



College of Engineering

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 Hickory Hall, 120
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Web site: www.eng.unt.edu

Oscar N. Garcia, Dean

Reza Mirshams, Associate Dean
 Kathy Swigger, Associate Dean

Programs of Study

The College of Engineering, through its disciplines of science, engineering and technology, offers course work leading to the following degrees:

- Master of Science and
- Doctor of Philosophy, both with a major in computer science;
- Master of Science with a major in computer engineering;
- Master of Science with a major in electrical engineering;
- Master of Science with a major in engineering technology;
- Master of Science, and
- Doctor of Philosophy, both with a major in materials science and engineering.

The Master of Science with a major in electrical engineering has been approved by the Texas Higher Education Coordinating Board with a 2007 starting date. Contact the Department of Electrical Engineering for specific program details. Call (940) 891-6872 for information.

Master's degrees are offered by all academic departments in the college.

Doctoral programs in the college typically reflect the areas of academic specialization or focus of the various departments (see individual departmental descriptions in this catalog for specific information). All areas offer challenging programs

that provide students with the opportunity to become experts in their chosen fields. A major emphasis in the college is to train graduate students in the fundamentals of engineering and scientific research and to prepare them, especially on the doctoral level, to be critical thinkers who can advance human knowledge through research.

The college is composed of the following four academic departments.

- Computer Science and Engineering
- Electrical Engineering
- Engineering Technology
- Materials Science and Engineering

Research

Research interests in the Department of Computer Science and Engineering include theoretical computer science, databases, visualization, game programming, wired and wireless networks, computer security, artificial intelligence, natural language processing, computer systems architecture, agent-based systems, collaborative learning, parallel and distributed processing, and numerical analysis.

The research areas in the Department of Electrical Engineering include signal processing, wireless communication, channel modeling and measurement, radar systems, VLSI design and testing, analog and mixed-signal IC design, nano-scale semiconductor device modeling and design, wireless sensor network design, radio-frequency identification (RFID) systems, sensor and sensor interface design, coding theory, bioinformatics, artificial intelligence, pattern recognition and multisensor fusion.

Research capabilities in the Department of Engineering Technology include small target visibility, noise cancellation, VLSI design of antenna array, logic circuit design, applications of technology to education, biomedical optics, pulse oximetry, telemedicine, liquid nitrogen automobiles, mechanical behavior of materials for structures and micromechanical systems, control systems, field emissions and corrosion engineering.

Research programs in the Department of Materials Science and Engineering emphasize hands-on research with modern equipment and facilities. Areas of research include polymers, nanocomposites, electronic materials and molecular electronics.

Advising

For general information, contact the Toulouse School of Graduate Studies. For specific requirements for graduate degrees, contact the appropriate department chair or graduate adviser.

Department of Computer Science and Engineering

Main Departmental Office
UNT Research Park, F201

P.O. Box 311366
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(940) 565-2767

Web site: www.cse.unt.edu

Krishna M. Kavi, Chair

Graduate Faculty: Akl, Barrett, Brazile, Dantu, Deng, Escobar-Molano, Garcia, Huang, Irby, Jacob, Kavi, Mihalcea, Mikler, Mohanty, Parberry, Renka, Shahrokhi, Sweany, Swigger, Tarau, Tate.

The Department of Computer Science and Engineering offers graduate programs leading to the following degrees:

- Master of Science with a major in computer engineering;
- Master of Science, and
- Doctor of Philosophy, both with a major in computer science.

Information regarding these degree programs, including admission requirements and degree requirements, can be obtained from the department's web site.

The objective of the master's degree is to produce professional computer scientists capable of contributing technically to the basic core areas of computer science and computer engineering as well as to application areas. The objective of the doctoral degree is to produce professionals capable of conducting and directing research within the discipline of computer science.

The department is committed to overall excellence in graduate education. Consequently, the programs of study for these degrees include a mixture of course, laboratory and research work designed to place graduates at the forefront of technical excellence.

The department also supports an interdisciplinary doctorate with a major in information science. See the School of Library and Information Sciences section of this catalog for more information.

Research

The Department of Computer Science and Engineering has a comprehensive research program. Current faculty research interests include artificial intelligence, data and knowledge bases, computer