

Aviation Technology (AVTY)

Community & Technical College

Aviation Program (<https://www.ctc.uaf.edu/programs/aviation-maintenance/>)
907-455-2800

AVTY F100 Private Pilot Ground School

4 Credits
Offered Fall
Study of aircraft and engine operation and limitations, aircraft flight instruments, navigation, navigation computers, national weather information and dissemination services. Federal aviation regulations, flight information publications, radio communications and navigation. Preparation for FAA private pilot-airplane written exam.

Lecture + Lab + Other: 4 + 0 + 0

Grading System: Letter Grades with option of Plus/Minus

AVTY F101 Private Pilot Flight Training

2 Credits
Offered As Demand Warrants
Flight instruction is arranged by student through approved pilot school or independent flight instructor. Training will meet federal aviation regulations. Course completion requires awarding of private pilot certificate.

Prerequisites: Department approval required.

Lecture + Lab + Other: 2 + 0 + 0

Grading System: Letter Grades with option of Plus/Minus

AVTY F102 Commercial Ground Instruction

3 Credits
Offered Spring
Advanced study of aircraft performance, airplane systems (including complex single engine, multi-engine and turboprop aircraft), navigation, regulations and meteorology. Employment considerations for commercial pilots surveyed. Preparation for the FAA commercial pilot-airplane written exam.

Lecture + Lab + Other: 3 + 0 + 0

Grading System: Letter Grades with option of Plus/Minus

AVTY F103 Commercial Flight Training

2 Credits
Offered As Demand Warrants
Flight instruction is arranged by student through approved pilot school or independent flight instructor. Training will meet federal aviation regulations. Course completion requires awarding of commercial pilot certificate.

Prerequisites: Private Pilot certificate, AVTY F102 or concurrent enrollment, or passing score on FAA Commercial Pilot written exam, department approval required.

Lecture + Lab + Other: 2 + 0 + 0

Grading System: Letter Grades with option of Plus/Minus

AVTY F105 Seaplane Flight Training

1 Credit
Offered As Demand Warrants
Flight instruction is arranged by student through approved pilot school or independent flight instructor. Training will meet federal aviation regulations. Course completion requires awarding of single-engine sea rating.

Prerequisites: Private pilot certificate or higher, department approval required.

Lecture + Lab + Other: 1 + 0 + 0

Grading System: Letter Grades with option of Plus/Minus

AVTY F107 Multi-Engine Flight Training

1 Credit
Offered As Demand Warrants
Flight instruction is arranged by student through approved pilot school or independent flight instructor. Training will meet federal aviation regulations. Course completion requires awarding of multi-engine rating.

Prerequisites: Private pilot certificate or higher, department approval required.

Lecture + Lab + Other: 1 + 0 + 0

Grading System: Letter Grades with option of Plus/Minus

AVTY F108 Introduction to Skis

1 Credit
Offered As Demand Warrants
Pilot instruction with a certified flight instructor or flight school in techniques of ski-plane operation and cold weather maintenance. The student is responsible for making arrangements for an appropriate aircraft, instructor and financing.

Prerequisites: Private pilot certificate.

Lecture + Lab + Other: 1 + 0 + 0

Grading System: Letter Grades with option of Plus/Minus

AVTY F109 Glider Flight Training

1 Credit
Offered As Demand Warrants
Flight instruction is arranged by student through approved pilot school or independent flight instructor. Training will meet federal aviation regulations. Course completion requires awarding of glider and private or commercial pilot certificate with a glider category rating.

Prerequisites: Department approval.

Lecture + Lab + Other: 1 + 0 + 0

Grading System: Letter Grades with option of Plus/Minus

AVTY F111 Fundamentals of Aviation

3 Credits
Offered As Demand Warrants
Basic concepts associated with the aircraft and its environment. Aircraft and its components, including basic systems, Federal Aviation Administration regulations, airports and airspace utilization, aeronautical charts, navigation, weather theory, medical and emergency factors.

Lecture + Lab + Other: 3 + 0 + 0

Grading System: Letter Grades with option of Plus/Minus

AVTY F116 Aviation History

3 Credits
Offered As Demand Warrants
Aviation from its early days to the present. People, places and machines contributing to the development of Alaskan aviation.

