

**BACHELOR OF SCIENCE IN AVIATION SCIENCE
UNIVERSITY OF HOUSTON-VICTORIA**

Congruence with System Goals and University Mission

The Bachelor of Science in Aviation Science program at University of Houston–Victoria (UHV) will provide students with marketable skills and knowledge so that they are prepared to meet the needs of the aviation industry, both on the ground and in the air. The proposed program, supported by a \$3.1 million appropriation from the Texas Legislature in 2023, will promote the efforts of the UH System to grow in national competitiveness by meeting a critical industry need, advancing student achievement and success, and serving the diverse Houston metroplex and Texas. The B.S. in Aviation Science will be a residential program, based on the Victoria campus, promoting the vision of a destination campus and vital engagement with community needs and resources such as the county airport. In addition, aviation faculty members will participate in cutting-edge research to provide accessible education to the local community and promote academic excellence of students.

Program Description

The proposed B.S. in Aviation Science is designed to prepare students with broad understanding of, and marketable skills, in aviation. The program requires 120 semester credit hours; students can choose either a Management Track or a Flight Track. The Management Track prepares students for careers in airport and airline management, flight dispatch, ground support, and other related fields. The Flight Track provides necessary knowledge and hands-on training to qualify for several pilot ratings/licenses (through the Federal Aviation Administration), leading to a career as a professional pilot.

All students will be able to understand, demonstrate, and apply subjects in aviation including the history of aviation, fundamental theory of flight, federal regulatory compliance, and airlines and airport operations. Management Track students will be equipped to make managerial decisions in real-world, aviation-related problems as well as communicate effectively and collaborate with teams from diverse backgrounds. Flight Track students will acquire technical knowledge for piloting aircraft, including flight planning, navigation, aircraft maneuver, airlines and airport operations, and National Air Space. The Flight Track is designed to provide hands-on experience in operating aircraft and pursuit of FAA certificates required for careers in commercial aviation. The B.S. in Aviation Science will approach these learning outcomes by requiring completion of the designated core curriculum, aviation-related foundation courses, and concentration courses focusing on management skills and data analytics (Management Track) or ground courses and hands-on flight experiences (Flight Track).

Student and Job Market Demand

Aviation is expected to be a growing industry. The Bureau of Labor Statistics predicts a 5.6% growth in the total number of commercial pilots and a 19.3% growth in the total air transportation workers by 2032, with about 16,000 annual openings for commercial pilots over the same period. Based on the report, the 2023 median pay for airline and commercial pilots is \$171,210 per year with more than 142,600 employed in this occupation.

The long-term occupational growth projections (2022-2032) of commercial pilots in Texas (11.8%) is greater than that of national level (3.9%) with a projected 750 annual openings in Texas. In 2021-2022, 2,103 bachelor's degrees were awarded nationwide (141 in Texas) in CIP

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code 49.0102.00 (Airline / Commercial / Professional Pilot and Flight Crew); demonstrating that there is a significant gap between the market demand and current supply.

Program Duplication

The Texas Higher Education Coordinating Board Program Inventory indicates that there are eight programs with bachelor's degrees awarded in Texas that share the same CIP code with the Aviation Science program at UHV **(49.0101.00/49.0102.00)**.

1. Angelo State University: Commercial Aviation
2. Baylor University: Aviation Sciences
3. LeTourneau University: Aviation Management – Flight Concentration
4. Schreiner University: Aviation
5. Stephen F. Austin State University: Aviation
6. Texas A&M University – Central Texas: Aviation Science – Professional Pilot
7. Texas Woman's University: Aviation
8. University of North Texas: Aviation Logistics

There are also six related programs (with a different CIP code) in Texas.

1. Grayson College: Associate degree in Aviation/Airway Management and Operations (CIP code: 49.0104.00)
2. Baylor University: Bachelor's degree in Aviation Administration (CIP code: 49.0104.00)
3. LeTourneau University: Bachelor's degree in Aeronautical Science – Management Concentration (CIP code: 49.0104.00)
4. LeTourneau University: Associate degree in Aviation Management – Flight Concentration (CIP code: 49.0101.00)
5. Texas A&M University – Central Texas: Bachelor's degree in Aviation Science – Aviation Management (CIP code: 49.0104.00)
6. Texas Southern University: Bachelor's degree in Aviation Science Management (CIP code: 49.0104.00)

Faculty Resources

Dr. Jiansen Wang (Ph.D., Technology; Department of Aviation) was recruited by UHV in September 2024. His major role includes program structure and curriculum design, teaching, and research in the aviation program. The tentative hiring plan for the Aviation Science program is to recruit another faculty with a Ph.D. degree in related fields and a focus on aviation by Fall 2027, as the initial cohort of students will transition to upper division and additional teaching resources may be needed. UHV will be partnering with a commercial flight school to provide the ground school and in-flight training required for the various pilot certifications embedded within the degree.

