

Aviation Science

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Telephone: 801-863-7771

Online Call Center Advisors:

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Advisory Committee: Chair, Captain James Healy, SkyWest Airlines; Captain Gary Lynn, Continental Airlines; Captain George Semak, Express Jet; Captain Michael Anderson, Federal Express; Scott Hansen, American Eagle; Dr. Lee Suidzinski, Experimental Aircraft Association; Dr. Sherwood Williams, CAVU Aviation; Development Committee Members: Mr. Jeff Kahn, Southwest Trust; Mr. Tom Heal, Tom Heal Real Estate; Mr. Ron Dallin, Gold's Gym

College of Technology and Computing

Dean: Ernest Carey
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FLIGHT PREREQUISITE

New students must meet with an aviation academic advisor before registering for courses. A class II Medical/Student Certificate from an FAA designated Medical Examiner is required. The Medical must be completed prior to entering the flight phase of the program so that student qualifications and special needs can be determined.

FLIGHT REQUIREMENTS

Students who plan to utilize UVU aircraft are required to enroll in and attend live ground and

flight course sections.

Students enrolled in live flight courses must attend their flight class by contacting the chief pilot responsible for their course no later than three days after the start of the semester or they will be dropped from the class.

CAREER OPPORTUNITIES

Professional Pilot: Worldwide growth of airlines and air traffic correlates highly with economic growth. The number of passengers is expected to nearly double by 2020. 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/remotely 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 an airline after obtaining adequate flight hours and experience. Graduates may also qualify 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 pilot certificates.

Aviation Administration: At Utah Valley University, the Aviation Administration Degree is designed to prepare students for careers as professional leaders in aviation. The number of individuals who travel by air will continue to grow in the years to come. Airlines are looking for dedicated, qualified personnel. The Federal Aviation Administration will need to employ increasing numbers of individuals to keep up with the demand. Courses included: airport management, security, transportation and corporate management, and cargo operations.

The Aviation Administration Degree will develop practical management and leadership skills for students with career goals in the aviation industry. Classes are based on real world aviation needs and will prepare students for employment in a broad range of positions including airline, corporate aviation, fixed base operator, and

airport management.

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. A grade of C- or better must be achieved in each aviation course.

Note: All aviation science majors are required to purchase the Bedford Handbook in their first semester of study. This handbook will be utilized throughout the aviation curriculum as a standard reference to help students improve their written communications skills and ability to follow documentation and citation standards. Aviation Science students are expected to comply with APA standards in all upper-level aviation science courses.

AAS in Aviation Science 66 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 Wellness (recommended) 2.0

Discipline Core Requirements: 48 Credits

- AVSC 1010 Survey of Aviation Science 2.0
- AVSC 1020 Aircraft Identification 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 1.0
- 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 3.0
- 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) 3.0
- 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)
- AVSC 4200 Ground Turbine Transition (3.0)
- AVSC 2860 SkillsUSA (1.0)

Aviation Management (Choose 9 credits)

- 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 66 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 UVU.
- 4 Completion of GE and specified departmental requirements
- 5 Completion of Commercial Pilot Certificate.
- 6 Students may count no more than 4 credit hours of total cooperative work experience (AVSC 281/285R) toward the degree requirements without department approval.

AS Pre Major in Aviation Science 60 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

Discipline Core Requirements: 25 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 3.0
- AVSC 2310 Flight Commercial Pilot--Phase II 3.0

Graduation Requirements:

- 1 Completion of a minimum of 60 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 UVU.
- 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: 28 Credits

- AVSC 1010 Survey of Aviation Science 2.0
- AVSC 2150 Air Transportation Management 3.0
- AVSC 2160 Aviation Law 3.0
- AVSC 2050 Introduction to Aviation Security 3.0
- AVSC 3010 Flight Environment 3.0
- AVSC 3200 Flight Physiology 3.0
- AVSC 3600 Crew Resource Management/ Human Factors 3.0
- AVSC 410G Global Ethical and Professional Issues in Aviation 3.0

Complete a minimum of 5 credits from the following: 5.0

- 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 57.0
- Professional Pilot 57.0

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 UVU, 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 unique to the area of emphasis. Students in the Professional Pilot emphasis should obtain an FAA Class I or II Medical Certificate prior to beginning flight training.
- 6 Students may count no more than 8 credit hours of total cooperative work experience (AVSC 281R/285R/481R/485R) toward the degree requirements without department approval.
- 7 Students completing a bachelor degree following the 2008 or later catalog must complete one course that meets the Global/Intercultural Requirement, indicated by a course number ending in G. For a complete listing, see page 25.

Aviation Science

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

Emphasis in Aviation Administration 57 Credits

Emphasis Requirements:		38 Credits
• AVSC 1020	Aircraft Identification	2.0
• AVSC 1030	Aviation Customer Service	3.0
• AVSC 1040	In-flight Service	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: 19 Credits

• Must complete 19 credits from the following elective courses:		19.0
• 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 281R	Cooperative Work Experience (1.0)	
• AVSC 285R	Cooperative Related Class (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)	
• AVSC 481R	Cooperative Work Experience (1.0)	
• AVSC 485R	Cooperative Related Class (1.0)	

Emphasis in Professional Pilot 57 Credits

Emphasis Requirements:		39 Credits
• AVSC 1020	Aircraft Identification	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	3.0
• 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 3300	Jet Transport Systems	3.0
• AVSC 3400	High Altitude Navigation/International Flight Operations	3.0
• AVSC 3530	Advanced Aerodynamics	3.0

Emphasis Elective Requirements: 18 Credits

• Must complete 18 credits from the following courses, including 11 hours of upper division.		18.0
• 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 281R	Cooperative Work Experience (1.0)	
• AVSC 285R	Cooperative Related Class (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)	
• AVSC 481R	Cooperative Work Experience (1.0)	
• AVSC 485R	Cooperative Related Class (1.0)	

BS in Technology Management 125 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:		33 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	3.0
• AVSC 2310	Flight Commercial Pilot--Phase II	3.0
• AVSC 2440	Ground Multi-Engine	1.0
• AVSC 2450	Flight Multi-Engine	1.0

Elective Requirements: 12 Credits

Complete 12 credits from the following:		12.0
• AVSC 1020	Aircraft Identification (2.0)	
• AVSC 2050	Introduction to Aviation Security (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 2500	Ground Multi-Engine Instructor (1.0)	
• AVSC 2510	Flight Multi-Engine Instructor (1.0)	
• AVSC 281R	Cooperative Work Experience (1.0)	
• AVSC 285R	Cooperative Related Class (1.0)	
• 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)	
• AVSC 410G	Global Ethical and Professional Issues in Aviation (3.0)	
• AVSC 475R	Current Topics in Aviation (1.0)	
• AVSC 481R	Cooperative Work Experience (1.0)	
• AVSC 485R	Cooperative Related Class (1.0)	

Graduation Requirements:

1 Students should take no more than 4 credit hours of aviation co-op (AVSC 281R/285R/481R/485R) toward the aviation elective section of the Technology Management degree.

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

- AVSC, Aviation Science