Computer Science
Degree Designation: BSCS

Mission Statement
In keeping with the mission of the College of Engineering, the Department of Computer Science and Engineering strives for excellence in teaching, research, and public service. Specifically, we aspire to:

1. Lead the advancement of computer science and engineering through internationally recognized research and graduate education, as well as technology transfer to regional industries;
2. Prepare students for full and ethical participation in a diverse society and encourage lifelong learning;
3. To educate undergraduates in the best practices of the field as well as integrate the latest research into the curriculum;
4. Foster the development of problem solving and communication skills as an integral component of the profession;
5. Provide quality learning experiences through small classes, active learning styles of teaching, and opportunities for meaningful interactions between students and faculty.

We expect that our students seeking employment will find appropriate professional positions and students desiring to continue their formal education will be accepted for admission into quality graduate programs. Our Computer Engineering and Computer Science programs are accredited by ABET, our Information Systems program has no accrediting body at this time.

Student Learning Outcomes

Content / Discipline Skills
- Demonstrate an understanding of the principles of computer languages, operating systems, algorithms, logic design, and computer architecture.
- Demonstrate an understanding of and ability to apply the principles of mathematics and physics as well as other social and natural sciences.
- Demonstrate a breadth of understanding in the liberal arts.

Critical Thinking Skills
- Demonstrate an understanding of domains of application of computing principles such as artificial intelligence, databases, and image processing.
- Demonstrate an understanding of the principles and processes of ethical decision making, particularly as they apply within our profession.
- Recognize the value of diversity within our profession.
- Recognize and be responsive to the need for continuing professional education.

Communication Skills
- Demonstrate the ability to engage in effective oral and written communication.

Assessment Strategies
- We evaluate the achievement of educational outcomes using student performance in courses, department senior exit interviews and surveys, college survey of alumni, and co-op supervisor assessments. We also contact employers and receive feedback on the level of preparedness of our students and their long-term career progress. We believe that course performance is a key measurement technique for assessing student achievement and provides a cornerstone for determining whether or not a student has acquired knowledge of and proficiency in employing basic and advanced concepts in computer engineering. We also use this measure to assess more general communication skills and level of understanding of non-technical subject material. We use the senior exit interviews and surveys as a vehicle for soliciting student feedback regarding their educational experience in our department. There are typically some specific questions posed in the interview, but one of the primary benefits of the interview is that it allows issues to surface which might not yet have been recognized by the faculty. The exit survey secures more quantitative evaluations of our students’ experiences with our courses, advising, facilities, and program. This instrument also provides information about our students’ professional plans. The college survey provides the perspective of recent graduates and those with some years of experience serving to validate our other assessments. Our alumni are in a position to let us know how well their undergraduate education served them as professionals and to offer suggestions for improvements based upon their experiences. For students that have co-op positions, after each student completes his or her assignment we ask for an evaluation from their supervisor. Supervisors are asked to indicate both strengths and weaknesses of the students. These evaluations give us insight into how well our students are prepared for the workplace. As part of our ABET accreditation, we are constantly improving our
assess the tools and procedures.

Career/Employment Options for Graduates

Job prospects are many and varied for our Computer Science graduates. The U.S. Department of Labor, Bureau of Labor Statistics states that, "These workers - computer systems analysts, database administrators, and computer scientists - include a wide range of computer specialists. Job tasks and occupational titles used to describe these workers evolve rapidly, reflecting new areas of specialization or changes in technology, as well as the preferences and practices of employers." Our graduates pursue careers in many specialties including computer programming, computer software engineering, database analyst, network administration, and many other specialties within the broad area of computer science and engineering. Our graduates find positions in the region, state, nation, and internationally. Our graduates also pursue further education in computer science and engineering, business, medicine, and law. For further information on the nature of work, employment, and job outlook, see the U.S. Department of Labor, Bureau of Labor Statistics Occupational Outlook Handbook, 2004–05 Edition at http://stats.bls.gov/oco/.