Lecture + Lab + Other: 3 + 0 + 0

Grading System: Letter Grades with option of Plus/Minus

AVTY F121 Introduction to Aviation Safety

2 Credits
Offered As Demand Warrants
An introduction to aviation safety designed to develop a positive attitude toward safety, refresh aeronautical knowledge and improve aeronautical skills. Proof required first day of class.

Prerequisites: Pilot's Certificate or enrollment in Aviation program.

Lecture + Lab + Other: 2 + 0 + 0

Grading System: Letter Grades with option of Plus/Minus

AVTY F122 Private Pilot Flight Training – Rotorcraft I

1.5 Credits

Offered As Demand Warrants

Introduces fundamentals flight skills and the practical application of aviation weather, performance, navigation, Federal Aviation Administration (FAA) regulations, flight planning, radio procedures and human factors. Includes compliance with FAA flight hour and certification requirements.

Prerequisites: AVTY F100 (may be taken concurrently); admission to the Professional Piloting program.

Lecture + Lab + Other: 0 + 3 + 0

Grading System: Letter Grades with option of Plus/Minus

AVTY F124 Private Pilot Flight Training – Rotorcraft II

1.5 Credits

Offered As Demand Warrants

Develops fundamental flight skills, and the practical application of aviation weather, performance, navigation, Federal Aviation Administration (FAA) regulations, flight planning, radio procedures and human factors. Includes compliance with FAA flight hour and certification requirements.

Prerequisites: AVTY F122; admission to the Professional Piloting program; students must hold an FAA Student Pilot certificate and at least an FAA Class III medical.

Lecture + Lab + Other: 0 + 3 + 0

Grading System: Letter Grades with option of Plus/Minus

AVTY F126 Private Pilot Flight Training – Rotorcraft III

1.5 Credits

Offered As Demand Warrants

Assesses fundamental flight skills and the practical application of aviation weather, performance, navigation, Federal Aviation Administration (FAA) regulations, flight planning, radio procedures and human factors. Includes compliance with FAA flight hour and certification requirements.

Prerequisites: AVTY F100 or FAA Student Pilot; admission to the Professional Piloting program.

Lecture + Lab + Other: 0 + 3 + 0

Grading System: Letter Grades with option of Plus/Minus

AVTY F128 Instrument Flight Training – Rotorcraft

2 Credits

Offered As Demand Warrants

Introduces fundamental skills of instrument flight, including basic attitude instrument flying, procedures, navigation systems and instrument flight rules. Develops and assesses the fundamental skills of instrument flight, including basic attitude instrument flying, procedures, navigation systems and instrument flight rules. Includes compliance with Federal Aviation Administration flight hour and certification requirements.

Prerequisites: AVTY F200 (may be taken concurrently); FAA Private Pilot Certificate; admission to the Professional Piloting program.

Lecture + Lab + Other: 0 + 4 + 0

Grading System: Letter Grades with option of Plus/Minus

AVTY F155 Preventive Maintenance

1-3 Credits

Offered Spring

Mechanics of the airplane, its powerplant and systems to enable the student to evaluate malfunctions and make maintenance decisions. Designed for the pilot-owner. Proof required first day of class.

Prerequisites: Pilot's Certificate or enrollment in Aviation program.

Lecture + Lab + Other: 1-3 + 0 + 0

Grading System: Letter Grades with option of Plus/Minus

Repeatable for Credit: May be taken 3 times for up to 3 credits

AVTY F200 Instrument Ground School

4 Credits

Offered Fall

Instrument flight operations in detail, altitude instrument flying, air traffic control and navigation facilities, pilot responsibilities. IFR enroute charts, instrument approach procedures. Federal Aviation Regulations, flight planning, human factors and meteorology. Includes optional visits to FAA, RAPCO and ARTCC facilities. Proof required first day of class.

Prerequisites: Pilot's Certificate or enrollment in Aviation program.

