

DEPARTMENT OF TRANSPORTATION STUDIES

The Department of Transportation Studies offers courses in the academic discipline of **Aviation Science and Technology (AWS)**. Through curricular offerings provided, students are able to earn **the Bachelor of Science (B.S.) in Aviation Science and Technology and the Master of Science (M.S.) in Transportation Planning and Management**. Cooperative Education (COE) courses are also offered through this instructional unit. **An undergraduate minor is offered in Aviation Science and Technology for students majoring in other academic disciplines. The Aviation Science and Technology Degree Program is accredited by the National Association of Industrial Technology (NAIT).** Members of the Department are housed in the College of Science and Technology/AWS Center.

For detailed information on the Master of Science in Transportation Planning and Management, students should refer to the Graduate School Bulletin of Texas Southern University.

The curriculum of study for the Bachelor of Science (B.S.) in **Aviation Science and Technology** provides students with two tracks, through which a concentration may be gained, to focus on: **Aviation Computer Science** and **Aviation Science Management**. A detailed listing of these requirements, by track, is given below. **Students selecting to pursue the B.S. in Aviation Science and Technology are not required to declare a minor in another academic discipline. Additionally, grades of “C” or better must be earned in all Aviation and Management courses required for either track leading to completion of the degree, as well as in all Computer Science courses required in the Aviation Computer Science track. Grades of “C-” are unacceptable. Prior to graduation, majors must pass an exit examination during their senior year.**

The mission of the Department of Transportation Studies is threefold: (1) to prepare students, specifically, for a variety of administrative and managerial positions in aviation; (2) to prepare students to function effectively in a number of diverse computer-related areas in the field of aviation; and (3) to provide students with adequate academic background and preparation for pursuing graduate study in the field of aviation or affiliated areas. In the fulfillment of this mission, students selecting the **Aviation Science Management** track of study are prepared for a number of career specialization options: Air Traffic Control Management, Air Carrier Management, Airport Management, and General Aviation Operations Management. To the same end, students choosing the **Aviation Computer Science** track of study are prepared to operate, design software for, troubleshoot, and program computers used in aviation.

Students wishing to pursue one of the tracks of study leading to the B.S. in **Aviation Science and Technology** must first gain admission to the University, must satisfy ASSET requirements and eradicate identified deficiencies through the General University Academic Center (GUAC), must contact the Department Office while satisfying ASSET requirements for advisement, and must petition the Department for admission once ASSET requirements have been completed and deficiencies removed. **In addition, before students may register for courses involving flying, they must first pass an appropriate medical examination administered by a Federal Aviation Administration (FAA) designated Aviation Medical Examiner (AME).** In passing this examination, a letter is provided which entitles the recipient to a special medical certificate documenting his/her qualifications to commence flight training.

Up to fifteen (15) semester credit hours may be given for flight-related experience toward the completion of the requirements for the B.S. in **Aviation Science and Technology**. The awarding of credit and advanced standing for this experience must be determined by the Dean of the College of Science and Technology and/or the Faculty Chair according to the prescribed eligibility requirements. No credit will be given for the FAA private pilot's certificate; however, flight requirements may be waived upon proof of certification. In equating flight-related experience to credit, appropriate documentation (transcripts, certificates, log books, letters of verification) must be submitted as part of the evaluation process.

In addition to academic course work, **a student pursuing the B.S. in Aviation Science and Technology must undertake an internship on a semester credit hour basis to meet degree requirements and gain practical experience.** Participants providing internship sites for students are the Houston Airport System (George Bush Intercontinental, Hobby, and Ellington Airports), Central Business District Helipad, airlines with large operational facilities in Houston, and general aviation. For further information on internships, students should contact either the Internship Coordinator in the College of Science and Technology, the Office of the Dean of the College of Science and Technology, or the University Director of Cooperative Education in the Placement Center at the University.

For the minor in Aviation Science and Technology offered through the Department, students are required to complete 22 semester credit hours in the following courses: AWS 101 (3 credits), AWS 101L (1 credit), AWS 102 (3 credits), AWS 321 (3 credits), AWS 371 (3 credits), AWS 381 (3 credits), AWS 404 (3 credits), and AWS 407 (3 credits).

