

General Catalog (Continued)

See inside front cover for symbol code.

First Year Seminar (1.0)

College success and life enrichment skills. Included are an introduction to the resources of the university, principles of critical thinking, and Christian values clarification.

College Seminar (1.0)

See description under GTEC110. Repeatable.

Prior Learning Assessment (PLA) (1.0)

Prior Learning Assessment (PLA) is a process which validates learning experiences occurring outside traditional college/university academic programs. A portfolio of evidence for demonstrating experience and competency justifies and determines the amount of credit granted. Repeatable with different topics.

Cooperative Work Experience (1.0)

Supervised (by the dean or his appointee) on-the-job work experience with a cooperating inuof a >m2Torof 5(Cor)--1.29xperiencppoinou05 Tc erienecerqui

BT: A a T

Students taking the Bachelor of Technology degree may: (1)
combine areas to meet specific career goals (see options that

Aircraft (1)
Example
Sixty-five (65) hours of aircraft and simulator time leading to the airplane Private Pilot Certificate including 10 hours of cross-country flight. *Fall, Spring, Summer*

Aircraft (1)
Instrument Pilot Ground School
Ground training to prepare the student for the FAA instrument rating airplane knowledge test. Topics include Federal Aviation Regulations, meteorology, instrument flight charts, flight planning, instrument approaches, use of navigation equipment, and FAA publications relating to instrument flight. *Spring*

Aircraft (1)
Example II
Sixty-five (65) hours of aircraft and simulator time leading to the airplane instrument pilot rating including 25 hours of cross-country flight needed to meet the 50-hour cross-country requirement. *Fall, Spring, Summer*

Aircraft (1)
Meteorology
Meteorology provides students with a comprehensive study of the principles of meteorology while simultaneously providing classroom and laboratory applications focused on current weather situations. It provides real experiences demonstrating the value of computers and electronic access to time sensitive data and information. *Fall*

Aircraft (1)
Aerodynamics
The study of aerodynamic principles used in aircraft. Designed for a better understanding of basic design and devices used to improve aircraft performance. *Fall*

Aircraft (1)
Commercial Pilot Ground School
Ground training to prepare the student for the FAA commercial-pilot airplane knowledge test. Topics include advanced

Spring

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COLLEGE OF TECHNOLOGY

Aircraft Performance ()
Tec **Pe** **fM** **Eg**
 Develops special piloting skills required in remote undeveloped bush operations. Topics include pilotage, dead reckoning, GPS navigation, low-level operations, terrain flying, mountain passes and canyons, cargo drops, short fields, uphill and downhill operations on primitive airstrips, maximum performance techniques, and precision airplane control. *Fall, Spring, Summer*

Aircraft Pilot Ground School ()
A **eT** **a** **P** **G** **dSc**
 Prepares the student for the FAA airline transport pilot knowledge test. Topics include air-carrier or air-taxi regulations, high altitude weather, advanced weight and balance, and the performance and special problems in large airplane operations. *Fall, Spring, Summer*

Aircraft Pilot Flight School ()
A **eT** **a** **P** **Eg** **T** **a** **g**
 Flight and ground training to prepare the student for the FAA airline transport pilot airplane practical test. Topics include instrument procedures, in-flight maneuvers, take-offs, landings, advanced airplane systems, and emergency procedures. *Fall, Spring, Summer*

Aircraft Maintenance

Aircraft Maintenance Technician ()
A **edSc** **ec** **f** **Ae** **ace** **Tec** **ca**
 Applies the sciences of mathematics and physics to the aerodynamics of flight, maintenance, weight and balance and various maintenance problems that the aircraft maintenance technician could encounter. Includes the study and use of drawings and basic ground operations. *Fall*

Aircraft Basic Electricity (-)
A **c** **af** **Ba** **c** **E** **ec** **c**
 A study of the fundamental basics of electricity and electronics; including electrical diagrams, calculations, sources of electrical power, direct and alternating current, aircraft storage batteries, capacitance and inductance, binary code and the basics of solid state logic. *Fall*

Aircraft Regulations and Procedures (-)
Fede **a** **Reg** **a** **P** **h** **ca** **F** **a** **d** **Rec** **d**
 Study of the federal regulations and manufacturer publications as they apply to aircraft design, maintenance, inspections, forms and records, and the certification and privileges/limitations of the aviation maintenance technicians. *Fall*

Aircraft Maintenance Practices ()
Ma **e** **a** **a** **d** **P** **ce** **e** **f** **A** **c** **af** **S** **tr** **e**
 Includes hand and power tool usage, aircraft hardware and materials, precision measurements, corrosion control, non-destructive testing, and fluid lines and fittings. *Fall*

Aircraft Electrical Systems **A** **c** **af** **E** **ec** **ca** **S** **e** **A** **tr** **(-)**
 Practical study of aircraft electrical systems, including installation practices, repair, troubleshooting, service, and inspections. *Spring*

Aircraft Engine Electrical Systems **A** **c** **af** **E** **ec** **ca** **S** **e** **A** **tr** **()**
 A study of engine ignition and engine electrical systems (starter, generators, alternators, auxiliary electrical power units and their control circuits, engine instruments, and engine fire protection-suppression systems). *Spring*

