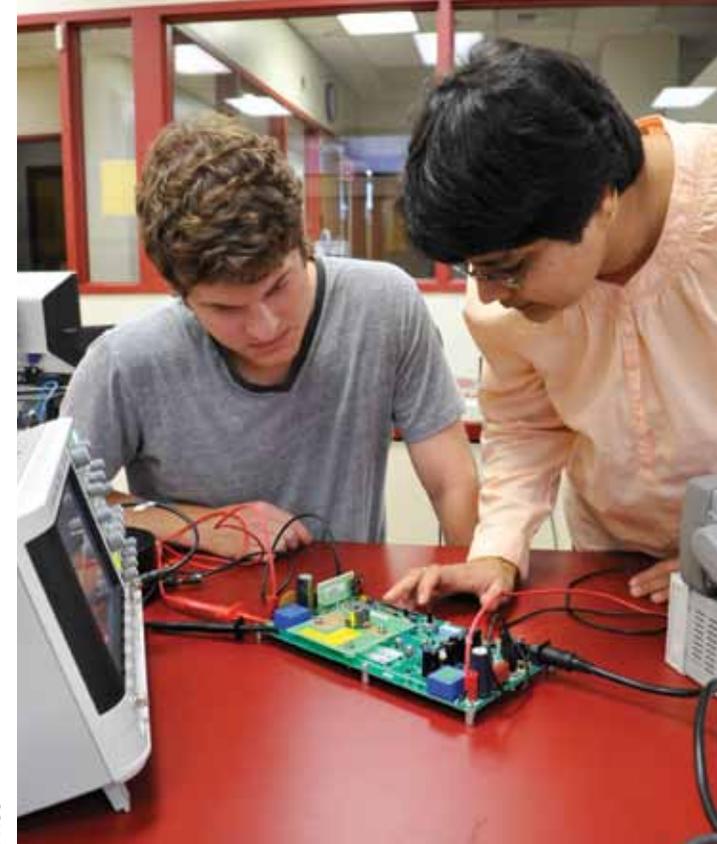


Electrical Engineering



SCU OMC-8041A 9/12 1,000



Engineer's Degree in Electrical Engineering

The program leading to the engineer's degree is particularly designed for the education of the practicing engineer. The degree is granted on completion of an approved academic program and a record of acceptable technical achievement in the candidate's field of engineering. The academic program consists of a minimum of 45 units beyond the master's degree. Courses are selected to advance competence in specific areas relating to the engineering professional's work. Evidence of technical achievement must include a paper principally written by the candidate and accepted for publication by a recognized engineering journal prior to the granting of the degree.

Unique Program Features

Faculty from Industry. Seventy-five graduate engineering faculty members work in Silicon Valley and maintain a strong industry connection. In addition to their business perspective, they are also instrumental in helping students connect with Bay Area engineering companies for internship and job opportunities.

Teaching Methodology. SCU faculty members use a wide variety of teaching methods to maximize students' learning experience, including discussion sessions, small-group coaching, problem-driven seminars, individual and "just-in-time" instruction in the form of online materials, learning guides, and short tutorials.

Project-Based Curriculum. The program features a heavy reliance on project-based learning, case analyses, and industrial practices, so coursework is immediately applicable to responsibilities at work.

Team Orientation. Teamwork is fundamental to the program, just as it is in the workplace. Collaborative learning equips students with the technical, managerial, and communication skills necessary to succeed in any career path.

Student Services for Working Professionals. SCU recognizes the pressures that part-time students experience in balancing competing demands on their time. We are dedicated to streamlining the administrative processes by providing students with the highest level of student services.

Engineering Graduate Programs

Founded in 1912, the School of Engineering educates tomorrow's technical leaders in small, rigorous classes taught by expert faculty members. Our outstanding graduate programs offer master's, engineer's, and Ph.D. degrees, as well as open university, and professional certificate programs.

Education Fitting Your Work Schedule, at Your Own Pace

Santa Clara University provides full-time students and busy working professionals in Silicon Valley with various education options to match their personal needs and work schedules, including:

- **Degree Programs**—full-time and part-time
- **Certificate Programs**—full-time and part-time
- **Open University**—take only the courses that interest you

To accommodate our students' busy work and internship schedules, all of our graduate engineering classes are held outside of normal business hours, with early morning classes from 7 a.m. to 9 a.m., evening classes starting at 5 p.m. and 7 p.m., and weekend classes. Our flexibility allows you to complete the program at your own pace.

For further information, please contact

Graduate Engineering Services
Santa Clara University
500 El Camino Real
Santa Clara, CA 95053
408-554-4313

www.scu.edu/engineering/graduate
www.scu.edu/engineering/ee

FSC
Logo



The Jesuit University in Silicon Valley

Electrical Engineering Graduate Program



The field of electrical engineering encompasses the design, construction, testing, and operation of electrical components, circuits, and systems. Santa Clara University's electrical engineering graduate program prepares students to apply their knowledge and skills to energy systems, nanotechnology, information processing and transmission, advanced integrated circuit design for digital, analog, and mixed systems, signal processing, mobile communication, embedded systems and robotics, new devices and architectures, and all areas of devices, circuits, and systems that have traditionally supported these efforts.

Our Graduate Program

Designed to meet the needs of both the working professional taking classes part time and the full-time student, our program offers a full spectrum of courses during early morning, evening, and weekend hours to free up daytime hours for work or study.

Flexibility extends to our course offerings. Our full-time faculty is complemented by a rich pool of highly qualified adjunct lecturers from industry. We are able to offer the latest knowledge on cutting-edge technologies, techniques, and trends to ensure our students stay current.

The department offers a variety of degree and certificate programs, including courses that cover the breadth of the discipline.

Master of Science Program

The master's program is designed to extend the technical breadth and depth of an engineer's knowledge. A total of 45 or more units is required for the master's degree, including the graduate core—a group of classes designed to enrich a student's understanding of global responsibilities and ethical decision making. The degree does not require a thesis, but students may include one in their program and receive up to 9 units for that work. A list of several emphasis areas and their faculty advisors is available from the department and on our website, which also describes each full-time faculty member's expertise with links to his/her personal website.



Doctor of Philosophy in Electrical Engineering

The doctor of philosophy (Ph.D.) degree is conferred by the School of Engineering primarily in recognition of competence in the subject field and the ability to investigate engineering problems independently, resulting in new and original contributions to knowledge in the field. The work for the degree consists of engineering research, the preparation of a thesis based on that research, and a program of advanced study in engineering, mathematics, and related physical sciences. As evidence of original research in the field, all or part of the thesis must be published or accepted for publication in at least one recognized top-tier engineering or scientific journal prior to the granting of the degree.

Certificate Programs

Certificate programs are designed to provide intensive background in a focused area at the graduate level. With 16 units required for completion, each certificate may be completed in a short period of time. These certificate programs are appropriate for students working in industry who wish to enhance their skills or for those interested in changing their career path. All SCU courses applied to the completion of a certificate program earn graduate credit that may also be applied toward a graduate degree. The department offers certificates in the following

- ASIC design and test
- Analog circuit design
- Digital signal processing application
- Digital signal processing theory
- Microwave and antennas

In addition, a Fundamentals of Engineering certificate requiring 16–24 units is offered for students who do not have an undergraduate degree in electrical engineering, but do have degrees in a related field or have related professional experience.