

Aviation Science

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Advisory Committee: Chair, Captain Mario Jimenez, Federal Express; Captain Steve Morrison, United Airlines; Captain Kory Morgan, Southwest Airlines; Captain James Healy, SkyWest Airlines; Captain Jayson Esplin, Jet Blue Airlines; Dr. Lee Suidzinski, Experimental Aircraft Association; Dr. Sherwood Williams, CAVU Aviation

School of Technology and Computing

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FLIGHT PREREQUISITE

An aviation placement exam and oral interview with an aviation advisor is required. A class II or a class III Medical/Student Certificate with an FAA designated Medical Examiner is required. These items must be completed prior to entering the flight phase of the program so that student qualifications and special needs can be determined.

CAREER OPPORTUNITIES

Currently there is a record demand for college-trained professional pilots for commuter, regional and major air carrier employment. This demand should continue through 2015. Pilots and aviation/aerospace personnel work in highly technical and practical scientific

environments on a daily basis; pilots have responsibility for operating single engine, multi-engine, turbo-prop, and jet aircraft in all weather conditions both day and night. Examples of jobs in the aviation field are: Charter and Air Taxi Pilot, University Flight Instructor, aerial photography and surveying, Military, Bush Pilot/remote re-supply, medical evacuation, fire fighting and spotting, Federal Government positions, Drug Enforcement, FAA Safety Inspectors, pipeline and transmission line patrol, recreation/sight-seeing pilot, police and traffic control, research and development, test flight, airplane sales/demonstration and generic commercial airline pilot. Graduates of the Associate in Applied Science or Associate in Science are qualified to become a commercial pilot or certified flight instructor and should qualify for entry into a four-year degree program for upper division course work. Graduates of the Bachelor of Science in Aviation Professional Pilot are qualified to be hired by a major airline after obtaining adequate flight hours and experience. Graduates are also qualified to be corporate and military pilots. Individuals who complete the Associate in Aviation Science constitute the majority of program employed flight instructors.

Students must complete a minimum of a commercial pilot certificate, issued by the Federal Aviation Administration to obtain the Bachelor of Science Professional Pilot or Tech Management, Associate in Science Aviation or Associate of Applied Science Aviation. The Bachelor of Science Aviation Administration does not require the commercial certificate.

PROGRAMS

Students graduating with an AAS or AS in Aviation may transfer to the Bachelor of Science in Aviation Professional Pilot, or Bachelor of Science in Aviation Administration, or the Bachelor of Science in Technology Management with an emphasis in Aviation Science, for completion of a four-year degree.

Note: an overall grade point average of 2.0 (C) or above is required for graduation.

AAS in Aviation Science 65 CREDITS

General Education Requirements:		18 Credits
• ENGL 1010	Introduction to Writing	3.0
• MAT 1010	Intermediate Algebra	4.0
• PHIL 2050	Ethics and Values	3.0
or Any other Humanities		
• POLS 1000	American Heritage	3.0
or HIST 1700	American Civilization (3.0)	
or Any other Social Science		
• Any approved Biology or Physical Science	Distribution Course	3.0
• HLTH 1100	Personal Health and Well-ness (recommended)	2.0
Discipline Core Requirements:		47 Credits
• AVSC 1010	Survey of Aviation Science	2.0
• AVSC 1100	Ground Private Pilot	4.0
• AVSC 1110	Flight Private Pilot Certification	3.0

Aviation Science

• AVSC 1220	Ground Commercial Pilot--Phase I	1.0
• AVSC 1230	Flight Commercial Pilot--Phase I	3.0
• AVSC 1240	Ground Instrument Pilot	4.0
• AVSC 1250	Flight Instrument Pilot Rating	2.0
• AVSC 2150	Air Transportation Management	3.0
• AVSC 2160	Aviation Law	3.0
• AVSC 2300	Ground Commercial Pilot--Phase II	2.0
• AVSC 2310	Flight Commercial Pilot--Phase II	3.0
• AVSC 2440	Ground Multi-Engine	1.0
• AVSC 2450	Flight Multi-Engine	1.0
• AVSC 281R	Cooperative Work Experience* (1.0)	5.0
• AVSC 285R	Cooperative Related Class (1.0)	1.0

