

Department of Computer Science

Texas Tech University | Edward E. Whitacre Jr. College of Engineering

About the Department of Computer Science

Computer Science spans the range from theory to practice to cutting-edge inventions. The need for computing professionals and executives has substantially grown over years. Almost every major challenge facing our world is turning to computing for a solution, from conquering disease to eliminating hunger, from improving education to protecting the environment. Exciting possibilities exist for students with degrees in computer science and software engineering. Students work with distinguished faculty in applying their math and science skills, gaining valuable hands-on experience, and working on research projects funded by federal, state, and industrial organizations. By learning advanced problem-solving methods, Texas Tech computer science students are prepared to solve the world's challenges in this dynamic and rapidly expanding field.

Research Focus Areas

The department has an excellent graduate faculty with research specialties in a variety of areas, including big data, data visualization, cybersecurity, high-performance and cloud computing, artificial intelligence, information retrieval, networking, parallel and distributed computing, programming languages, and software engineering.

Points of Pride

- All programs are fully accredited (BS by ABET - Accreditation Board for Engineering and Technology, and Ph.D., MScS, MSSE by THECB - Texas Higher Ed Coordinating Board)
- 2017 Best SE Master's online by "College Choice"
- 2018 Top 5% in Best Value Computer and Information Science by "College factual"
- 2019 Top Engineering School Changing



- the World by "College Gazette", where CS is one of the main contributing factors for research under NASA's Intelligent Systems Program
- 2020 Ranked #5 in most affordable college for MSSE by "Online U"
- Students received recognitions and won awards in several competitive contests in national/ international computing conferences (e.g., 2019 Big Data Cup)
- Our recent graduates are now working in prominent high tech companies such as Amazon, Microsoft, Google, Apple, Oracle, Adobe, Facebook, and YouTube. They are increasingly recruited by top corporations in Texas such as GMs, L3Harris, and USAA
- 95.8% of responses from our 2019 BSCS graduates are employed



Academic Success

The department commits to continuously improve academic success for students through:

- Advising excellence by dedicated advisors and faculty to provide (i) a robust first year experience (e.g., an integrated common cores for freshman Engineering students), (ii) proactive and data-informed advising by enforcing periodic advising and reaching out to help, (iii) helpful services (e.g., tutoring, training in study skills), and (iv) supportive community (e.g., CS software development club, and student organizations)
- Early introduction to career planning by providing pre-professional advising (e.g., by alumni, faculty), internship and career opportunity (e.g., career centers)
- Expanded experiential learning opportunities to help students clarify their educational and career goals and build their skills through study abroad, mentored research, field-based learning experiences, service learning, and internships.
- Reduced learning obstacles, such as increased course availability (e.g., online courses) and removal



of curricular roadblocks (e.g., revised pre-requisites to allow students to accelerate progress).

- Positive mindset and sense of belonging by participating in departmental activities, joining student interest group and activities (e.g., Hackathons, events by student organizations) to foster stronger student-faculty ties and connection to faculty, classmates, and advisors.

Preparing you for a Global Future

Computer science has risen to the forefront of global technology advancement. At Texas Tech, students are educated to be the engineers, scientists, and leaders of the future. Going beyond a traditional curriculum to explore practical applications, students experience cutting-edge research and learn how computer science is a source of innovation in other disciplines. Research in the department addresses important local, national, and worldwide problems that impact the capability and advancement of computing: making our infrastructure and software safer, smarter, and more secure; enabling valuable analyses of sensor and social networks; protecting visually impaired Internet users from cyber attacks; and exploiting Big Data for uses such as predicting Texas groundwater drought and enhanced oil recovery. Continuing to excel in research on artificial intelligence theories and languages deployed in space technology, the department is building on this expertise to become a home to researchers with exceptional strengths in experimental systems and applied research to blaze new trails in software engineering, networks of Internet devices, and health

informatics. The department is also tackling privacy issues in digital world, and conserving energy in computing and communication. Led by faculty members who are leaders in their fields of study, graduate and undergraduate students are exposed to the latest advances in these areas.

Advanced Degrees Offered

- Five year accelerate B.S./M.S.
- Graduate Certificate in Software Engineering
- Master of Science in Computer Science
- Master of Science in Software Engineering
- Doctor of Philosophy in Computer Science

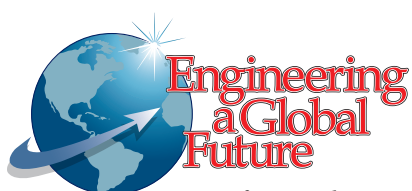
Student Organizations

- Association for Computing Machinery (ACM)
- Institute of Electrical and Electronics Engineers (IEEE)
- Extraordinary Women of Computer Science (EWoCS)
- Tech Women in High Performance Computing (TWHPC)
- Upsilon Pi Epsilon (UPE)

Careers

Our computer science graduates will have skills ready to work globally in a wide range of work places as computer architects, data scientists, software engineers/ testers/ managers, or systems analysts in both computing, healthcare and business industries as well as in government organizations and academia. According to 2019 PayScale, an average annual salary for BSCS graduates is \$84K .

[https://www.payscale.com/research/US/Degree=Bachelor_of_Science_\(BS_%2F_BSc\)%2C_Computer_Science_\(CS\)/Salary](https://www.payscale.com/research/US/Degree=Bachelor_of_Science_(BS_%2F_BSc)%2C_Computer_Science_(CS)/Salary)



Transforming lives; one student at a time



TEXAS TECH UNIVERSITY

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