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 As Demand Warrants  
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