

Certificate in Software Engineering - Online

Program Director

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What is Software Engineering?

Software Engineering deals with all aspects of software development to produce successful software. A good software engineer not only is proficient in coding but also understands the steps to produce software including designing a system architecture or eliciting requirements from customers or estimating the cost of a project.

Software engineering is one of the fastest growing fields in the United States. Employment of software developers is projected to grow 24 percent from 2016 to 2026.

The Software Engineering program at St. Mary's University is designed to give students a combined experience of classroom learning and hands-on engineering practice, creating software systems that are reliable, efficient and maintainable. The program focuses on both the technical and management skills that equips its graduates to be successful in the job market. It emphasizes the organizational structures, development processes, analysis and modeling techniques, design methodologies, documentation standards, and quality assurance.

The courses are taught by highly knowledgeable full-time and adjunct faculty with vast industry experience.

Our graduates are employed by a variety of companies, including the following: Intel, Microsoft, IBM, Rackspace, USAA, Southwest Research Institute, AT&T, Accenture, and Samsung.

Admission Requirements

Applicants must have a Bachelor of Science degree in Software Engineering, Computer Science, Computer Engineering or a closely related discipline.

Applicants whose Bachelor of Science degree is not in Software Engineering, Computer Science or Computer Engineering are required to demonstrate proficiency in the following courses (or take the corresponding prerequisite courses at St. Mary's University or other institutions): EG 1302, EG 2342, MT 3323.

Certificate in Software Engineering Admission Requirements

- Applicants must have a Bachelor of Science degree in engineering, computer science, or a closely related discipline such as physics or mathematics. The graduate program director will evaluate applicants from other disciplines on an individual basis. If the applicant has not taken the following courses or equivalent courses in their undergraduate program, they may be admitted with the provision that they take the prerequisite courses at St. Mary's University or other institutions: Discrete Mathematics, Object Oriented Programming, and Data Structures and Algorithms.
- International students must submit minimum TOEFL scores of 80 on the Internet-based test or at least 6.0 on the IELTS. Students who score 6.0 on the IELTS or 80-82 on the TOEFL will be required to enroll in EN6301 Academic Writing for International Students during the first semester of attendance.
- Submit a completed application form, a written statement of purpose indicating the applicant's interests and objectives, and official transcripts of all college level work.

Applicants whose Bachelor of Science degree is not in Software Engineering, Computer Science or Computer Engineering are required to demonstrate proficiency in the following courses (or take the corresponding prerequisite courses at St. Mary's University or other institutions): EG 1302, EG 2342, MT 3323

The certificate program in Software Engineering is a four-course (12 hour) program. Students will choose four courses from this list of three-hour courses:

Click on the course number to view course title and description.

Code	Title	Semester Hours
Courses		
Select four of the following:		12
EG 6306	Software Project Planning and Management	
EG 7304	Requirements Engineering	
EG 7312	Soft. Des & Architecture	
EG 6334	Software Quality Assurance	

EG 7308 Soft. Verification & Valid.

EG 7310 Software Maintenance, Evolution and Reengineering

Total Semester Hours

12