COLLEGE OF TECHNOLOGY

M. Wesley Shultz, *Dean*
Gerald W. Coy, *Associate Dean*

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BACCALAUREATE DEGREE CORE REQUIREMENTS

The BSET and BT core requirements are as follows:

BSET—24

ENGR120, ELCT141, 142, MECT121, MECT235, INDT450, ENGT310, or ENGT396 or GTEC395 or INDT315

BT—8

ENGR370, INDT310, AGRI395 or GTEC395 or INDT315 or AVIA395

General Courses **(Credits)**

See inside front cover for symbol code.

GTEC110 **(3)**
Freshman Seminar
College success and life enrichment skills. Included are an introduction to the resources of the university, principles of critical thinking, and Christian values clarification.

GTEC115 **(3)**
College Seminar
See description under GTEC110. Repeatable.

GTEC298 **(1-32)**
Prior Learning Assessment
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.

GTEC395 **(1-6)**
Cooperative Work Experience
Supervised (by the dean or his appointee) on-the-job work experience with a cooperating industry. A minimum of 120 hours of work is required per credit. The student must submit a report of the cooperative work experience as specified by the instructor. Repeatable to 6 credits. Graded S/U. Prerequisites: an associate degree in technology or equivalent and permission of the dean. Students must apply and be accepted one semester in advance of their planned Cooperative Education experiences.

GTEC498 **(1-32)**
Prior Learning Assessment
See description under GTEC298. Total Prior Learning Assessment credits (GTEC298 and 498) may not exceed 32 credits.

INDIVIDUALIZED PROGRAMS OF STUDY

For students who have career goals or special interests in areas other than those provided in one of the established majors or minors, a special individualized program is available in the following degrees: Bachelor of Science, Bachelor of Science in Engineering Technology, Bachelor of Technology, and Associate of Technology. An individualized concentration may be planned to meet the career goals of a student. Before the beginning of the junior year for baccalaureate-degree students or the beginning of the sophomore year for associate-degree students, the student, with the assistance of his or her advisor, prepares a proposed program of study. The program must be approved by a department faculty and the College of Technology Academic Policies and Curricula Committee.

AERONAUTICAL TECHNOLOGY

Seamount Building (Airpark)
(269) 471-3547
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Faculty

Gary A. Marsh, *Chair*
Duane E. Habenicht
Richard L. Kaping
Daniel A. Thompson

Academic Programs	Credits
BSET: Aircraft Engineering Technology	155
BT: Aviation Technology	124-132
Avionics/Maintenance (Airframe)	
Flight	
Flight/Business	
Flight/Maintenance	
Maintenance	
Maintenance/Business	
AT: Aviation Technology	62-74
Flight	
Maintenance (52)	
Minor in Aviation Technology	25
Flight	
Maintenance (32)	
FAA-approved Part 141*	
Private Pilot*	
Commercial Pilot	
Instrument Rating	
Flight Instructor	
Multi-Engine Rating	
FAA-approved Part 147, Maintenance Technician	
Airframe	
Powerplant	

Students may choose program emphases (or a combination of them) in such areas as flight, maintenance, business, avionics, and engineering technology.

Programs

If any of the degree programs do not meet the needs of the student, an individualized major is available as described on the previous page.

BSET: Aircraft Engineering Technology

The BSET degree combines the aviation maintenance program with selected engineering courses and thus prepares the individual for activities between the pure engineer and a skilled craftsman (licensed A & P Technician).

Maintenance area courses (see below)	52
Technical core	20
MECT285, 326, 355, 370, 375	
Degree core	24
General Education requirements	59
Total credits for degree	**155**

BT: Aviation Technology

Students taking the Bachelor of Technology degree may choose to combine two of the specialization options—flight, maintenance, business, and avionics—or they may combine areas (see below) to meet specific career goals or limit their specialization to a single area—flight or maintenance.

Major*	60-85
Degree core	8
General Education requirements	39-42
General electives	17-0
Total credits for degree	**124-132**

***Major Options**

Avionics and Maintenance
- Avionics (Electronics)—37 credits
- Maintenance (Airframe)—32 credits

Flight
- Flight—27-29 credits
- Flight electives—18-16 credits
- Aviation electives—15 credits

Flight and Business
- Flight—27-29 credits
- Aviation electives—12-10 credits
- Business—30-21 credits

Flight and Maintenance
- Flight—27-29 credits
- Maintenance—52 credits

Maintenance
- Maintenance—52 credits
- Flight/Aviation electives—8 credits

Maintenance and Business
- Maintenance—52 credits
- Business—30-21 credits

AT: Aviation Technology

Students may earn an Associate of Technology degree by taking courses beyond those required for the certificate in either the flight or maintenance area. The additional courses give students a broader General Education base, prepare them better to perform the activities acquired by the certificate program, and facilitate study for an advanced degree.

Major*	40-52
General Education requirements	16-22
General electives	6-0
Total credits for degree	**62-74**

***Majors**

Flight
- Flight—27-29 credits
- Aviation electives—13-11 credits

Maintenance
- Maintenance—52 credits

Minor in Aviation Technology

Requirements: A minimum of 25 or 32 credits in flight or maintenance, respectively.

Students earn a minor in Aviation Technology by completing one of the following:

Flight (25 credits): AFLT115, 116, 117, 215, 216, 217, 305, 306. A Commercial Pilot certificate and instrument rating are required.

Maintenance: (32 credits) Complete either the Airframe or Powerplant License.

