

AVIATION EMERGING TECHNOLOGIES / BACHELOR OF SCIENCE

Overview

Total Credit Hours: 120-128

Major Credit Hours: 77-78

Requirements

Degree Requirements

Code	Title	Hours
Core Courses		
PHYS 13000	Applied Physics for Aviation	3
AVMT 34000	Composite Material Fabrication and Repair	3
AVTR 13000	Private Pilot Ground 1	3
AVTR 13100	Private Pilot Ground 2	3
AVTR 23100	Instrument Pilot Ground School	4
AVTR 25000	Aviation Meteorology 1	3
AVTR 25200	Aviation Meteorology 2	3
AVTR 30000	Professional Development for Aviators	1
AVTR 30500	Crew Resource Management	3
AVTR 31300	Air Traffic Control Systems	3
AVTR 33100	Commercial Pilot Ground School	3
AVTR 34100	Unmanned Systems Field Operations	3
AVTR 34200	Aerodynamics	3
AVTR 34300	UAS Operations 1	3
AVTR 35000	Advanced Air Mobility	3
AVTR 35100	Vertiport Planning and Development	3
AVTR 37300	Transportation Safety Management Systems	3
AVTR 44300	UAS Operations 2	3
AVTR 44400	Electric and Advanced Propulsion in Aviation	3
AVTR 46300	Aircraft Accident Investigation	3
AVTR 47700	UAS Senior Capstone	3
Concentration		
Select one of the following:		15-16
Aviation Administration Concentration (p. 1)		
Computer Science Concentration (p. 1)		
Maintenance Technology Concentration (p. 1)		
Total Hours		77-78

Aviation Administration Concentration

Concentration: ADMN

Code	Title	Hours
AVMT 46100	Aviation Maintenance Management	3
AVTR 20400	Aviation Regulations	3
AVTR 31300	Air Traffic Control Systems	3
AVTR 35300	Air Transportation	3

AVTR 45200	Airport Management	3
Total Hours		15

Computer Science Concentration

Concentration: CPSC

Students will take six credit hours of core concentration courses, and 10 credit hours from one of two computer science tracks.

Code	Title	Hours
Core Concentration Courses		
CPSC 20000	Introduction to Computer Science	3
CPSC 21000	Programming Fundamentals	3
Track Options		
Select one of the following tracks:		10
Track Option 1:		
CPSC 24500	Object-Oriented Programming	
MATH 21000	Discrete Mathematics	
CPSC 47000	Artificial Intelligence	
	or ECEN 45000 Robotics	
Track Option 2:		
CPSC 31500	Scientific Computing	
ECEN 45000	Robotics	
MATH 20900	Calculus 1	
	or MATH 20600 Applied Calculus	
Total Hours		16

Maintenance Technology Concentration

Concentration: MTCH

Code	Title	Hours
AVMT 20000	Aircraft Instruments	4
AVMT 31000	Aircraft Reciprocating Engines	4
AVMT 32000	Aircraft Systems 2	3
AVMT 41000	Gas Turbine Powerplants	4
Total Hours		15

General Education Courses

The following general education requirements are listed and satisfied under the core curriculum:

The two science requirements are met by AVTR 25000 Aviation Meteorology 1 and AVTR 25200 Aviation Meteorology 2.

The mathematics requirement is met in the Computer Science concentration by MATH 21000 Discrete Mathematics or MATH 20900 Calculus 1.

For additional required General Education courses, see the General Education section (<https://catalog.lewisu.edu/undergraduate/general-information/general-education/>) in this catalog.

Advanced Writing Requirement

The Advanced Writing Requirement of the General Education Curriculum is satisfied by successful completion of AVTR 37300 Transportation Safety Management Systems.