

AVIATION SCIENCE - PILOT

AVI 100 AVIATION INTRODUCTORY SEMINAR

1 Lecture 0 Lab 1 Credit Hours(s)

This course is designed for students in the aviation science curricula. The course will focus on personal development and effective strategies for successful completion of the degree requirements. Personal educational goals and curriculum management, transfer and employment opportunities, technical skills and utilizing college and flight school resources will be examined in this seminar.

AVI 101 INTRODUCTION TO FLIGHT

4 Lecture 0 Lab 4 Credit Hours(s)

This course is a study of the required knowledge for a Private Pilot's license. Subjects covered in this course include: theory of flight, basic aerodynamics, airplane operation/system/performance, navigation, flight computations, communications, publications, regulations and basic emergency procedures. Students are provided the information necessary to complete the FAA Private Pilot Knowledge Exam for Airplane/SEL. This class will be successfully completed and a grade provided when the FAA written exam is passed or in class final exam is passed at the discretion of the instructor. The fee for the FAA written test is not covered in the course fee.

AVI 102 AVIATION HISTORY

3 Lecture 0 Lab 3 Credit Hours(s)

This course provides a general description of the entire field of aviation starting with the early achievements of flight and progressing through milestones to the present age. This course contains an overview of the governmental involvement with the aviation industry from establishing the postal routes, safety regulations, and airline subsidies through deregulation of the airline industry. This course includes the contributions to aviation by women, minorities, and other cultures. The introduction and development of power flight, from Zeppelins, Flying Boats, through the Boeing 777, and the X-30 Oriental Express and beyond is also explored. An extended field trip will be made to the Rhinebeck Aerodrome to see the aircraft from early years of flight.

AVI 104 INSTRUMENT FLIGHT

4 Lecture 0 Lab 4 Credit Hours(s)

This course is a study of the instrument flying techniques and procedures in conjunction with modern ILS, VOR, ADF, GPS, and radar facilities. The course includes the study of basic attitude instrument flying, instrument navigation procedures, holding, precision and non-precision approach and departure procedures and macro and micro-metrology and analysis. Students are provided the information necessary to complete the FAA Instrument Rating Knowledge Exam. This class will be

successfully completed and a grade provided when the FAA knowledge exam is passed. The fee for the FAA written test is not covered in the course fee.

Prerequisites: AVI101 or equivalent.

AVI 110 AVIATION LAW

3 Lecture 0 Lab 3 Credit Hours(s)

Course will cover the history of aviation law. The Code of Federal Regulations as they pertain to the aviation community. Ecological concerns regarding aviation noise, noise abatement, and the role of the State and Federal Government. Liability issues and tort reform, as they pertain to private and commercial flight operations. Prerequisites: AVI 100 and AVI 102.

AVI 111 INTRO TO FLIGHT LABORATORY

0 Lecture 3 Lab 1 Credit Hours(s)

This course provides a student with the practical flight experience to acquire a Private Pilot's license. The primary flight training includes dual and solo flight time to meet FAA practical testing standards in such training as basic flight maneuvers, takeoff and landing, night flying and cross-country procedures. Minimum FAA flight training hours apply and students will, in most cases, exceed those minimum hours in order to meet practical test standards. Completion of the FAA knowledge exam is required for the certificate. The cost of flight school is considerable and is subject to change.

Prerequisite: FAA Second Class Medical Certificate (required), FAA First Class Medical Certificate (recommended); proof of US citizenship or completion of US Office of Homeland Security, Transportation Security Administration background check requirements.

Co-requisite: AVI101 or equivalent.

AVI 114 INSTRUMENT FLIGHT LABORATORY

0 Lecture 3 Lab 1 Credit Hours(s)

This course provides a student with the practical flight experience in an aircraft and an approved flight training device to acquire an Instrument Rating. The primary instrument flight training includes dual flight time to meet FAA practical testing standards in such training as attitude instrument flying, departure, enroute and approach procedures in the instrument flight environment, instrument night flying and cross-country procedures. Minimum FAA flight training hours apply and students will, in most cases, exceed those minimum hours in order to meet practical test standards. Completion of the FAA knowledge exam is required for this certificate. The cost of flight school is considerable and is subject to change. Prerequisite: AVI 101 and AVI 111 (Introduction to Flight Lab); FAA Second Class Medical Certificate (required); FAA First Class Medical Certificate (recommended); proof of US citizenship or completion of the US Office of Homeland Security, Transportation Security Administration background check requirements.

Corequisite: AVI 104 or equivalent.