Complete one of the following sets of courses: 9.0

Certified Flight Instructor

• AVSC 2330	Theory of Instruction (1.0)	
• AVSC 2400	Ground Certified Flight Instructor (3.0)	
• AVSC 2410	Flight Certified Flight Instructor (1.0)	
• AVSC 2420	Ground CFI Instrument (1.0)	
• AVSC 2430	Flight CFI Instrument (1.0)	
• AVSC 2500	Ground Multi-Engine Instructor (1.0)	
• AVSC 2510	Flight Multi-Engine Instructor (1.0)	

First Officer

• AVSC 3300	Jet Transport Systems (3.0)	
• AVSC 3600	Crew Resource Management/Human Factors (3.0)	

Aviation Management (Choose 9 credits)

• AVSC 2860	SkillsUSA (1.0)	
• AVSC 3020	Aviation Insurance and Risk Management (3.0)	

• AVSC 3100	Corporate Aviation Management (3.0)	
• AVSC 3120	Airport Management (3.0)	
• AVSC 3140	Fixed Base Operations Management (3.0)	

Air Traffic Control

• AVSC 3030	Air Traffic Control (3.0)	
• AVSC 3040	Air Traffic Control II (3.0)	
• AVSC 3600	Crew Resource Management/Human Factors (3.0)	

Graduation Requirements:

- 1 Completion of a minimum of 65 or more semester credits.
- 2 Overall grade point average of 2.0 (C) or above. C- or above required for all aviation major classes.
- 3 Residency hours--minimum of 20 credit hours through course attendance at UVSC.
- 4 Completion of GE and specified departmental requirements
- 5 Completion of Commercial Pilot Certificate.

Footnotes:
* One credit from AVSC 1020 Aircraft Identification may be substituted for one of cooperative work experience.

AS Pre Major in Aviation Science 61 CREDITS

General Education Requirements: 35 Credits

• ENGL 1010	Introduction to Writing	3.0
• ENGL 2010	Intermediate Writing--Humanities/Social Sciences	3.0
or ENGL 2020	Intermediate Writing--Science and Technology (3.0)	

Complete one of the following: 3.0

• MATH 1030	Quantitative Reasoning (recommended for Humanities or Arts majors) (3.0)	
• MATH 1040	Introduction to Statistics (recommended for Social Science majors) (3.0)	
• MATH 1050	College Algebra (recommended for Business, Education, Science, and Health Professions majors) (4.0)	

Complete one of the following: 3.0

• HIST 2700	US History to 1877 (3.0)	
and HIST 2710	US History since 1877 (3.0)	
• HIST 1700	American Civilization (3.0)	
• HIST 1740	US Economic History (3.0)	
• POLS 1000	American Heritage (3.0)	
• POLS 1100	American National Government (3.0)	

Complete the following:

• PHIL 2050	Ethics and Values	3.0
• HLTH 1100	Personal Health and Wellness (2.0)	
or PES 1097	Fitness for Life	2.0

Distribution Courses

• Biology	3.0
• Physical Science	3.0
• Additional Biology or Physical Science	3.0
• Humanities Distribution	3.0
• Fine Arts Distribution	3.0

• Social/Behavioral Science	3.0
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Discipline Core Requirements: 24 Credits

• AVSC 1010	Survey of Aviation Science	2.0
• AVSC 1100	Ground Private Pilot	4.0
• AVSC 1110	Flight Private Pilot Certification	3.0
• AVSC 1220	Ground Commercial Pilot--Phase I	1.0
• AVSC 1230	Flight Commercial Pilot--Phase I	3.0
• AVSC 1240	Ground Instrument Pilot	4.0
• AVSC 1250	Flight Instrument Pilot Rating	2.0
• AVSC 2300	Ground Commercial Pilot--Phase II	2.0
• AVSC 2310	Flight Commercial Pilot--Phase II	3.0

