

BACHELOR OF SCIENCE IN AVIATION SCIENCE

Web Site: <https://twu.edu/aviation/>

The program in Aviation Science prepares students for a career in aviation. In addition to completing flight training in preparation for commercial pilot certification, the program offers robust coursework in all facets of aviation leading to two track options: Professional Pilot and Aviation Management.

Marketable Skills

Defined by the Texas Higher Education Coordinating Board's 60x30 Strategic Plan (<https://reportcenter.highered.texas.gov/agency-publication/miscellaneous/the-cb-60x30-strategic-plan/>) as, "Those skills valued by employers that can be applied in a variety of work settings, including interpersonal, cognitive, and applied skills areas. These skills can be either primary or complementary to a major and are acquired by students through education, including curricular, co-curricular, and extracurricular activities."

- **Applied skills:** This program prepares students to earn commercial pilot privileges for operating single-engine and multi-engine aircraft.
- **Critical thinking:** This program prepares students to think critically and analytically in order to develop effective solutions, including in high-pressure situations.
- **Communication:** This program prepares students to communicate effectively on a range of technical and specialized aviation topics to a wide variety of audiences.
- **Teamwork:** This program prepares students to collaborate effectively.

Admissions

All applicants must meet the general undergraduate admission requirements (<https://catalog.twu.edu/undergraduate/admission-information/>). In addition, applicants must

- be at least 17 years old;
- be able to read, speak, write, and understand the English language;
- hold at least a valid 3rd-class medical certificate (1st-class medical certificate is recommended);
- possess a valid Student Pilot certificate prior to first solo flight.

Degree Requirements

Total Semester Credit Hours Required

Students must earn a grade of B or better in all AVS courses that lead to certifications and/or ratings. Students must earn a C or better in all other AVS courses that count toward the major.

Texas Core Curriculum

Code	Title	SCHs
ENG 1013	Composition I	3
ENG 1023	Composition II	3
Mathematics		3

Life & Physical Sciences		6
Language, Philosophy, & Culture		3
Creative Arts		3
HIST 1013	History of the United States, 1492-1865	3
HIST 1023	History of the United States, 1865 to the Present	3
POLS 2013	U.S. National Government	3
POLS 2023	Texas Government	3
Social & Behavioral Sciences		3
CAO: Women's Studies		3
CAO: First Year Seminar, Wellness or Mathematics		3
Total SCHs		42

Code	Title	SCHs
Requirements		
ENG 3253	Technical Writing	3
Aviation Science FAR Part 141 Courses		
AVS 1012	Private Pilot Ground I	2
AVS 1021	Private Pilot Ground II	1
AVS 1112	Private Pilot Flight Lab I	2
AVS 1121	Private Pilot Flight Lab II	1
AVS 1133	Instrument Flight Lab	3
AVS 2043	Commercial Ground	3
AVS 2033	Instrument Ground	3
AVS 2112	Commercial Flight Lab I	2
AVS 2123	Commercial Flight Lab II	3
AVS 2131	Multi-Engine Flight Lab	1
Aviation Science Non-Part 141 Courses		
AVS 1213	Aircraft Systems I	3
AVS 1223	Aerodynamics and Aircraft Performance	3
AVS 1233	Aviation Weather and Meteorology	3
AVS 2213	Air Traffic Control and the National Airspace System	3
AVS 2223	Aviation Safety	3
AVS 2233	Aviation Law and Regulations	3
AVS 3213	Aircraft Systems II	3
AVS 3223	Human Factors	3
AVS 3233	Advanced Power Plant and Turbine Engine Systems	3
AVS 3243	Advanced Autoflight and Flight Management Systems	3
AVS 4013	Aviation, Space, & American Society	3
Total SCHs		57

Departmental Requirements

Code	Title	SCHs
PHYS 1133	Principles of Physics I	3
MATH 1303	College Algebra	3
or MATH 1703	Elementary Statistics I	

Aviation Management Option

Code	Title	SCHs
AVS 3313	Flight Operations Management	3
AVS 3323	Global Navigation and Flight Planning	3
MGT 3003	Principles of Management	3
MGT 3273	Human Resource Management (Electives (6 SCH must be 3000 or 4000-level))	3
Electives (6 SCH must be 3000 or 4000-level)		8
Total SCHs		20

Professional Pilot Option

Code	Title	SCHs
AVS 3112	Certified Flight Instructor Flight Lab	2
AVS 3013	Certified Flight Instructor Ground	3
AVS 3121	Certified Flight Instructor-Instrument Flight Lab	1
Electives (12 SCH must be 3000 or 4000-level)		14
Total SCHs		20