AVI 116 FLIGHT SAFETY

3 Lecture 0 Lab 3 Credit Hours(s)

This course introduces practical safety material, organizations and equipment necessary to conduct safe daily flight operations. All factors including weather, maintenance, equipment and human factors will be examined with particular emphasis on critical decision making under stress conditions. Proper decision making will be based on knowledge of formal weather briefing techniques flight plan filing, search and rescue methods, post crash survival, aircraft maintenance programs, accident /incident report forms, airport rescue and fire fighting, the role of the NTSB flight safety organizations and modern hardware.

Prerequisite AVI-104 Permission of the department

AVI 201 AVIATION MANAGEMENT

3 Lecture 0 Lab 3 Credit Hours(s)

Presents operational and managerial aspects of general aviation, charter service and the airlines Emphasizes corporate aviation and fixed base operations (FBO), flight training, corporate aviation, general aviation aircraft, business aircraft ownership and management methods, and regulations associated with general aviation operations

Prerequisites: AVI 101 Introduction to Flight

AVI 208 COMMERCIAL FLIGHT

3 Lecture 0 Lab 3 Credit Hours(s)

This course is a study of the required knowledge information for a Commercial Pilot's license. Subjects covered in this course include: advanced aerodynamics, advanced aircraft systems, physiology, emergency procedures and planning, flight safety, and aeronautical decision making. There is a focus on crew resource management and flight safety operations to include Part 91 and Part 135 regulations and operations. Students will receive an instructor endorsement for the Commercial Pilot Knowledge Exam at the completion of the course requirements for an airplane-SEL. The fee for the FAA Knowledge Exam is not covered in the course fee.

Prerequisites: AVI 104

AVI 209 COMMERCIAL FLIGHT LABORATORY II

0 Lecture 3 Lab 1 Credit Hours(s)

This course provides a student with continued practical experience in aviation crew resource management. Continued use of effective communication skills are formulated and evaluated throughout this course. Students are introduced to the function and operation of advanced aircraft systems; practical experience in accelerated stalls and advanced maneuvers in order to apply

aerodynamic theory. Students are trained on advanced aircraft systems, incorporating the associated emergency procedures for these systems and planning for commercial flight situations. Students completing this course in conjunction with AVI 218 will receive the practical flight experience requirements necessary to complete the FAA Commercial Practical Exam and receive a Commercial Pilot Certificate. The cost of flight school is considerable and is subject to change.

Prerequisite: AVI 208 and AVI 218 (Commercial Flight Laboratory I); FAA Second Class Medical Certificate (required), FAA First Class Medical Certificate (recommended); proof of US citizenship or completion of the US Office of Homeland Security, Transportation Security Administration background check requirements.

AVI 218 COMMERCIAL FLIGHT LABORATORY I

0 Lecture 3 Lab 1 Credit Hours(s)

This course provides a student with the practical flight experience in a single engine aircraft toward the FAA cross country requirement to obtain a Commercial Pilot Certificate. This course alone will not complete all requirements for the commercial certificate. Students will gain flight experience in day and night cross-country both dual and solo. Students will be introduced to the crew resource management concept, function and practical use of standard operating procedures, minimum equipment lists and commercial flight operations (Part 135 and Part 121) scenarios. The cost of flight school is considerable and is subject to change.

Prerequisite: AVI104 and AVI114(Instrument Flight Lab), or equivalent Private Pilot w/Instrument Rating; FAA Second Class Medical Certificate (required), FAA First Class Medical Certificate (recommended); proof of US citizenship or completion of the US Office of Homeland Security, Transportation Security Administration background check requirements.

Corequisite: AVI208 or equivalent.

AVI 271 SPECIAL STUDY PROJECT I

1 Lecture 0 Lab 1 Credit Hours(s)

A special learning experience designed by one or more students with the cooperation and approval of a faculty member. Prior to registering for any special studies course, the approval of the department head must be obtained. Proposed study plans require departmental approval. Projects may be based on reading, research, community service, work experience, or other activities that advance the student's knowledge and competence in the field of Aviation Science and related areas. The student's time commitment to the project will be approximately 35-50 hours.

AVI 272 SPECIAL STUDY PROJECT II

2 Lecture 0 Lab 2 Credit Hours(s)

Similar to AVI 271, except that the student's time commitment to this project will be approximately 70-90 hours.

AVI 273 SPECIAL STUDY PROJECT III

3 Lecture 0 Lab 3 Credit Hours(s)

Similar to AVI 271, except that the student's time commitment to this project will be approximately 105-135 hours.