FAA Certification

FAA-Approved Instruction. The Department of Aeronautical Technology operates a Flight School as well as an Airframe and Powerplant Maintenance Technician School approved by the FAA under Title 14 CFR, Part 141* and Part 147, respectively.

* Private curriculum only

FAA Flight Certification Programs. Students may take flight instruction to qualify for several levels of certification. Students wishing only to take the content courses necessary for the specific flying expertise can take just the flight area courses as outlogr. (Aiauction to area 1

MAINTENANCE AREA COURSES

FAA Maintenance Certificates. Students may earn the following FAA-approved certificates from the department's Aviation Maintenance Technician School:

Airframe
Powerplant

Maintenance students must obtain either the FAA Airframe or Powerplant license for any degree or certificate.

Required Courses—52

AVMT 108, 114, 116, 120, 204, 206, 210, 220, 226, 237, 304, 306, 308, 310, 314, and 316.

Courses

(Credits)

See inside front cover for symbol code.

AVIATION FLIGHT

AFLT104 **(1-4)**
Introduction to Aviation
Acquaints students with opportunities in aviation, such as mission flying, flight instruction, aircraft maintenance, avionics, sales, safety, and aerodynamics of flight. Non-majors receive one free hour dual instruction per credit hour enrolled. *Fall, Spring*

AFLT115 **(4)**
Private Pilot Ground School
Ground training to prepare students for the FAA private pilot airplane knowledge test. Topics include aerodynamics, weight and balance, Federal Aviation Regulations, navigation, meteorology, aircraft systems and performance. *Fall, Spring, Summer*

AFLT116 **(4)**
Private Pilot Flight Training I
Flight and ground training to prepare a student through post solo flight. *Fall, Spring, Summer*

AFLT117 **(4)**
Private Pilot Flight Training II
Flight and ground training to prepare a student for cross-country flying and for the FAA private pilot airplane practical test. *Fall, Spring, Summer*

AFLT215 **(3)**
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. *Fall, Spring, Summer*

AFLT216 **(3)**
Instrument Pilot Flight Training I
Instrument flight training from basic attitude flight through holding patterns. *Fall, Spring, Summer*

AFLT217 **(3)**
Instrument Pilot Flight Training II
Instrument flight training from instrument approaches, instrument cross-country flight and preparation for the FAA instrument rating airplane practical test. *Fall, Spring, Summer*

AFLT305 **(2)**
Commercial Pilot Ground School
Ground training to prepare the student for the FAA commercial-pilot airplane knowledge test. Topics include advanced navigation, FAR Parts 61, 91, and 135 for air taxi, complex aircraft systems, weight and balance, and performance charts. *Fall, Spring, Summer*

AFLT306 **(2)**
Commercial Pilot Flight Training
Flight training and solo-flight practice to prepare the student for the FAA commercial-pilot airplane practical test. Repeatable to 4 credits. *Fall, Spring, Summer*

AFLT307 **(2)**
Multi-Engine Flight Training
Flight and ground training to prepare the student for the multi-engine airplane practical test. *Fall, Spring, Summer*

AFLT315 **Alt (3)**
Aircraft Systems for Pilots
The study of aircraft systems and engines, propellers and governors; the fuel, electrical, hydraulic, pneumatic, and de-icing systems, flight controls, weight and balance, and aircraft-instrument systems. *Fall*

AFLT330 **(3)**
Crew Resource Management
Study of the effective use of resources available to the crew to achieve safe and efficient flight operations. Areas include human factors, communication, conflict resolution, leadership, teamwork, and situational awareness as applied to flight operations. *Spring*

AFLT455 **(2)**
Flight Instructor Ground School
Ground training to prepare the student for the FAA flight instructor airplane knowledge test. Topics include techniques of teaching, analysis of maneuvers, and lesson planning. *Fall, Spring, Summer*

AFLT456 **(2)**
Flight Instructor Flight Training
Flight and ground training to prepare the student for the FAA flight instructor airplane practical test. Topics include the performance, teaching, and analysis of flight maneuvers required for the private and commercial airplane pilot. *Fall, Spring, Summer*

AFLT464 **(2)**
Basic and Advanced Ground Instructor
Prepares the student for the FAA basic and advanced ground instructor knowledge test. Topics include techniques of teaching aerodynamics, aircraft performance, aircraft systems, weight and balance, meteorology, navigation, and regulations. *Fall, Spring, Summer*

AFLT465 **(2)**
Instrument Flight Instructor Ground School
Prepares the student for the FAA instrument flight instructor knowledge test. Topics include techniques of teaching instrument flight, analysis of instrument maneuvers, instrument approaches, enroute operations, regulations, and lesson planning. *Fall, Spring, Summer*

AFLT466 **(2)**
Instrument Flight Instructor Flight Training
Flight and ground training to prepare the student for the FAA instrument flight instructor airplane practical test. Topics include the performance, teaching, and analysis of attitude instruments,

instrument approaches, and enroute operations. *Fall, Spring, Summer*

AFLT467 **(2)**
Multi-Engine Flight Instructor
Flight and ground training to prepare the student for the FAA multi-engine airplane flight instructor practical test. Topics include the performance, teaching, and analysis of maneuvers and procedures for the multi-engine airplane. *Fall, Spring, Summer*

AFLT469 **(2)**
Instrument Ground Instructor
Prepares the student for the FAA instrument ground instructor knowledge test. Topics include the techniques of teaching advanced weather theory, weather reports and forecasts, instrument procedures and regulations, approaches, and enroute operations.