Elective Requirements: 2 Credits

Complete two credits from the following: 2.0

• AVSC 1020	Aircraft Identification (1.0)	
• AVSC 2150	Air Transportation Management (3.0)	
• AVSC 2160	Aviation Law (3.0)	
• AVSC 2330	Theory of Instruction (1.0)	
• AVSC 2400	Ground Certified Flight Instructor (3.0)	
• AVSC 2410	Flight Certified Flight Instructor (1.0)	
• AVSC 2420	Ground CFI Instrument (1.0)	
• AVSC 2430	Flight CFI Instrument (1.0)	
• AVSC 2440	Ground Multi-Engine (1.0)	
• AVSC 2450	Flight Multi-Engine (1.0)	

Graduation Requirements:

- 1 Completion of a minimum of 61 or more semester credits.
- 2 Overall grade point average of 2.0 (C) or above. (Departments may require a higher GPA.)
- 3 Residency hours--minimum of 20 credit hours through course attendance at UVSC.
- 4 Completion of GE and specified departmental requirements.
- 5 Completion of Commercial Pilot Certificate.

BS in Aviation 120 CREDITS

Matriculation Requirements:

- 1 Medical Requirement: Class 1 FAA medical exam.
- 2 Completion of 25 aviation credits and a 2.5 GPA.

General Education Requirements: 35 Credits

• ENGL 1010	Introduction to Writing	3.0
• ENGL 2020	Intermediate Writing--Science and Technology	3.0

Complete one of the following: 3.0

• MATH 1030	Quantitative Reasoning (recommended for Humanities or Arts majors) (3.0)	
• MATH 1040	Introduction to Statistics (recommended for Social Science majors) (3.0)	
• MATH 1050	College Algebra (recommended for Business, Education, Science, and Health Professions majors) (4.0)	

Complete one of the following: 3.0

• HIST 2700	US History to 1877 (3.0)	
and HIST 2710	US History since 1877 (3.0)	
• HIST 1700	American Civilization (3.0)	
• HIST 1740	US Economic History (3.0)	
• POLS 1000	American Heritage (3.0)	
• POLS 1100	American National Government (3.0)	

Complete the following:

• PHIL 2050	Ethics and Values	3.0
• HLTH 1100	Personal Health and Wellness (2.0)	
or PES 1097	Fitness for Life	2.0

Distribution Courses

• Biology	3.0
• Physical Science (PHYS 1010 recommended)	3.0
• Additional Biology or Physical Science (METO 1010 recommended)	3.0
• Humanities Distribution (COMM 1020 recommended)	3.0
• Fine Arts Distribution	3.0
• Social/Behavioral Science (PSY 1010 recommended)	3.0

Discipline Core Requirements: 30 Credits

• AVSC 1010	Survey of Aviation Science	2.0
• AVSC 2150	Air Transportation Management	3.0
• AVSC 2160	Aviation Law	3.0
• AVSC 281R	Cooperative Work Experience (1.0)	3.0
• AVSC 285R	Cooperative Related Class	1.0
• AVSC 3010	Flight Environment	3.0
• AVSC 3200	Flight Physiology	3.0
• AVSC 3600	Crew Resource Management/Human Factors	3.0

Complete 8 credits from the following: 8.0

• AVSC 481R	Cooperative Work Experience (minimum of 2 credits) (1.0)	
• AVSC 490R	Safety and Professional Seminars (2.0)	
• AVSC 491R	Undergraduate Research Project (minimum of 3 credits) (3.0)	

Emphasis:

Complete one of the following:

• Aviation Administration	55.0
• Professional Pilot	55.0

Graduation Requirements:

- 1 Completion of a minimum of 120 or more semester credits, with a minimum of 40 upper division semester credits.
- 2 Overall grade point average of 2.0 (C) or above. Aviation courses require a C- or above. (Departments may require a higher GPA.)
- 3 Residency hours--minimum of 30 credit hours through course attendance at UVSC, with at least 10 hours earned in the last 45 hours.
- 4 Completion of Commercial Pilot Certificate for the Professional Pilot emphasis.
- 5 Completion of GE and specified departmental requirements including successful completion of the Class 1 FAA medical exam.

