The Department of Computing Sciences at the University of Scranton offers three undergraduate majors, each of which prepares students for professional careers and for advanced study. The emphasis is on mastering the foundational concepts of computing while making use of state-of-the-art tools.

The Bachelor of Science Degree (B.S.) in Computer Science (CS) was first offered in 1970, making it one of the oldest and most established programs in the state of Pennsylvania.

The Bachelor of Science Degree (B.S.) in Computer Information Systems (CIS) was established in 1985 to better serve the needs of those students interested in the application of computing primarily in the business and management domains.

The newly established Bachelor of Science Degree (B.S.) in Information Technology (IT) enrolled its first students in Fall 2016, and this program prepares students to be “user-focused” professionals who apply technology to meet the needs of organizations.

Additionally, since 1990 the department has offered a Master of Science (M.S.) degree program in Software Engineering (SE). This program attracts experienced software developers as well as students coming directly out of undergraduate programs. A Combined Baccalaureate/Master’s Degree Program provides a means for qualified undergraduate students to earn both B.S. and M.S. degrees in five years.

Undergraduate Curricula
The Computer Science, Computer Information Systems and Information Technology programs share a common core of introductory courses during the first year of study. These courses prepare students in the underlying foundational concepts and skills of the computing discipline. All three programs culminate during the senior year in the Senior Projects course, when students undertake a project in collaboration with a faculty advisor. In addition to developing the artifacts of the project, students must also satisfy significant reporting requirements as a means of honing their communication skills. Students are further encouraged to pursue internship and undergraduate research opportunities.

The Computer Science major is accredited by ABET (http://www.abet.org), the recognized accrediting body for college and university programs in applied science, computing, engineering, and technology. It is the only such accredited Computer Science degree program in Northeastern Pennsylvania, and Scranton is one of the twenty schools in the state of Pennsylvania with such an accredited computing program.

Related Programs
The undergraduate program in Computer Engineering (CE), offered through the department of Physics/ECE, requires 27 credits of course work in our department.

Proficiencies
Students gain experience utilizing a variety of languages (including Java, Python, C/C++, PHP, LISP and assembler) and systems (including MS Windows, OS X, UNIX, Linux, FreeBSD and LeOS). Students have the opportunity to explore the application of TCP/IP, Web servers (including Apache and Tomcat), database management systems (including MySQL and PostgreSQL), JDB, Java Servlets and various wireless technologies. Projects involving software development for mobile devices have utilized both the Android and Apple iOS platforms. This variety provides valuable and marketable expertise to augment the theory and conceptual understanding emphasized in coursework.

Facilities
In addition to the general computing resources available to all University students, the Department of Computing Sciences provides a variety of computing resources dedicated to the support of programs in computing. Laboratories on the first floor of the Loyola Science Center, near faculty offices, provide reconfigurable space for these resources, most of which are accessible from both on and off campus locations through a VPN. The department is a member of the MSDN® Academic Alliance (MSDNAA), which offers a wide range of Microsoft software development tools (including Visual Studio .NET).

Graduates

The more than 1,200 accomplished alumni of these programs attest to the stability, relevance and quality of the educational experience here. Students are not only well prepared to enter their profession, but are also ready to evolve with and contribute to the discipline and the world as they learn throughout their careers.

Students
The low student to faculty ratio allows students to work closely with their instructors and with each other in the educational process. Many students pursue summer opportunities, including paid internships at Google, Guard, IBM, MetLife, WebMD, TMG Health, USPS, and recent NSF Research Experiences for Undergraduates (REU) at Auburn, Montclair St., New York Institute of Technology, Pittsburgh, and Tennessee Technological University.

Outstanding students are recognized by Updall Pi Epsilon (UPE), the honor society in the Computing Sciences. Many students are involved in the department’s Student Chapter of the Association for Computing Machinery (ACM) and the IEEE Student Branch.

Faculty
Major courses are taught by the six full-time tenured members of the department’s faculty. Their average of over 20 years of service to the University is indicative of the stability and commitment of the department. The faculty’s commitment to scholarship is evidenced by their work with students, research and contributions to the discipline.

The department’s web page, at http://www.cs.scranton.edu, presents more about the programs, the people and the courses. Most faculty keep course related materials online and so browsing through these public pages offers a glimpse of what goes on in the courses offered.

Location/Contact
All faculty offices and departmental labs are located on the first floor of the Loyola Science Center (LSC), in McDonnell and Milan halls. You can reach the department's secretary at (570) 941-7774 and cs@scranton.edu and are encouraged to plan a visit.

The Department of Computing Sciences faculty offices and labs are most conveniently reached via the entrance on Monroe Ave; directly across from The Estate.

B.S., M.S. CS, CIS, IT, SE ABET, ACM, IEEE, UPE
This program’s focus is on mastering the underlying concepts of computing with an emphasis on software engineering. The program is supplemented by courses in mathematics and the natural sciences and prepares students for both advanced study and wide ranging careers in computing, including software development.

**MINOR**

To minor in Computer Science, the student must take a minimum of 20 credits including Math 142, CMPS 134, CMPS 144, CMPS 240 and at least two of CMPS 250, 260, 344, 345, 350, 352, 354, 356, 358, 360, 362, 364, 370, 372, 374, 376, 384, or IT 354.

**COMPUTER INFORMATION SYSTEMS MAJOR**

This program focuses on the development of information systems and is supplemented by courses to be completed by the student, the Kania School of Management. The program prepares students to be information systems professionals capable of developing and configuring software applications. Graduates are prepared to pursue advanced degrees in computing or an M.B.A.

**INFORMATION TECHNOLOGY MAJOR**

This program provides students with knowledge and abilities that prepare them for versatile careers as IT Professionals and for continued professional development. The IT professional understands, evaluates, applies, and manages the information technology resources of individuals and organizations to assist them in achieving their goals and objectives. In addition to providing such preparation in an ever-changing technical landscape, this program prepares students to be effective communicators and contributing collaborators in multiple domains.

The major courses follow a well-defined prerequisite structure with pervasive topics, such as security, spanning multiple courses. A noteworthy aspect of the program is that the Cognate Area requires both breadth and depth in relevant areas, and also provides an opportunity for the completion of a related minor. A capstone course in the senior year requires each student to complete a project under the direction of a faculty member. Opportunities exist for internship and practice experiences.

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