**Department:** Dept of TransportStud**AWS 400 Flight Instructor Instrument (3 Credits)****Lecture:** 3

Flight Instructor Instrument (3) Instruction, flight training and practice teaching to obtain the aeronautical skills and knowledge necessary for FAA Certified Flight Instructor, Instruments. Prerequisite: AWS 315

College/School: Col of Science, Engr & Tech**Department:** Dept of TransportStud**AWS 401 Adv Aerodynamics (3 Credits)****Lecture:** 3

Advanced Aerodynamics (3) Advanced theories of flight and flight factors, including airfoil shape, drag velocity, lift and thrust, stability and control; advanced principles of performance, including capabilities and limitations, performance and design criteria, load factors, weight and balance charts, comparative analysis of aircraft, and certification of aircraft. Three hours of lecture per week. Prerequisite: 312

College/School: Col of Science, Engr & Tech**Department:** Dept of TransportStud**AWS 402 Effective HSEM CM & Leadership (3 Credits)****Lecture:** 3

Effective HSEM Communications & Leadership (3) Prepares future aviation professionals with communication and leadership skills to fulfill teambuilding roles with government and non-government agencies during times of aviation disasters. Three hours of lecture per week. Prerequisite or Corequisite: AWS 310

College/School: Col of Science, Engr & Tech**Department:** Dept of TransportStud**AWS 403 Turboprop Familiarization (3 Credits)****Lecture:** 3

Turboprop Familiarization (3) This course studies Turboprop and turbojet engines and their operation. Electrical, pressurization, hydraulic, and fuel systems will be examined. Three hours of lecture per week. Prerequisite: AWS 315

College/School: Col of Science, Engr & Tech**Department:** Dept of TransportStud**AWS 404 Flight Safety (3 Credits)****Lecture:** 3, **Lab:** 0

Flight Safety (3) Analysis of factors and procedures relating to aviation safety; techniques for accident prevention; development of safety and emergency response programs; procedures used in accident investigations; and human factors. Three hours of lecture per week.

College/School: Col of Science, Engr & Tech**Department:** Dept of TransportStud**AWS 406 Natl Airspace System (3 Credits)****Lecture:** 3, **Lab:** 0

The National Airspace System (3) Overview of the proposed NAS Plan, including problems such as airspace allocation, airspace usage, facilities, and safety. Three hours of lecture per week.

College/School: Col of Science, Engr & Tech**Department:** Dept of TransportStud**AWS 407 Aviation Services Opers (3 Credits)****Lecture:** 3, **Lab:** 0

Aviation Services Operations (3) Study of the organization, management, and overall operating procedures of a fixed-based operation, including the study of contracts and regulations governing fueling operations and the economics of fuel distribution at airports. Three hours of lecture per week.

College/School: Col of Science, Engr & Tech**Department:** Dept of TransportStud**AWS 409 Gen Aviation Mgmt (3 Credits)****Lecture:** 3

General Aviation Management (Fixed Based Ops) (3) A study of fixed based operations and its functions and responsibilities of managing the facility. The course will also examine sources of profit, management, maintenance and operations. Three hours of lecture per week. Prerequisite: AWS 205

College/School: Col of Science, Engr & Tech**Department:** Dept of TransportStud**AWS 415 Aeronautical Charts & Publicat (3 Credits)****Lecture:** 3

Aeronautical Charts and Publications (3) The student will become familiar with VFR Charts, FAA publications, en-route IFR Charts, SI Ds & STARS, approach plates, and emergency rescue procedures. Three hours of lecture per week. Prerequisite: AWS 312

College/School: Col of Science, Engr & Tech**Department:** Dept of TransportStud**AWS 425 Flight Physiology (3 Credits)****Lecture:** 3

Flight Physiology (3) A study of the causes, symptoms, treatment, and prevention of medical issues associated with flight. Three hours of lecture per week. Prerequisite: AWS 105, AWS 105L, AWS 315

College/School: Col of Science, Engr & Tech**Department:** Dept of TransportStud**AWS 444 Aviation Proj System Mgmt (3 Credits)****Lecture:** 3

Aviation Project System Management (3) A study of the role of project managers using software programs and systems analysis techniques. Three hours of lecture per week. Prerequisite: AWS 205 Corequisite: 444L

College/School: Col of Science, Engr & Tech**Department:** Dept of TransportStud**AWS 444L Aviation Proj System Mgmt Lab (3 Credits)****Lab:** 3

Aviation Project System Management Lab (1) Laboratory training of the role of project managers using software programs and systems analysis techniques. Prerequisite 205, Co-requisite: AWS 444

College/School: Col of Science, Engr & Tech**Department:** Dept of TransportStud

AWS 495 Field Work Pract in AWS (3,6 Credits)

Lecture: 0, **Lab:** 20

Field Work Practicum in Airway Science (3) Directed study involving field placement which provides students with practical exposure to present operational and managerial practices in aviation.

College/School: Col of Science, Engr & Tech

Department: Dept of TransportStud