Structure

Department of Civil Engineering and Construction Management

The departmental goals are designed to give students state-of-the-art knowledge for professional career and life-long development skills needed to enter the fields of civil engineering and construction management while meeting all the requirements to earn a Bachelor of Science degree. The department engages in the best practices of teaching, scholarship, and service to ensure that graduates serve as ethical and highly qualified leaders of civil engineering and construction management. Students will find open doors to a dedicated and diverse faculty who are well-educated yet grounded in the practical aspects of “real world” civil engineering design and construction. Civil Engineering Technology (CET) degree programs are accredited by the Engineering Technology Accreditation Commission of ABET, http://www.abet.org. The CET program no longer accepts entering students. The Construction Management program is accredited by the American Council on Construction Education (ACCE), http://acce-hq.org.

Department of Computer Science

When introduced in 1983, the main emphasis was to provide a solid foundation in algorithm design and implementation based upon a strong background in mathematics. Since that time we have expanded our offerings to include more theoretical-based computer science courses while retaining the original objective. We also have strengthened the program with “core” courses in computer science that reflect a broader emphasis and a greater variety of electives.

Program Educational Objective (3-5 years after graduation)

- an ability to apply mathematical foundations, algorithmic principles, and computer science theory in the modeling and design of computer-based systems in a way that demonstrates comprehension of the tradeoffs involved in design choices;
- an ability to apply design and development principles in the construction of software systems of varying complexity.

Outcomes

Upon graduation, students with a BS majoring in Computer Science will have:

- an ability to apply knowledge of computing and mathematics appropriate to the discipline;
- an ability to analyze a problem, and identify and define the computing requirements appropriate to its solution;
- an ability to design, implement and evaluate a computer-based system, process, component, or program to meet desired needs;
- an ability to function effectively on teams to accomplish a common goal;
- an understanding of professional, ethical, legal, security, and social issues and responsibilities;
- an ability to communicate effectively with a range of audiences;
- an ability to analyze the local and global impact of computing on individuals, organizations, and society;
- recognition of the need for, and an ability to engage in, continuing professional development;
- an ability to use current techniques, skills, and tools necessary for computing practices;
- an ability to apply design and development principles in the construction of software systems of varying complexity.


Department of Electrical Engineering

The Department of Electrical Engineering offers students a hands-on laboratory oriented Bachelor of Science educational experience in Electrical Engineering. The Electrical Engineering curriculum is theoretical, yet hands-on and career oriented. Students gain expertise and practical knowledge in all areas of Electrical Engineering (EE). The Electrical Engineering department has several distinct areas of focus including: Communication Systems, Power Generation and Smart Grids, Fiber Optics, Electromagnetics, Antennas, Control Systems, Network Security, and Sensors. The EE Program is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org. The EET degree program is accredited by the Engineering Technology Accreditation Commission of ABET, http://www.abet.org; however, the EET program no longer accepts entering students.

Department of Information Technology

The department promotes Information Technology as a profession and as an academic discipline. In pursuit of the program mission, world-class educational programs prepare students for a range of careers or graduate study. IT professionals focus on meeting the needs of users within an organizational and societal context through the selection, creation, application, integration and administration of computing technologies. They must, therefore, have a good understanding of the various information technologies and the type of activity in which the organization is involved. Our students are required to complete a series of major core courses, an internship experience, an IT specialization area, and a second discipline concentration. Students and faculty also conduct innovative research in all aspects of IT and its applications and participate in consulting and economic development activities that support the mission of Georgia Southern University.

Outcomes

Upon graduation, students with a BS in Information Technology will be able to:

- identify and define the requirements that must be satisfied to address user needs;
- analyze user requirements to design IT-based solutions;
- identify and evaluate current technologies and assess their applicability to address individual and organizational needs;
- work in project teams to develop and/or implement IT-based solutions;
- use current computing techniques, skills, and/or technologies.

The IT program is accredited by the Computing Accreditation Commission of ABET, http://www.abet.org.

Information Technology - WebBSIT

The Georgia WebBSIT program has two primary purposes. The first purpose is to produce IT graduates with the knowledge, skills, and abilities to meet the needs of Georgia employers. The second purpose is to provide access to a BSIT education for Georgia citizens whose lifestyles make it difficult to attend face-to-face classes on campus. People who are currently working in IT, have family commitments, travel frequently, serve in the military, or simply prefer online learning now have the opportunity to earn a degree from Georgia Southern, one of the six institutions offering
the WebBSIT program in Georgia. IT graduates use computer software and hardware tools and applications to develop, support, and manage the technology infrastructure within organizations.

Outcomes

Upon graduation, students with a BS in the Georgia WebBSIT will be able to:

• identify and define the requirements that must be satisfied to address user needs;
• analyze user requirements to design IT-based solutions;
• identify and evaluate current technologies and assess their applicability to address individual and organizational needs;
• work in project teams to develop and/or implement IT-based solutions;
• use current computing techniques, skills, and/or technologies.

These outcomes are in keeping with emerging program and curricular standards for IT education, as well as with the goals and outcomes of the traditional BSIT programs of the collaborating institutions.

Department of Manufacturing Engineering

The Department of Manufacturing Engineering, established in the fall semester 2015, offers students an applied laboratory oriented Bachelor of Science educational experience in Manufacturing Engineering. The Manufacturing Engineering curriculum is theoretical yet hands-on and career oriented. Students gain expertise and practical knowledge in Manufacturing Engineering (MfgE) in the areas of innovative technologies, advanced materials and processes, world-class quality assurance, automation and IT integration that drives today's and the future's manufacturing industries. Manufacturing Engineers work in tandem with mechanical and electrical engineers to design products and ensure their manufacturability. A manufacturing engineer concentrates on facilities, equipment, processes and methods necessary for the efficient and safe production of the product in a globally competitive environment.

With manufacturing rapidly returning to the U.S., there is a growing demand for manufacturing engineers who are trained in the latest processes, technologies and techniques. Georgia Southern’s B.S. in Manufacturing Engineering, as the only one within a 500-mile radius of Statesboro, Georgia will provide highly trained manufacturing engineers to meet that growing demand.

Department of Mechanical Engineering

The Department of Mechanical Engineering offers students an applied laboratory oriented Bachelor of Science educational experience in Mechanical Engineering. The Mechanical Engineering curriculum is theoretical yet hands-on and career oriented. Students gain expertise and practical knowledge in Mechanical Engineering (ME) in the major areas of Mechanical Devices and Controls, Environmental Systems, Mechanical Design and Analysis, Material Science, Renewable Energy, and Thermal-Fluid Energy Sciences. The ME Program is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org. The MET degree program is accredited by the Engineering Technology Accreditation Commission of ABET, http://www.abet.org; however, the MET program no longer accepts entering students.

Faculty members mentor students in research projects, providing personalized opportunities for professional development. Active areas of research include Biofuels Development; Combustion; Engine Design and Testing; Robotics Automation; Tribology; and Sustainable Design.