UT PERMIAN BASIN™

Degree: Bachelor of Science
Program: Computer Science
Degree Map | 2025 - 2029

	Your Class Schedule	Academic Advising	Enriching Experiences	Lifelong Success
Freshman	• Complete core courses recommended for your degree plan • Focus on English, History, Math, and Computer Science courses • Enroll in 16 credit hours Fall and 17 credit hours in Spring semesters • Pass all your prerequisite classes with a C or better	• Participate in New Student Orientation • Meet with your Academic Advising Center Freshman Advisor before registration • Plan the class schedule and register for classes • Register for classes as soon as possible	***Prioritize Your Wellness*** • Participate in campus recreation • Attend Financial Literacy seminars • Form healthy study habits ***Build Your Community*** • Use FalconLink & attend Club Day • Volunteer • Attend campus events ***Explore Your World*** • Attend an athletics event, musical performance, or visit the art gallery	***Build Your Brand*** • Draft your resume • Register for the Job Board ***Craft Your Future*** • Explore career options • Have coffee with a faculty member • Be an active participant in Directed Observations
Sophomore	• Complete core courses recommended for your degree plan • Focus on Political Science, Math, Science with lab and Computer Science courses • Enroll in 15 credit hours Fall and 17 credit hours Spring semester • Pass all your prerequisite classes with a C or better.	• Meet with your Academic Advising Center Advisor before registration • Plan class schedule and register for classes • Register for classes as soon as possible	***Prioritize Your Wellness*** • Enjoy outdoor spaces on campus ***Build Your Community*** • Join an organization • Explore campus leadership (SGA, Orientation Leader, Resident Asst.) • Seek to attend professional meetings and seminars ***Explore Your World*** • Consider study abroad • Attend a lecture series	***Build Your Brand*** • Update your resume • Join LinkedIn • Consider student employment ***Craft Your Future*** • Participate in mock interviews • Attend an internship/career fair • Be an active participant in clinical practicum courses
Junior	• Focus on Math and Computer Science courses • Enroll in 15 credit hours Fall and 13 credit hours Spring semester • Pass all your computer science classes with C or better	• Meet with your Computer Science Academic Advisor before registration • Plan the class schedule and register for classes • Register for classes as soon as possible • Discuss your graduation plan with the CS Academic Advisor	***Prioritize Your Wellness*** • Attend a health fair ***Build Your Community*** • Run for organization officer role • Apply to be a Falcon Ambassador • Seek to attend professional meetings and seminars ***Explore Your World*** • Consider study abroad • Participate in service learning	***Build Your Brand*** • Update your resume • Conduct research with faculty ***Craft Your Future*** • Search for internships or fellowships • Be an active participant in clinical practicum courses
Senior	• Focus on Computer Science courses and technical elective courses • Enroll in 13 credit hours Fall and 14 credit hours Spring semester	• Meet with your Computer Science Academic Advisor before registration • Plan the class schedule and register for classes • Apply for graduation and inform the CS faculty advisor to complete the degree check form	***Prioritize Your Wellness*** • Attend financial literacy seminars ***Build Your Community*** • Attend your ring ceremony • Join Alumni Association upon graduation • Seek to attend professional meetings and seminars ***Explore Your World*** • Ask your clinical preceptor about opportunities to view surgery	***Build Your Brand*** • Update your resume • Present research ***Craft Your Future*** • Participate in an internship or fellowship • Be an active participant in project-based courses • Apply for jobs

Skills Learned Upon Graduation

• **Leadership • Problem-solving • Communication**
• **Critical Thinking • Collaboration • Confidence**
• **Global Awareness • Teamwork • Volunteering**

Career Opportunities

• **Information Security Manager • Software Developer**
• **Network Security Engineer • Data Scientist**
• **Data Analyst • Educator • Data Architect**

Education Requirements

Semester 1	Semester 2
ENGL 1301 – Composition I (3 sch)	ENGL 1302 – Composition II (3 sch)
HIST 1301 – History of the US to 1877 (3 sch)	HIST 1302 – History of the US since 1877 (3 sch)
MATH 2412 – Precalculus (4 sch)	MATH 2413 – Calculus I (4 sch)
Creative Arts (3 credits)	Social and Behavior Science (3 sch)
UNIV 1301 – Honors Freshman Seminar I (3 sch)	COSC 1430 – Intro to Comp. Sci I (4 sch)
16 HOURS	**17 HOURS**

Semester 3	Semester 4
PLSC 2305 – American National politics (3 sch)	PLSC 2306 – State and Local Politics (3 sch)
COSC 2430 – Intro to Comp. Sci II (4 sch)	COSC 2420 – C Programming (4 sch)
MATH 2414 – Calculus II (4 sch)	COSC 3312 – Discrete Mathematics (3 sch)
Science with Lab (3+1 sch)	Science with Lab (3+1 sch)
	MATH 1342 – Elementary Statistics (3 sch)
15 HOURS	**17 HOURS**

Semester 5	Semester 6
MATH 3301 – Introduction to Probability I (3 sch)	COSC 3420 – Data Structures (4 sch)
MATH 3305 – Math Reasoning (3 sch)	COSC 3320 – Python Programming (3 sch)
COSC 3310 – Computer Organization (3 sch)	COSC 4395 – Research (3 sch)
COSC 3315 – Info. Systems and Security (3 sch)	Technical Elective*
COMM 1315 – Intro to Public Speaking (3 sch)	
15 HOURS	**13 HOURS**

Semester 7	Semester 8
COSC 4430 – Operating Systems (4 sch)	COSC 4460 – Software Engineering (4 sch)
Technical Elective**	COSC 4370 – Data Communications (3 sch)
Technical Elective**	COSC 4475 – Distributed Systems (4 sch)
Technical Elective***	NTSC 4311 – History and Philosophy of Science (3 sch)
13 HOURS	**14 HOURS**

Three Tracks are offered in BS Computer Science:

1. Cyber Security Track: COSC 4375 – Intro to Comp. Security*, COSC 4470 – Applied Network Security**, COSC 4380 – Cryptography**
2. Data Science Track: COSC 4415 – Database Systems*, COSC 4385 – Data Science**, COSC 4386 – Big Data Analytics**
3. Software Development Track: COSC 4415 – Database Systems*, COSC 4455 – Multimedia & Web Develop. **, COSC 4485 – Mobile App Development**

Technical Elective ***: Not required for Software Development. For other tracks, this can be from another department.

- **Complete a total of at least 120 credit hours and complete the general education requirements**
- **Complete 48 hours at the junior/senior level, of which 30 must be at UTPB**
- **Obtain at least a C grade in ALL MAJOR courses**