For additional information on the Bachelor of Science in Aviation Science and Technology, students are asked to contact the Department Office at (713)-313-1841.

LISTING OF FACULTY IN THE DEPARTMENT

<p>Clack, Harry E. Instructor B.S., M.S., Texas Southern University</p>	<p>Lewis, Carol A. Associate Professor B.S., M.S., University of Iowa Ph.D., University of Houston</p>
<p>Dittmer, Peter Assistant Professor B.BA., Texas A & M University M.S., Central Missouri State University Ed.D. (ABD), Nova Southeastern University</p>	<p>Qi, Yi (Grace) Assistant Professor B.S., M.S., East China Normal University, Shanghai M.S. Polytechnic University of New York Ph.D. Polytechnic University of New York</p>
<p>Glass, Charles Assistant Professor B.A., Prairie View A & M University M.A., Texas Southern University M.S.Ed., University of Southern California Ed.D., Texas Southern University</p>	<p>Qiao, Fengxiang Assistant Professor B.S. South East University, Nanjing Jiangsu Province M.S. South East University, Nanjing Jiangsu Province Ph.D. Hong Kong University of Science and Technology</p>
<p>Hall, Tasjah Visiting Instructor B.S., Texas Southern University M.S., Texas Southern University</p>	<p>Yu, Lei Chair, Professor B.S., Beijing (formerly Northern) Jiaotong University M.S., Nagoya Institute of Technology Ph.D., Queen's University</p>

AVIATION SCIENCE AND TECHNOLOGY COURSES

AWS 101	Introduction to Aviation (3) Introduction to operational parts of an airplane, meteorology, aircraft navigation systems, radio procedures, cockpit instrumentation, flight physiology, and FAA regulations governing flight activity of a private pilot. Preparation for FAA private pilot written examination. Three hours of lecture per week.
AWS 101L	Introduction to Aviation Laboratory (1) Introduction to rudimentary flight procedures and techniques required for basic flight. Two hours of laboratory per week. Corequisite: AWS 101.
AWS 102	Aviation History (3) Historical survey of manned flight; developments in aircraft design; the present air transportation system; evolutionary trends in air transportation; origin of all major air carriers; and overview of the role of African-Americans in early aviation. Three hours of lecture per week.
AWS 113	Introduction to Flight (3) Aircraft engine performance charts, weight and balance limitations, cross-country flight control procedures and communication. Supervised dual and solo flight simulations provided to students. Two hours of lecture and two hours of laboratory per week.
AWS 113L	Introduction to Flight Laboratory (1) Flight instruction directed toward the private pilot certificate. Two hours of laboratory per week. Corequisite: AWS 113.
AWS 120	Transportation Survey (3) Transportation modes and their interrelationships; significance of, evolution of, social and environmental impacts of transportation systems; urban transportation problems. Three hours of lecture per week.
AWS 201	Flight Meteorology (3) Survey of atmospheric and weather-related phenomena and their impact on flight operations, including the interface of airmen and flight service stations. Three hours of lecture per week. Corequisite: AWS 201L.
AWS 201L	Flight Meteorology Laboratory (1) Introduction to the methods and techniques of flight meteorology. Two hours of laboratory per week. Corequisite: AWS 201.
AWS 313	Intermediate Flight Theory (3) Aerodynamics, weight and balance computations, performance problems, flight maneuvers, aircraft power plant operations, flight physiology, cockpit instrumentation, and associated FAA regulations. Preparation for FAA commercial pilot written examination. Three hours of lecture per week.
AWS 321	Air Traffic Control (3) Study of the national air traffic control system emphasizing traffic control procedures and the role of centers, approach towers, flight service stations, communications, and navigation procedures. Three hours of lecture per week. Corequisite: AWS 321L.
AWS 321L	Air Traffic Control Laboratory (1) Practical application of air traffic control skills in a laboratory setting. Two hours of laboratory per week. Corequisite: AWS 321.
AWS 351	Aviation Law (3) Chronological development of aviation law, federal and state regulatory functions, rights and liabilities of aviators, commercial air carrier operations, and the traveling public. Includes FAA regulations and directives governing airport operations, air carrier safety, and aviation security. Three hours of lecture per week.