NOTE: If student chooses HIST 2700 and 2710, the additional hours may be used towards a social science distribution requirement.

Emphasis in Aviation Administration 55 Credits

Emphasis Requirements: 40 Credits

• AVSC 1020	Aircraft Identification	1.0
• AVSC 1030	Aviation Customer Service	3.0
• AVSC 1040	In-flight Service	3.0
• AVSC 2050	Introduction to Aviation Security	3.0
• AVSC 2180	Airline Computer Applications	3.0
• AVSC 2190	Introduction to Dispatch and Scheduling	3.0
• AVSC 2200	Aviation Marketing	3.0
• AVSC 3020	Aviation Insurance and Risk Management	3.0
• AVSC 3050	Aviation Human Resource Management	3.0
• AVSC 3060	Regional Airline Management	3.0
• AVSC 3070	Aviation Cargo Operations	3.0
• AVSC 3100	Corporate Aviation Management	3.0
• AVSC 3120	Airport Management	3.0
• AVSC 3140	Fixed Base Operations Management	3.0

Emphasis Elective Requirements: 15 Credits

- Must complete 15 credits from the following elective courses: 15.0
- AVSC 1100 Ground Private Pilot (4.0)
- AVSC 1110 Flight Private Pilot Certification (3.0)
- AVSC 1220 Ground Commercial Pilot--Phase I (1.0)
- AVSC 1230 Flight Commercial Pilot--Phase I (3.0)
- AVSC 1240 Ground Instrument Pilot (4.0)
- AVSC 1250 Flight Instrument Pilot Rating (2.0)
- AVSC 2300 Ground Commercial Pilot--Phase II (2.0)
- AVSC 2310 Flight Commercial Pilot--Phase II (3.0)
- AVSC 2330 Theory of Instruction (1.0)
- AVSC 2400 Ground Certified Flight Instructor (3.0)
- AVSC 2410 Flight Certified Flight Instructor (1.0)
- AVSC 2860 SkillsUSA (1.0)
- AVSC 3030 Air Traffic Control (3.0)
- AVSC 3040 Air Traffic Control II (3.0)
- AVSC 3210 Aircraft Crash and Emergency Management (3.0)
- AVSC 3610 Aviation Safety and Security (3.0)
- AVSC 475R Current Topics in Aviation (1.0)

Emphasis in Professional Pilot 55 Credits

Emphasis Requirements: 36 Credits

• AVSC 1100	Ground Private Pilot	4.0
• AVSC 1110	Flight Private Pilot Certification	3.0
• AVSC 1220	Ground Commercial Pilot--Phase I	1.0
• AVSC 1230	Flight Commercial Pilot--Phase I	3.0
• AVSC 1240	Ground Instrument Pilot	4.0
• AVSC 1250	Flight Instrument Pilot Rating	2.0
• AVSC 2300	Ground Commercial Pilot--Phase II	2.0
• AVSC 2310	Flight Commercial Pilot--Phase II	3.0
• AVSC 2440	Ground Multi-Engine	1.0
• AVSC 2450	Flight Multi-Engine	1.0
• AVSC 3030	Air Traffic Control	3.0
• AVSC 3400	High Altitude Navigation/International Flight Operations	3.0
• AVSC 3530	Advanced Aerodynamics	3.0
• AVSC 3300	Jet Transport Systems	3.0

Emphasis Elective Requirements: 19 Credits

- Must complete 19 credits from the following courses, including 10 hours of upper division. 19.0
- AVSC 1020 Aircraft Identification (1.0)
- AVSC 1120 Basic Aircraft Systems (1.0)

