

# AVFT - Aviation Flight Training

## **AVFT 121 Aviation Fundamentals: 4 Credits (4 Lec)**

(F) Introduction to basic flight principles. Course includes the principles of flight (basic aerodynamics), aircraft systems, performance, weight and balance, aviation physiology, federal air regulations, and flight publications.

## **AVFT 122 Private Pilot - Flight: 2 Credits (4 Lab)**

Students must enroll in this course while pursuing a private pilot's certificate from an approved flight school. Course credits will be awarded upon receipt of a copy of the student's private pilot certificate.

## **AVFT 130 Meteorology for Aviation: 3 Credits (3 Lec)**

Provides a detailed introduction to the environmental factors that are critical to safe flight operations. Includes the following: thermal patterns, horizontal and vertical motion, moisture clouds, precipitation, air masses, fronts, cyclones, thunderstorms and aviation hazards. Will also include meteorological flight planning, use of weather information systems, and reports and charts used for aviation weather reporting and forecasting.

## **AVFT 141 Advanced Navigation Systems: 3 Credits (3 Lec)**

PREREQUISITE: AVFT 121 or consent of instructor. This course is designed to provide sufficient background and practical applications of an integrated avionics system. Upon successful completion of this course the student will have the knowledge required to apply the Garmin G1000 integrated avionics to the IFR flight environment

## **AVFT 142 Instrument Flight: 2 Credits (2 Lab)**

PREREQUISITE: AVFT 121 and possession of an FAA-approved Private Pilot Certificate or Program Director approval

COREQUISITE: AVFT 143. (Course can be offered throughout the year depending on when students complete their Private Pilot Certification with our flight provider at the Bozeman Yellowstone Airport) Students must enroll in this course while pursuing the Instrument certificate at an approved flight school. Credits will be awarded upon receipt of a copy of the student's instrument rating

## **AVFT 143 Instrument Ground: 3 Credits (3 Lec)**

PREREQUISITE: AVFT 121. An introduction to flight under IFR conditions. Course includes basic instrument flying, flight instruments, IFR navigation charts and approach plates, IFR regulations and procedures, ATC clearances and IFR flight planning. Completion of the course will prepare the student for the Instrument Knowledge Exam

## **AVFT 150 Aviation Operations: 3 Credits (3 Lec)**

An overview of general aviation operations, specifically the operation and management of the Fixed Base Operation (FBO). This course also covers current events and trends affecting the general aviation industry as a whole.

## **AVFT 160 Enhancing Human Performance in Aviation: 4 Credits (4 Lec)**

(F) Majors only. An examination of the human factors that affect performance in aviation, including physiological, psychological and system factors.

## **AVFT 171 Aircraft Systems for Pilots: 3 Credits (3 Lec)**

Introduction to basic aircraft systems found on modern single and multi-engine reciprocating and turbine aircraft. Topics will include piston engines with a focus on turbine engines, electrical systems; hydraulic and pneumatic systems; radios and instruments; propellers; and pressurization systems. Course also includes maintenance requirements, documentation, and trouble shooting from the cockpit. This course will focus on the systems commonly found on training and commercial aircraft.

## **AVFT 191 Special Topics: 1-4 Credits (1-4 Lec)**

Course prerequisites as determined for each offering.

## **AVFT 245 Commercial Ground: 3 Credits (3 Lec)**

PREREQUISITE: AVFT 122. (F) Commercial Flight Maneuvers, Airplane Aerodynamics, Advanced Performance, Power plants (including fuel injection and turbo-charging), Environmental Control Systems and Retractable Landing Gear Systems will be taught. Also, airports (marking and lighting) will be reviewed. Advanced Weight and Balance, and Part 61, 91, 125, and 135 and NTSB 830 Commercial Pilot Regulations will build on the private pilot regulations learned earlier. High Altitude Physiology, and High Performance and Turbine-Aircraft Flight Operations will be emphasized

## **AVFT 252 Commercial Flight 1: 2 Credits (2 Lab)**

PREREQUISITE: AVFT 142 or possession of an FAA approved Instrument Certification or Program Director Approval. (This course may be offered throughout the year depending on the student's successful completion of flight training and receipt of an FAA Instrument Certification. ) Students must enroll in this course while pursuing the Multi-Engine commercial certificate at an approved flight school. Credits will be awarded upon completion of 57.5 flight hours of Commercial flight training

## **AVFT 253 Commercial Flight 2: 2 Credits (2 Lab)**

PREREQUISITES: AVFT 142 Students must enroll in this course while pursuing the Multi-engine commercial certificate at an approved flight school. Credits will be awarded upon completion of the FAA Commercial Pilot Certificate. Department of Workforce Programs

## **AVFT 260 Aviation Safety: 3 Credits (3 Lec)**

This course will concentrate primarily on the organizations and processes that govern commercial and general aviation safety in the United States. This course will also provide an overview of modern techniques used in accident investigation. Also covered are descriptions of major factors and the causation of aviation accidents.

## **AVFT 261 Flight Instructor Theory: 4 Credits (4 Lec)**

PREREQUISITE: AVFT 142. (Sp) Theory of flight and ground instruction, aircraft performance, analysis of flight maneuvers, and other basic theory as needed to become a certified flight instructor

## **AVFT 262 Advanced Aircraft Theory: 3 Credits (3 Lec)**

(3 Lec) S Prerequisite: Private Pilot Certificate and Instrument rating, or consent of instructor. Introduction to high performance, multi engine, aerobatic, and tailwheel aircraft; their systems, performance, weight and balance computations, flight procedures, characteristics, and emergencies. Unusual attitude recoveries, IFR and VFR.

## **AVFT 263 Aviation Regulations and Professional Conduct: 3 Credits (3 Lec)**

Provides a detailed study of the regulations and procedures common to the aviation industry as well as a survey of the legal environment and the standards of conduct required of professional pilots.

## **AVFT 291 Special Topics: 1-4 Credits ()**

## **AVFT 491 Special Topics: 1-4 Credits ()**