Bachelor of Science Degree in Aviation Computer Science
Accredited by National Association of Industrial Technology (NAIT)
Four-Year Degree Plan - Total Credits: 120

First Year									
First Semester				Second Semester					
AWS	101	Intro to Aviation	3	AWS	102	Aviation History	3		
AWS	101L	Intro to Aviation Lab	1	ENG	132	Freshmen English II	3		
MATH	133	College Algebra	3	CS	117	Intro Comp Science II	3		
ENG	131	Freshmen English I	3	MATH	134	Plane Trigonometry	3		
CS	116	Intro Comp Science I	3	HED	233	History & Principles	2		
ITEC	111	Orientation	1	SC	135	Business Prof. Comm	3		
				14hrs					17hrs

Second Year									
Third Semester				Fourth Semester					
AWS	120	Transportation Survey	3	AWS	Elect***	***Elective***	3		
CS	120	Intro to Programming in C++	3	CS	140	Adv Programming in C++	3		
POLS	231	Amer. Pol System I	3	POLS	232	Amer. Pol System II	3		
ENG	2xx	Any 200 Level	3	HIST	232	Soc & Pol since 1877	3		
HIST	231	Soc & Pol to 1877	3	MATH	241	Calculus	4		
				15hrs					16hrs

Third Year									
Fifth Semester				Sixth Semester					
AWS	321	Air Traffic Control	3	AWS	371	Airport Management	3		
AWS	321L	Air Traffic Control Lab	1	CS	243	Computer Organization	3		
AWS	351	Aviation Law	3	CS	343	Microprocessors & Sys	3		
CS	216	Adv Applications I	3	NSCI	1XX**	Natural Science	4		
NSCI	1XX**	Natural Science	4	PSY	131	General Psychology	3		
MUSI	239	Fine Arts & Daily Liv	3						
				17hrs					16hrs

Fourth Year									
Seventh Semester				Eighth Semester					
AWS	406	National Airspace Sys	3	AWS	495	Fieldwork Practicum	3		
AWS	404	Flight Safety	3	AWS	409	Gen Aviation Management/FBO	3		
AWS	Elect***	***Elective***	3	AWS	Elect***	***Elective***	3		
MGMT	300	Business Org & Mgmt	3	ITEC	331	Technical Writing	3		
ITEC	412	Senior Seminar 1	1						
				13hrs					12hrs

** Natural Science credits should be selected from the following: BIOL 143 (4); CHEM 111, 131 (4); CHEM 112, 132 (4); GEOL 141 (4); and PHYS 101 (4).

*** AWS Elective Options: AWS 313, 371, and 406 (or any other AWS courses approved by the department)

Bachelor of Science Degree in Aviation Computer Science
Accredited by National Association of Industrial Technology (NAIT)
Five-Year Degree Plan - Total Credits: 120

First Year							
First Semester				Second Semester			
AWS	101	Intro to Aviation	3	AWS	102	Aviation History	3
AWS	101L	Intro to Aviation Lab	1	CS	117	Intro Comp Science II	3
MATH	133	College Algebra	3	MATH	134	Plane Trigonometry	3
CS	116	Intro Comp Science I	3	HED	233	History & Principles of Health	2
SC	135	Business Prof. Comm	3	ITEC	111	Orientation	1
				13hrs			12hrs

Second Year							
Third Semester				Fourth Semester			
AWS	120	Transportation Survey	3	AWS	Elect***	***Elective***	3
CS	120	Intro to Programming in C++	3	CS	140	Adv Programming in C++	3
ENG	131	Freshmen English I	3	ENG	132	Freshmen English II	3
MATH	241	Calculus	4	MUSI	239	Fine Arts & Daily Liv	3
				13hrs			12hrs