Aircraft Systems **A** **c** **af** **S** **e** **A** **tr** **()**
 An in-depth study into the inspection, repair, checking, servicing and troubleshooting of the following aircraft systems; ice-and-rain detection, cabin atmosphere (pressurization, heating, cooling, and oxygen), position warning systems, navigation and communication systems, and aircraft instruments and their use in trouble-shooting of aircraft systems. *Spring*

Aircraft Fuel and Fuel Systems **A** **c** **af** **F** **ue** **l** **a** **d** **F** **ue** **l** **S** **ys** **e** **A** **tr** **(-)**
 A study of the various types and handling of fuels used in aircraft. Includes a study of aircraft fuel systems, fuel metering methods and the inspection, checking, servicing, troubleshooting, repair and overhaul of fuel systems and their components, and fire detection and protection. *Spring*

Engine Fuel Metering Systems **E** **g** **e** **F** **ue** **l** **M** **e** **t** **e** **r** **i** **n** **g** **S** **ys** **e** **A** **tr** **(-)**
 A study of the engine side of the fuel systems (firewall forward). Includes an in-depth study of fuel-metering devices used on aircraft engines (carburetors, pressure carburetors, direct and continuous fuel-injection systems). Service, maintenance, repair and trouble-shooting of each different system type is covered in detail. *Spring*

Maintenance: General, Airframe, Propeller, Repair ()
Ma **e** **a** **ce** **Ge** **e** **a** **A** **f** **a** **e** **P** **e** **P** **a** **Re** **e**
 A review of all subjects from a selected curriculum. A minimum of five examinations per curriculum area is required. Prerequisites: All applicable curriculum subjects must have been completed. *Fall, Spring*

Aircraft Hydraulic, Pneumatic, and Landing Gear Systems **A** **c** **af** **H** **d** **a** **ic** **P** **ne** **a** **ic** **a** **d** **L** **a** **n** **d** **g** **ea** **r** **S** **ys** **e** **A** **tr** **()**
 Operation and maintenance of aircraft hydraulic systems, pneumatic systems, landing-gear systems, and the inspection, checking, servicing, trouble-shooting, and repair of these systems and system components. *Spring*

Aircraft Metal Structures **A** **c** **af** **M** **e** **t** **a** **l** **S** **tr** **uc** **t** **u** **r** **e** **A** **tr** **()**
 A study and application of the processes used in the fabrication and repair of aircraft metal structures. Welding theory and practice with emphasis on weld-quality identification. Riveted, aircraft, aluminum, sheet-metal structures including the fabrication and repair of such structures. *Fall*

Aircraft Non-Metal Structures **A** **c** **af** **N** **o** **n** **-** **m** **e** **t** **a** **l** **S** **tr** **uc** **t** **u** **r** **e** **A** **tr** **(-)**
 A study of wood and fabric as used in the construction of aircraft and a study of the methods, tooling, inspection, processes, and repair of composite aircraft structures. Includes the application, identification, and functions of aircraft protective finishes. *Spring*

Aircraft Assembly, Rigging and Inspection (1)

Study of the nomenclature and design features of both fixed-wing and rotor-wing aircraft and the assembly, alignment of aircraft structures, and rigging and balancing of control system. A detailed inspection of the entire aircraft or rotorcraft is covered as it applies to the airframe 100-hour and other required inspection. *Spring*

Gasturbine Engines (1)

Principles and theory of jet-engine propulsion, design, types of, and associated systems. Maintenance, overhaul, installation-removal, repair, trimming, and troubleshooting of turbine engines. *Fall*

Aircraft Propeller Design (1)

Theory and limited work on propellers, both wood and metal. Encompasses fixed, adjustable, controllable, feathering, reversible, and the control of the latter by mechanical, hydromatic, or electrical control systems. The inspection practice of performing the 100-hour inspection on aircraft engines and propellers. *Spring*

Reciprocating Engines (1)

A study of reciprocating engine theory, overhaul methods, and practices and the installation of reciprocating engines. Also includes a study of the following engine systems: exhaust, cooling, induction, and lubrication. *Spring*

Welding Technology (1)

Oxyacetylene and electric welding processes including oxyacetylene welding, cutting, and brazing; basic shielded metal arc welding and basic gas metal arc welding. A limited amount of out-of-position welding will be stressed. *Fall*

Machineries (1)

Basic set-up and operation of lathes, milling machines, grinders, drilling machines, and shapers; safety, machine maintenance, off-hand grinding, drill sharpening, layout, and inspection emphasized. *Spring*

Project Credits (1)

Development of a skill in a given area of technology under the supervision of the instructor. Repeatable to 12 project credits. Prerequisite: Permission of instructor. *Fall, Spring*

Topics (1)

Repeatable with different topics in aviation. *Arranged*

Career Experience (1)

Work experience with an aviation organization or airline. A minimum of 120 hours of work required per credit. Graded S/U. Prerequisite: Permission of the department. *Arranged*

Independent Studies (1)

Enables students to pursue topics in aviation not offered in other scheduled courses. Prerequisite: Permission of the department. Repeatable to 4 credits. *Arranged*

Internship (1)

On-the-job internship experience for those students seeking industrial experience which cannot be simulated in a classroom setting. A range of 120–150 clock hours of work are required for each credit. Selected in consultation with the student's advisor. May be repeated.

Practicum (1)

Lab or on-the-job experience to build skills in a specific area of technology. Prerequisite: Permission of department. Repeatable to 6 credits. *Arranged*