



## GRADUATE PROGRAMS IN ARTS & SCIENCES



# MASTER'S DEGREE PROGRAM IN SOFTWARE ENGINEERING

The Master of Science in Software Engineering (MSSE) graduate program, offered by the Department of Computing Sciences, is designed to develop software professionals who are knowledgeable about and skilled in the application of principles related to the development and maintenance of computer software.

The program requires 36 graduate credits and it normally takes two years for full-time students and three years for part-time students to complete. All the graduate courses are scheduled for weekday evenings.

Graduates of the program have been hired by companies such as IBM, Los Alamos National Lab, Tyco Electronics, Compaq, Metlife, Prudential, GTE, and Alltel.

## CURRICULUM

### Fundamental Courses (12 credits)

- Mathematics for Software Engineering
- Introduction to Software Development
- Formal Methods and Models
- Requirements Analysis and Software Specification

### Advanced Courses (18 credits)

- Principles & Applications of Software Design
- Software Project Management
- Software Generation and Maintenance
- Engineering of Software Systems
- Database Systems
- Interactive and Time Critical Systems Design

### Thesis Project (6 credits)

The thesis project normally involves the design and implementation of a software system under the supervision of a faculty member.

## ADMISSIONS

### Application Requirements:

- On-line application: [www.scranton.edu/gradapply](http://www.scranton.edu/gradapply)
- Official academic transcripts from all colleges/universities attended indicating a cumulative undergraduate GPA of 3.0.
- Three professional letters of recommendation from individuals that can evaluate your ability to perform graduate level work
- Statement of intentions
- This program accepts applications for the fall term only.

In addition to the admission requirements listed above, candidates for admission should be able to demonstrate knowledge equivalent to undergraduate courses in:

- Programming in an object-oriented language
- Discrete Mathematics
- Data Structures

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A NATIONALLY RECOGNIZED MASTER'S UNIVERSITY

The Estate, Scranton, Pennsylvania 18510 | Ph. (570) 941-7600 | Fax: (570) 941-5995

THE UNIVERSITY OF  
**SCRANTON**  
A JESUIT UNIVERSITY

## SOFTWARE ENGINEERING

- File Processing
- Operating Systems

If a student is lacking background in the areas listed, the student may take the Computer Science Fundamentals I & II courses (details at the website) to fulfill the requirements.

### FACULTY

All graduate courses are taught by the seven full-time members of the department's faculty with an average of nearly 20 years of service to the University. All the faculty are committed to scholarship as well as high quality teaching. Their research interests include software engineering, Web development, computer networks and security, database systems, real-time systems, computer graphics, and theory of computation.

### GRADUATE ASSISTANTSHIPS

Teaching and research assistantships are available to the graduate students in the program. Traditionally, over 80% of full-time students receive funding.

### FACILITIES

Students have access to a number of computing platforms, including MS Windows, Linux, and FreeBSD. These resources are networked and accessible from both on and off campus. The department is a member of the MSDN® Academic Alliance (MSDNAA), which offers a wide range of Microsoft software development tools, such as Visual Studio .NET, to the students. Open source systems and tools are extensively used in the program, including Sun's Java J2SDK, Eclipse, PHP, Linux, FreeBSD, Apache and PostgreSQL.

### CONTACT INFORMATION

The department is located on the fourth floor of the Harper-McGinnis wing of

St. Thomas Hall. The department office is St. Thomas 483, with all faculty offices and departmental labs nearby. Please call (570) 941-7774 to plan a department visit, or contact Yaodong Bi, Ph.D., Program Director, at (570) 941-7774 or [se@cs.scranton.edu](mailto:se@cs.scranton.edu); fax: (570) 941-4250, or visit our Web site at: [www.cs.scranton.edu/~se](http://www.cs.scranton.edu/~se)

### COME AND SEE FOR YOURSELF

The best way to discover whether The University of Scranton offers the best graduate program for you is to visit our campus. We encourage you to meet with a member of the Graduate Admissions staff by contacting us at (570) 941-7600 or emailing [cgce@scranton.edu](mailto:cgce@scranton.edu). We are happy to accommodate your schedule.

### FINANCIAL AID

The University of Scranton Office of Financial Aid offers a variety of programs to make your education more affordable. If you are interested in financial aid, including loans, then you should complete the Free Application for Federal Student Aid (FAFSA). The preferred application method is via the Internet at [www.fafsa.gov](http://www.fafsa.gov). Please list in the college choice section of the FAFSA, The University of Scranton and the federal school code 003384. An Employer-Assisted Tuition Deferment option and alternative loans are also available.

### SERVICES AND ADVISING

The College of Graduate and Continuing Education Office of Student Services and Advising provides individual advising and class registration. The office is open from 8:30 a.m. to 7:00 p.m. Monday through Thursday and from 8:30 a.m. to 4:30 p.m. on Friday. Whether you are on campus, at

work or home with your family, the Office of Student Services and Advising offers convenient access to meet your needs. The professional and support staff can be reached at (570) 941-7580.



#### Office of Graduate Admissions

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