Third Year							
Fifth Semester				Sixth Semester			
AWS	321	Air Traffic Control	3	AWS	371	Airport Management	3
AWS	321L	Air Traffic Control Lab	1	CS	243	Computer Organization	3
HIST	231	Soc & Pol to 1877	3	HIST	232	Soc & Pol since 1877	3
POLS	231	Amer. Pol System I	3	POLS	232	Amer. Pol System II	3
ENG	2xx	Any 200 Level	3				
				13hrs			12hrs

Fourth Year							
Seventh Semester				Eighth Semester			
AWS	351	Aviation Law	3	AWS	409	Gen Aviation Management/FBO	3
CS	216	Adv Applications I	3	CS	343	Microprocessors & Sys	3
NSCI	1XX**	Natural Science	4	NSCI	1XX**	Natural Science	4
ITEC	412	Senior Seminar	1	PSY	131	General Psychology	3
				11hrs			13hrs

Fifth Year							
Ninth Semester				Tenth Semester			
AWS	406	National Airspace Sys	3	AWS	495	Fieldwork Practicum	3
AWS	404	Flight Safety	3	AWS	Elect***	***Elective***	3
ITEC	331	Technical Writing	3	AWS	Elect***	***Elective***	3
MGMT	300	Business Org & Mgmt	3				
				12hrs			9hrs

** Natural Science credits should be selected from the following: BIOL 143 (4); CHEM 111, 131 (4); CHEM 112, 132 (4); GEOL 141 (4); and PHYS 101 (4).

*** AWS Elective Options: AWS 313, 371, and 406 (or any other AWS courses approved by the department)

Bachelor of Science Degree in Aviation Computer Science
Accredited by National Association of Industrial Technology (NAIT)
Six-Year Degree Plan - Total Credits: 120

First Year							
First Semester				Second Semester			
AWS	101	Intro to Aviation	3	AWS	102	Aviation History	3
AWS	101L	Intro to Aviation Lab	1	CS	117	Intro Comp Science II	3
MATH	133	College Algebra	3	MATH	134	Plane Trigonometry	3
CS	116	Intro Comp Science I	3	ITEC	111	Orientation	1
10hrs				10hrs			

Second Year							
Third Semester				Fourth Semester			
AWS	120	Transportation Survey	3	AWS	321	Air Traffic Control	3
CS	120	Intro to Programming in C++	3	AWS	321L	Air Traffic Control Lab	1
MATH	241	Calculus	4	CS	140	Adv Programming in C++	3
				MUSI	239	Fine Arts & Daily Liv	3
10hrs				10hrs			

Third Year							
Fifth Semester				Sixth Semester			
AWS	Elect***	***Elective***	3	AWS	371	Airport Management	3
CS	243	Computer Organization	3	ENG	132	Freshmen English II	3
ENG	131	Freshmen English I	3	CS	216	Adv Applications 1	3
9hrs				9hrs			

Fourth Year							
Seventh Semester				Eighth Semester			
AWS	351	Aviation Law	3	AWS	409	Gen Aviation Management/FBO	3
CS	343	Microprocessors & Sys	3	ENG	2xx	Any 200 Level	3
NSCI	1XX**	Natural Science	4	NSCI	1XX**	Natural Sci	4
10hrs				10hrs			

Fifth Year							
Ninth Semester				Tenth Semester			
AWS	406	National Airspace Sys	3	AWS	Elect***	***Elective ***	3
POLS	231	Amer. Pol System I	3	POLS	232	Amer. Pol Systems II	3
HIST	231	Soc & Pol to 1877	3	HIST	232	Soc & Pol since 1877	3
SC	135	Business Prof. Comm	3	PSY	131	General Psychology	3
12hrs				12hrs			

Sixth Year							
Eleventh Semester				Twelfth Semester			
AWS	404	Flight Safety	3	AWS	495	Fieldwork Practicum	3
ITEC	331	Technical Writing	3	AWS	Elect***	***Elective ***	3
MGMT	300	Business Org & Mgmt	3	HED	233	History & Principles of Health	2
				ITEC	412	Senior Seminar	1
9hrs				9hrs			

** Natural Science credits should be selected from the following: BIOL 143 (4); CHEM 111, 131 (4); CHEM 112, 132 (4); GEOL 141 (4); and PHYS 101 (4).