Lecture + Lab + Other: 3 + 3 + 0

Grading System: Letter Grades with option of Plus/Minus

AVTY F201 Instrument Pilot Training

2 Credits

Offered As Demand Warrants

Flight instruction is arranged by student through approved pilot school or independent flight instructor. Cost of flight instruction varies with location of instruction. Training will be in accordance with current Federal Aviation Regulations. Course completion requires awarding of instrument rating.

Prerequisites: Private or Commercial Pilot Certificate or AVTY F200 (may be taken concurrently) or passing score on FAA Private or Commercial Pilot written exam; department approval.

Lecture + Lab + Other: 2 + 0 + 0

Grading System: Letter Grades with option of Plus/Minus

AVTY F202 Flight Instructor Ground School

3 Credits

Offered As Demand Warrants

Preparation for the FAA certified flight instructor or advanced ground instructor written exam.

Prerequisites: Commercial pilot certificate.

Lecture + Lab + Other: 3 + 0 + 0

Grading System: Letter Grades with option of Plus/Minus

AVTY F203 Flight Instructor Flight Training

2 Credits

Offered As Demand Warrants

Flight instruction is arranged by student through approved pilot school or independent flight instructor. Training meets federal aviation regulations. Course completion requires awarding of certified flight instructor certificate.

Prerequisites: Commercial pilot certificate with instrument rating; AVTY F202; or concurrent enrollment; or passing score on FAA flight instructor written exams; department approval.

Lecture + Lab + Other: 2 + 0 + 0

Grading System: Letter Grades with option of Plus/Minus

AVTY F205 Instrument Instructor Flying

3 Credits

Offered As Demand Warrants

Preparation for certification as an instrument flight instructor.

Prerequisites: Commercial flight instructor certificate and department approval.

Lecture + Lab + Other: 3 + 0 + 0

Grading System: Letter Grades with option of Plus/Minus

AVTY F206 ATP Ground Instruction

4 Credits

Offered As Demand Warrants

Preparation for the FAA airline transport pilot written exam.

Prerequisites: Compliance with FAR 61.151 and 61.155 or department permission.

Lecture + Lab + Other: 4 + 0 + 0

Grading System: Letter Grades with option of Plus/Minus

AVTY F207 ATP Flying

2 Credits

Offered As Demand Warrants

Qualification for single- or multi-engine FAA airline transport pilot certificate.

Prerequisites: Commercial pilot certificate, 1500 hours of flight time as pilot or equivalent as described in FAR 61.155; AVTY F206 or passing score on FAA airline transport pilot written exam; current FAA first class medical certificate.

Lecture + Lab + Other: 2 + 0 + 0**Grading System:** Letter Grades with option of Plus/Minus**AVTY F211 Instrument Flying**

3 Credits

Offered As Demand Warrants

Lecture + Lab + Other: 3 + 0 + 0**Grading System:** Letter Grades with option of Plus/Minus**AVTY F220 Basic Flight Physiology**

3 Credits

Offered As Demand Warrants

Understanding the physiology of flight and using this knowledge to explain why certain phenomena occur to the mind and body during flight. Proof required first day of class.

Prerequisites: Pilot's Certificate or enrollment in Aviation program.**Lecture + Lab + Other:** 3 + 0 + 0**Grading System:** Letter Grades with option of Plus/Minus**AVTY F226 Flight Engineer Ground School**

4 Credits

Offered As Demand Warrants

A comprehensive examination of the major systems of one of the following aircraft: turbojet (B-727, DC-8, B-707); turboprop (L-382, L-188); or reciprocating (DC-6). Preparation for the FAA flight engineer written exam.

Prerequisites: FAA commercial pilot license and instrument rating or equivalent; department approval.

Lecture + Lab + Other: 4 + 0 + 0**Grading System:** Letter Grades with option of Plus/Minus**AVTY F231 Arctic Survival**

3 Credits

Offered Spring

Use of principles, procedures, techniques and equipment to survive extreme Arctic conditions and assist in safe recovery. Lab required.

Cross-listed with EMS F257.**Lecture + Lab + Other:** 3 + 0 + 0**Grading System:** Letter Grades with option of Plus/Minus**AVTY F232 Aviation Astronomy and Navigation**

3 Credits

Offered As Demand Warrants

Air navigation and astronomy, including charts, equipment, star and constellation identification, and calculations.