- AVSC 1130 Glider Rating (1.0)
- AVSC 1150 Mountain and Desert Flying (1.0)
- AVSC 1160 Seaplane Rating (1.0)
- AVSC 1260 21st Century Avionics and Instrumentation (1.0)
- AVSC 2170 Airline Interview Preparation (1.0)
- AVSC 2330 Theory of Instruction (1.0)
- AVSC 235R Unusual Attitude Safety Training (1.0)
- AVSC 2400 Ground Certified Flight Instructor (3.0)
- AVSC 2410 Flight Certified Flight Instructor (1.0)
- AVSC 2420 Ground CFI Instrument (1.0)
- AVSC 2430 Flight CFI Instrument (1.0)
- AVSC 2500 Ground Multi-Engine Instructor (1.0)
- AVSC 2510 Flight Multi-Engine Instructor (1.0)
- AVSC 2860 SkillsUSA (1.0)
- AVSC 3020 Aviation Insurance and Risk Management (3.0)
- AVSC 3040 Air Traffic Control II (3.0)
- AVSC 3100 Corporate Aviation Management (3.0)
- AVSC 3120 Airport Management (3.0)
- AVSC 3140 Fixed Base Operations Management (3.0)
- AVSC 4200 Ground Turbine Transition (3.0)
- AVSC 4210 Flight Turbine Transition (1.0)
- AVSC 4300 Ground Airline Transport Pilot/Aircraft Dispatcher (3.0)
- AVSC 4310 Flight Airline Transport Pilot (1.0)
- AVSC 475R Current Topics in Aviation (1.0)

BS in Technology

Management 124 CREDITS

The following Technical Area is available (see the Technology Management section of this catalog for complete degree requirement listings.)

Specialization in

Aviation Science 45 Credits

Emphasis Requirements: 39 Credits

- AVSC 1010 Survey of Aviation Science 2.0
- AVSC 1100 Ground Private Pilot 4.0
- AVSC 1110 Flight Private Pilot Certification 3.0
- AVSC 1220 Ground Commercial Pilot--Phase I 1.0
- AVSC 1230 Flight Commercial Pilot--Phase I 3.0
- AVSC 1240 Ground Instrument Pilot 4.0
- AVSC 1250 Flight Instrument Pilot Rating 2.0
- AVSC 2150 Air Transportation Management 3.0
- AVSC 2160 Aviation Law 3.0
- AVSC 2300 Ground Commercial Pilot--Phase II 2.0
- AVSC 2310 Flight Commercial Pilot--Phase II 3.0
- AVSC 2440 Ground Multi-Engine 1.0
- AVSC 2450 Flight Multi-Engine 1.0
- AVSC 281R Cooperative Work Experience (Must repeat 3 times) (1.0) 3.0
- AVSC 285R Cooperative Related Class 1.0
- METO 1010 Introduction to Meteorology 3.0

Elective Requirements: 6 Credits

Complete 6 credits from the following: 6.0

- AVSC 1020 Aircraft Identification (1.0)
- AVSC 2330 Theory of Instruction (1.0)
- AVSC 2400 Ground Certified Flight Instructor (3.0)
- AVSC 2410 Flight Certified Flight Instructor (1.0)
- AVSC 2420 Ground CFI Instrument (1.0)
- AVSC 2430 Flight CFI Instrument (1.0)
- AVSC 2500 Ground Multi-Engine Instructor (1.0)
- AVSC 2510 Flight Multi-Engine Instructor (1.0)
- AVSC 3020 Aviation Insurance and Risk Management (3.0)
- AVSC 3100 Corporate Aviation Management (3.0)
- AVSC 3120 Airport Management (3.0)
- AVSC 3140 Fixed Base Operations Management (3.0)
- AVSC 2860 SkillsUSA (1.0)
- AVSC 475R Current Topics in Aviation (1.0)

See Course Descriptions section of the catalog for detailed course information. This department manages the following course prefixes:

- AVSC, Aviation Science