*** AWS Elective Options: AWS 313, 371, and 406 (or any other AWS courses approved by the department)

Bachelor of Science Degree in Aviation Science Management
Accredited by National Association of Industrial Technology (NAIT)
Four-Year Degree Plan - Total Credits: 120

First Year							
First Semester				Second Semester			
AWS	101	Intro to Aviation	3	AWS	102	Aviation History	3
AWS	101L	Intro to Aviation Lab	1	ENG	132	Freshmen English II	3
MATH	133	College Algebra	3	SPAN	131	Spanish	3
ENG	131	Freshmen English I	3	PSY	131	General Psychology	3
CS	116	Intro Comp Science I	3	MUSI	239	Fine Arts & Daily Liv	3
ITEC	111	Orientation	1				
SC	135	Business Prof. Comm	3				
			17hrs				15hrs

Second Year							
Third Semester				Fourth Semester			
AWS	120	Transportation Survey	3	AWS	Elect***	***Elective***	3
HIST	231	Soc & Pol to 1877	3	HIST	232	Soc & Pol since 1877	3
POLS	231	Amer. Pol System I	3	POLS	232	Amer. Pol System II	3
NSCI	1XX**	Natural Science	4	NSCI	1XX**	Natural Science	4
SPAN	132	Spanish	3	ENG	2xx	Any 200 Level	3
			16hs				16hrs

Third Year							
Fifth Semester				Sixth Semester			
AWS	321	Air Traffic Control	3	AWS	381	Air Carrier Management	3
AWS	321L	Air Traffic Control Lab	1	AWS	371	Airport Management	3
AWS	351	Aviation Law	3	AWS	Elect***	***Elective***	3
MGMT	300	Business Org & Mgmt	3	MGMT	301	Personnel and Manpower Dev	3
ITEC	331	Technical Writing	3	MKTG	306	Principles of Marketing	3
ENGT	331	Engineering Economy	3				
			16rs				15rs

Fourth Year							
Seventh Semester				Eighth Semester			
AWS	406	National Airspace Sys	3	AWS	495	Fieldwork Practicum	3
AWS	404	Flight Safety	3	AWS	409	General Aviation Management	3
MGSC	304	Information Technology	3	AWS	Elect***	***Elective***	3
MGMT	402	Advanced Aircraft Sys	3	MGMT	402	International Management	3
ITEC	412	Senior Seminar	1				
			13hrs				12hrs

** Natural Science credits should be selected from the following: BIOL 143 (4); CHEM 111, 131 (4); CHEM 112, 132 (4); GEOL 141 (4); and PHYS 101 (4).

*** AWS Elective Options: AWS 313, 371, and 406 (or any other AWS courses approved by the department)

Bachelor of Science Degree in Aviation Science Management
Accredited by National Association of Industrial Technology (NAIT)
Five-Year Degree Plan - Total Credits: 120

First Year							
First Semester				Second Semester			
AWS	101	Intro to Aviation	3	AWS	102	Aviation History	3
AWS	101L	Intro to Aviation Lab	1	ENG	132	Freshmen English II	3
MATH	133	College Algebra	3	PSY	131	General Psychology	3
ENG	131	Freshmen English I	3	MUSI	239	Fine Arts & Daily Liv	3
ITEC	111	Orientation	1				
			11hrs				12hrs

Second Year							
Third Semester				Fourth Semester			
AWS	120	Transportation Survey	3	AWS	Elect***	***Elective***	3
HIST	231	Soc & Pol to 1877	3	HIST	232	Soc & Pol since 1877	3
POLS	231	Amer. Pol System I	3	POLS	232	Amer. Pol System II	3
ENG	2xx	Any 200 Level	3	SPAN	131	Spanish	3
			12hrs				12hrs

Third Year							
Fifth Semester				Sixth Semester			
AWS	351	Aviation Law	3	AWS	Elect***	***Elective***	3
SPAN	132	Spanish	3	NSCI	1XX**	Natural Science	4
NSCI	1XX**	Natural Science	4	CS	116	Intro Comp Science I	3
SC	135	Business Prof. Comm					3
			13hrs				10hrs

