Marketable Skills for Computer Science

Degree and Major: Bachelor of Science in Computer Science

After completing the **BS in computer science** degree program at UT Tyler, the student can:

Soft Skills:	Hard Skills:	Unique Features of Program
• Demonstrate proficiency in technical writing, oral and written communication, diagramming and requirements gathering.	• Demonstrate technical competence in the general software development life cycle: problem analysis, design, coding, testing, and implementation.	• Success coaches provide beyond-classroom assistance for lower-division courses.
• Demonstrate competence in software development documentation, group presentations, UML and E-R diagrams.	• Demonstrate proficiency in programming in structured language(s): logical thinking, problem solving, problem decomposition, and coding.	• Students throughout their degree program are provided opportunities for hands-on experiences in specialized computing laboratories.
• Demonstrate global awareness and social responsibility as related to the impact of automation, impact of technological advances, cybersecurity, ethics education, and intellectual property laws.	• Demonstrate proficiency in programming in object-oriented language(s): logical thinking, problem solving, problem decomposition, and coding.	• Special dedicated classrooms provide a desktop computer for each student to optimally enhance direct, in-class, hands-on learning opportunities.
• Demonstrate leadership and teamwork by working in groups to achieve goals of software development.	• Demonstrate proficiency in abstract data structure types, techniques of algorithm analysis, and the theory of computation.	• Multidisciplinary teamwork required in capstone projects with other (i.e. CIS and IT) computing degree majors.
• Demonstrate technical knowledge of all aspects of cybersecurity including standards, compliance, and management.	• Demonstrate a deep understanding of structured systems including basic computer organization and hardware architecture.	• Special topic electives which provide students with contemporary knowledge and skills spanning the most current aspects of professional computing.
	• Demonstrate technical competence in computer networks: cybersecurity the Internet, web development, cryptography, troubleshooting, and programming.	• Special career success opportunities linking students with prospective employers for jobs and internships.
	• Demonstrate an implementation-level understanding of databases including design, integrity, and security.	
	• Demonstrate an in-depth understanding of operating systems including process scheduling, memory management, and I/O management with special focus on Windows and UNIX.	