Lecture + Lab + Other: 3 + 0 + 0**Grading System:** Letter Grades with option of Plus/Minus**AVTY F235 Elements of Weather**

3 Credits

Offered Fall

Weather as it affects aircraft operators with an emphasis on interior Alaska.

Lecture + Lab + Other: 3 + 0 + 0**Grading System:** Letter Grades with option of Plus/Minus**AVTY F239 Aircraft Dispatcher**

4 Credits

Offered As Demand Warrants

Coordinating functions involving the aircraft and other departments of an airline business. Those wanting to be eligible for aircraft dispatcher certificate must be 23 years of age.

Lecture + Lab + Other: 4 + 0 + 0**Grading System:** Letter Grades with option of Plus/Minus**AVTY F240 Commercial Flight Instruction - Rotorcraft I**

2 Credits

Offered As Demand Warrants

Develops commercial flight skills, including night flight, aviation physiology, advanced aerodynamics, aircraft performance, weight and balance and regulations for commercial pilots and commercial flight operations. Includes compliance with Federal Aviation Administration flight hour and certification requirements.

Prerequisites: AVTY F200; AVTY F242; AVTY F244 (all courses may be taken concurrently); FAA Private Pilot Certificate; admission to the Professional Piloting program.

Lecture + Lab + Other: 0 + 4 + 0**Grading System:** Letter Grades with option of Plus/Minus**AVTY F242 Commercial Flight Instruction Rotorcraft II**

2 Credits

Offered As Demand Warrants

Assesses commercial flight skills, including night flight, aviation physiology, advanced aerodynamics, aircraft performance, weight and balance and regulations for commercial pilots and commercial flight operations. Includes compliance with Federal Aviation Administration flight hour and certification requirements.

Prerequisites: AVTY F102; AVTY F240; AVTY F243 (all courses may be taken concurrently); FAA Private Pilot Certificate; admission to the Professional Piloting program.

Lecture + Lab + Other: 0 + 4 + 0**Grading System:** Letter Grades with option of Plus/Minus**AVTY F244 Commercial Flight Instruction - Rotorcraft III**

2 Credits

Offered As Demand Warrants

Assesses commercial flight skills, including night flight, aviation physiology, advanced aerodynamics, aircraft performance, weight and balance and regulations for commercial pilots and commercial flight operations. Includes compliance with Federal Aviation Administration flight hour and certification requirements.

Prerequisites: AVTY F102; AVTY F240; AVTY F242 (all courses may be taken concurrently); FAA Private Pilot Certificate; admission to the Professional Piloting program.

Lecture + Lab + Other: 0 + 4 + 0**Grading System:** Letter Grades with option of Plus/Minus**AVTY F402 Aircraft Management**

3 Credits

Offered As Demand Warrants

Securing, dispatching and monitoring aircraft operations. Safety, security, community relations, cost-effective scheduling and personnel management for mission scheduling.

Lecture + Lab + Other: 3 + 0 + 0**Grading System:** Letter Grades with option of Plus/Minus

AVTY F405 Advanced Aircraft Operations

3 Credits

Offered As Demand Warrants

Techniques and requirements associated with the operation of turbine-powered aircraft, remotely piloted aircraft, helicopters and STOL aircraft for pilots and air workers; safety; systems; aerodynamics; operating characteristics.

Prerequisites: AVTY F100, AVTY F111.

Lecture + Lab + Other: 3 + 0 + 0

Grading System: Letter Grades with option of Plus/Minus

AVTY F410 Techniques of Bush Flying

2 Credits

Offered As Demand Warrants

Flight training emphasizing emergency procedures in remote locations, off-airport operations, critical flight attitudes, low-level flight, terrain flying, special maneuvers and unique soft and short field takeoffs and landings.

Prerequisites: AVTY F231; AVTY F235; commercial rating; 20 hours taildragger time.

Lecture + Lab + Other: 1 + 2 + 0

Grading System: Letter Grades with option of Plus/Minus