Fourth Year							
Seventh Semester				Eighth Semester			
AWS	321	Air Traffic Control	3	AWS	381	Air Carrier Management	3
AWS	321L	Air Traffic Control Lab	1	AWS	371	Airport Management	3
MGMT	300	Business Org & Mgmt	3	MGMT	301	Personnel and Manpower Dev	3
ITEC	331	Technical Writing	3	MKTG	306	Principles of Marketing	3
ENGT	331	Engineering Economy					3
			13hrs				12hrs

Fifth Year							
Ninth Semester				Tenth Semester			
AWS	406	National Airspace Sys	3	AWS	495	Fieldwork Practicum	3
AWS	404	Flight Safety	3	AWS	409	General Aviation Management	3
MGSC	304	Information Technology	3	AWS	Elect***	***Elective***	3
MGMT	402	Advanced Aircraft Sys	3	MGMT	402	International Management	3
ITEC	412	Senior Seminar	1				
			13hrs				12hrs

** Natural Science credits should be selected from the following: BIOL 143 (4); CHEM 111, 131 (4); CHEM 112, 132 (4); GEOL 141 (4); and PHYS 101 (4).

*** AWS Elective Options: AWS 313, 371, and 406 (or any other AWS courses approved by the department)

Bachelor of Science Degree in Aviation Science Management
Accredited by National Association of Industrial Technology (NAIT)
Six-Year Degree Plan - Total Credits: 120

First Year							
First Semester		Second Semester					
AWS	101L	Intro to Aviation Lab	1	ENG	132	Freshmen English II	3
MATH	133	College Algebra	3	PSY	131	General Psychology	3
ENG	131	Freshmen English I	3	ITEC	111	Orientation	1
			10hrs				10hrs

Second Year							
Third Semester		Fourth Semester					
AWS	120	Transportation Survey	3	AWS	Elect***	***Elective***	3
HIST	231	Soc & Pol to 1877	3	HIST	232	Soc & Pol since 1877	3
POLS	231	Amer. Pol System I	3	POLS	232	Amer. Pol System II	3
ENG	2xx	Any 200 Level	3	SPAN	131	Spanish	3
			12hrs				12hrs

Third Year							
Fifth Semester		Sixth Semester					
AWS	351	Aviation Law	3	AWS	Elect***	***Elective***	3
SPAN	132	Spanish	3	NSCI	1XX**	Natural Science	4
NSCI	1XX**	Natural Science	4	CS	116	Intro Comp Science I	3
			10hrs				10hrs

Fourth Year							
Seventh Semester		Eighth Semester					
AWS	321	Air Traffic Control	3	AWS	381	Air Carrier Management	3
AWS	321L	Air Traffic Control Lab	1	AWS	371	Airport Management	3
MGMT	300	Business Org & Mgmt	3	MGMT	301	Personnel and Manpower Dev	3
ITEC	331	Technical Writing	3				
			10hrs				9hrs

Fifth Year							
Ninth Semester		Tenth Semester					
AWS	404	Flight Safety	3	AWS	409	General Aviation Management	3
ENGT	331	Engineering Economy	3	MKTG	306	Principles of Marketing	3
SC	135	Business Prof. Comm	3	MGMT	402	International Management	3
			9hrs				9hrs

Sixth Year							
Eleventh Semester		Twelfth Semester					
AWS	406	National Airspace Sys	3	AWS	495	Fieldwork Practicum	3
MGSC	304	Information Technology	3	AWS	Elect***	***Elective***	3
MGMT	402	Advanced Aircraft Sys	3	MUSI	239	Fine Arts & Daily Liv	3
ITEC	412	Senior Seminar	1				
			10hrs				9hrs

** Natural Science credits should be selected from the following: BIOL 143 (4); CHEM 111, 131 (4); CHEM 112, 132 (4); GEOL 141 (4); and PHYS 101 (4).

*** AWS Elective Options: AWS 313, 371, and 406 (or any other AWS courses approved by the department)