Recommended Plan of Study

First Year

Fall	TCCN	SCHs
ENG 1013 Composition I	ENGL 1301	3
UNIV 1231 Learning Frameworks: First-Year Seminar	EDUC 1100, EDUC 1200, EDUC 1300	1
MATH 1303 or 1703 College Algebra or Elementary Statistics I	MATH 1314 or MATH 1342	3
AVS 1012 Private Pilot Ground I		2
AVS 1112 Private Pilot Flight Lab I		2
AVS 1213 Aircraft Systems I		3
SCHs		14
Spring	TCCN	SCHs
ENG 1023 Composition II	ENGL 1302	3
PHYS 1133 Principles of Physics I & PHYS 1131 and Principles of Physics Laboratory I	PHYS 1301 & PHYS 1101	4
Wellness CAO Core		2
AVS 1021 Private Pilot Ground II		1
AVS 1121 Private Pilot Flight Lab II		1
AVS 1223 Aerodynamics and Aircraft Performance		3
AVS 1233 Aviation Weather and Meteorology		3
SCHs		17

Second Year	TCCN	SCHs
Fall		
Language, Philosophy, & Culture Core		3
Physical or Life Science Core		3
AVS 2033 Instrument Ground		3
AVS 1133 Instrument Flight Lab		3
SCHs		12
Spring	TCCN	SCHs
AVS 3243 Advanced Autoflight and Flight Management Systems		3
AVS 3121 Certified Flight Instructor-Instrument Flight Lab		1
Electives (12 SCH must be 3000 or 4000-level)		8
SCHs		12
Total SCHs:		57

AVS 2213	Air Traffic Control and the National Airspace System	3
SCHs		15

Spring	TCCN	SCHs	
Creative Arts Core			
3			
HIST 1013	History of the United States, 1492-1865	HIST 1301	3
AVS 2043	Commercial Ground		3
AVS 2112	Commercial Flight Lab I		2
AVS 2223	Aviation Safety		3
AVS 2233	Aviation Law and Regulations		3
SCHs		17	
Total SCHs:		63	

Professional Pilot Option

Third Year	TCCN	SCHs	
Fall			
AVS 2123	Commercial Flight Lab II	3	
AVS 3213	Aircraft Systems II	3	
HIST 1023	History of the United States, 1865 to the Present	HIST 1302	3
POLS 2013	U.S. National Government	GOVT 2305	3
Electives (12 SCH must be 3000 or 4000-level)		3	
SCHs		15	

Spring	TCCN	SCHs	
AVS 3223	Human Factors	3	
AVS 2131	Multi-Engine Flight Lab	1	
AVS 3013	Certified Flight Instructor Ground	3	
ENG 3253	Technical Writing	3	
POLS 2023	Texas Government	GOVT 2306	3
Social/Behavioral Sciences Core		3	
SCHs		16	

Fourth Year	TCCN	SCHs
Fall		
AVS 3233	Advanced Power Plant and Turbine Engine Systems	3
AVS 4013	Aviation, Space, American Society	3
AVS 3112	Certified Flight Instructor Flight Lab	2
Multicultural Women's Studies Core		3
Electives (12 SCH must be 3000 or 4000-level)		3
SCHs		14

Spring	TCCN	SCHs
AVS 3243	Advanced Autoflight and Flight Management Systems	3
AVS 3121	Certified Flight Instructor-Instrument Flight Lab	1
Electives (12 SCH must be 3000 or 4000-level)		8
SCHs		12
Total SCHs:		57

Aviation Management Option

Third Year

Fall		TCCN	SCHs
AVS 2123	Commercial Flight Lab II		3
AVS 3213	Aircraft Systems II		3
AVS 3313	Flight Operations Management		3
HIST 1023	History of the United States, 1865 to the Present	HIST 1302	3
POLS 2013	U.S. National Government	GOVT 2305	3
SCHs			15

Spring		TCCN	SCHs
AVS 3223	Human Factors		3
AVS 2131	Multi-Engine Flight Lab		1
AVS 3323	Global Navigation and Flight Planning		3
ENG 3253	Technical Writing		3
POLS 2023	Texas Government	GOVT 2306	3
Social/Behavioral Sciences Core			3
SCHs			16

Fourth Year

Fall		TCCN	SCHs
AVS 3233	Advanced Power Plant and Turbine Engine Systems		3
AVS 4013	Aviation, Space, American Society		3
MGT 3003	Principles of Management		3
Multicultural Women's Studies Core			3
Electives (6 SCH must be 3000 or 4000-level)			2
SCHs			14

Spring		TCCN	SCHs
AVS 3243	Advanced Autoflight and Flight Management Systems		3
MGT 3273	Human Resource Management		3
Electives (6 SCH must be 3000 or 4000-level)			6
SCHs			12

Total SCHs: 57