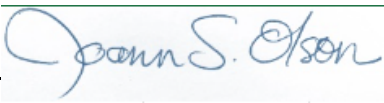
State or National Need

The proposed B.S. in Aviation Science provides accessibility to students with interests in aviation to develop their knowledge and skills and prepare for a successful career. The program aims at promoting student competency and excellence through a structured course sequence, comprehensive knowledge and topics covered, and academic research opportunities. The

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program will address the shortage of a qualified workforce for pilots and other aviation-related positions at the state and national level through training and graduating competent pilots and professional aviation management personnel.

PRO FORMA FOR BS in Aviation Science

FY2026				Operating Years					
		Year 0	FY2026	FY2027	FY2028	FY2029	FY2030		
			Fall25	Fall26	Fall27	Fall28	Fall29		
Enrollments									
Cohort 1			12	11	9	8			
Cohort 2				15	14	12		10	
Cohort 3					18	16		14	
Cohort 4						21		18	
Cohort 5								24	
Cohort 6									
Total			12	26	41	57		66	
Expenses									
Faculty (9 month)									
	Salary	% effort	Year 0	FY2026	FY2027	FY2028	FY2029	FY2030	
Wang	80,000	100%		80,000	81,600	83,232	84,897	86,595	
Faculty member to be hired	80,000	100%		-	-	80,000	81,600	83,232	
Position 3				-	-	-	-	-	
Position 4				-	-	-	-	-	
Position 5				-	-	-	-	-	
Position 6				-	-	-	-	-	
Adjuncts				-	-	-	-	-	
Subtotal	160,000	200%	-	80,000	81,600	163,232	166,497	169,827	
Faculty FTE									
				1.00	1.00	2.00	2.00	2.00	
Staff (12 month)									
Position 1--college-level shared administrative support	40,000	25%		10,000	10,200	10,404	10,612	10,824	
Position 2--operations manager (funded by state aviation allocation)	80,000	100%		80,000	81,600	83,232	84,897	86,595	
Position 3				-	-	-	-	-	
Position 4				-	-	-	-	-	
Position 5				-	-	-	-	-	
Position 6				-	-	-	-	-	
Graduate Students				-	-	-	-	-	
Subtotal	120,000	125%	-	90,000	91,800	93,636	95,509	97,419	
Staff FTE									
				1.25	1.25	1.25	1.25	1.25	
Total Salaries			-	170,000	173,400	256,868	262,005	267,245	
Benefits @ 20.5%			-	34,850	35,547	52,658	53,711	54,785	
Total Personnel			-	204,850	208,947	309,526	315,716	322,031	
Non-Personnel									
Marketing/Recruiting				5,000	4,000	2,000	2,000	2,000	
Scholarships & Tuition Assistantships					-	-	-	-	
Annual maintenance & operations				1,000	1,000	1,000	1,000	1,000	
Library and Information Technology				1,000	1,000	1,000	1,000	1,000	
Accreditation				-	-	1,565	1,565	20,000	
Facilities				-	-	-	-	-	
Laboratory and other equipment				3,000	3,000	3,000	3,000	3,000	
Other				-	-	-	-	-	
Total Non-Personnel			-	10,000	9,000	8,565	8,565	27,000	
Allocated to university operations		10%		6,824	14,785	27,154	36,253	46,435	
Total Annual Expense			\$ -	\$ 221,674	\$ 232,732	\$ 345,245	\$ 360,534	\$ 395,465	
Revenue									
Formula Funding Generated				-	-	73,193	73,193	169,732	
Statutory Tuition Applied to Formula				-	-	(34,800)	(34,800)	(80,700)	
Subtotal: State General Revenue				-	-	38,393	38,393	89,032	
UH Tuition and Fees				76,658	166,093	261,916	364,127	421,621	
Allocated to set aside per student				(8,420)	(18,243)	(28,767)	(39,993)	(46,308)	
Total Revenue from Enrollment				68,239	147,851	271,542	362,527	464,345	
Existing College Resources from grant as per narrative				204,850	208,947	-	-	-	
Net Revenue				273,089	356,798	271,542	362,527	464,345	
Net Annual Gain/(Loss)			-	\$ 51,415	\$ 124,066	\$ (73,703)	\$ 1,993	\$ 68,880	
Cumulative Gain/(Loss)			-	\$ 51,415	\$ 175,480	\$ 101,777	\$ 103,770	\$ 172,650	
Campus Signoff							Date:	10/15/2024	
Daniel Chang, Program Director, Office of the Provost Signature:	_____						Date:	_____	
Vivianne Do, Executive Director, Office of the Provost Signature:	_____						Date:	_____	