Software engineers analyze, design, build and implement software systems, and the need for them is growing. According to the U.S. Department of Labor, software engineering is one of the occupations expected to add the most jobs through 2016.

Candidates who have at least a bachelor’s degree in the field will be increasingly needed, and those who continue to acquire new skills and training will be in high demand.

The master’s program in software engineering at Texas State University provides students with the knowledge and skills to gain an edge on the competition. The program allows students to specialize in the complex and rapidly evolving field of software development and helps students leverage their technical and managerial skills in new or existing careers.

The university’s well-equipped and remotely accessible laboratory facilities give students the opportunity to get hands-on experience and implement classroom concepts.
Course Work
Students choose either a thesis or non-thesis track and work toward a master of science in software engineering degree.

- Thesis Option (30 semester hours): Students complete 21 hours of graduate core courses, an additional three-hour graduate computer science elective and a thesis. The thesis program requires at least six semester hours of thesis courses.
- Non-thesis Option (36 semester hours): Students complete 24 hours of graduate core courses and an additional 12 hours of graduate computer science electives. The curriculum covers software engineering concepts as well as the technical skills graduates need to develop software.

Core Courses
- Graphical User Interfaces
- Survey of Software Engineering
- Formal Methods in Software Engineering
- Software Quality
- Advanced Software Engineering Processes and Methods
- Software Engineering Practicum or Thesis Processes and Methods (non-thesis only)

Additional Core Courses
Students must select two of the following courses:
- Advanced Operating Systems
- Network and Communication Systems
- Algorithm Design and Analysis
- Database Theory and Design
- Advanced Artificial Intelligence

Convenient Classes
The Department of Computer Science makes special efforts to schedule evening classes to accommodate working professionals. Most evening classes meet once per week for three hours. By attending classes two or three nights per week, many students complete their degrees in two years. Courses are offered at both Texas State’s main campus in San Marcos and its Round Rock Campus north of Austin. Courses make extensive use of the Internet, and the university offers remote network access to many computing resources.

Facilities
In addition to the university’s computing facilities, the Department of Computer Science’s labs provide students with access to state-of-the-art, multimedia-oriented Intel, AMD, Apple servers and workstations with 32-bit and 64-bit microprocessors running Microsoft Windows, Mac OS X, Microsoft Windows Server and Red Hat Enterprise Linux/CentOS. Application platforms include Oracle 11g and MySQL relational database management systems, BEA WebLogic, VMWare, Apache HTTP Server, and a wide range of compilers and assemblers, including the GNU Compiler Collection (GCC), Visual Studio .NET and Java Software Development Kit (SDK).

Admission Policy
Students may be required to take some undergraduate courses if they do not have sufficient undergraduate computer science backgrounds. Applicants must meet The Graduate College’s minimum GPA requirement of 2.75 for the last 60 hours of course work leading to the bachelor’s degree. They must also have earned a preferred Graduate Record Exam (GRE) score of 286, with preferred minimum scores 138 on the verbal and 148 on the quantitative portions.

Each applicant must submit the following to The Graduate College:
- the online Graduate College application through ApplyTexas
- application fee
- one official transcript from each college or university attended
- official Graduate Record Exam (GRE) score. See www.gradcollege.txstate.edu/soen.html regarding details of the GRE requirements.
- official TOEFL score. Please visit www.gradcollege.txstate.edu/Prospect_Students/Intl_Info for more information.
- three letters of recommendation
- academic vita/résumé
- statement of purpose

Applicants accepted to the program will participate in a diagnostic interview with the graduate advisor. This interview will include a review of test scores, grades and work history. In some cases, additional courses may be added to the degree program.

Visit www.gradcollege.txstate.edu/apply for access to an online application, where to submit application documents and additional details. Applications are due June 15 for the fall semester, October 15 for the spring semester and April 15 for the summer semester. The priority deadline for the fall semester is February 15.

Financial Assistance
The Department of Computer Science offers a limited number of instructional and research assistantships for qualified students. Highly qualified applicants may be offered graduate instructional assistant positions during admission. Interested individuals should contact the graduate advisor in the Department of Computer Science for faculty research interests and research assistantships. For more information about scholarships, financial aid and application deadlines, visit The Graduate College website at www.gradcollege.txstate.edu and click on Financing Your Graduate Education. Please note that program admission priority deadlines must be met in order to be considered for scholarships, fellowships and assistantships.

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