ACCESS ABILITY

MASTER OF SCIENCE | SOFTWARE ENGINEERING

SMU | LYLE
SCHOOL OF ENGINEERING

An insurance firm must reconfigure its MIS system to enable agents to securely submit applications and claims through smart phones and tablets.

A car maker must harden its intranet to protect intellectual property as terabytes of data flow to overseas production partners.

The U.S. Army must equip its warfighters with handheld computers that instantly access cloud-based mission-planning applications.

Mobile devices are changing how data is accessed and employed. Remote sensors, digital cameras, email, and social media provide information that does not fit legacy databases, but must be mined for potential business insights. Large applications, "big data," cloud computing. These are among the developments driving demand for specialists in software engineering—a critical need that SMU's Lyle School of Engineering is meeting with its master's program.

FIND US **HERE**

P.O. Box 750335 Dallas, Texas 75275

EngineeringLeaders@SMU.edu | lyle.smu.edu

214-768-2002

ACADEMIC **PROGRAM**

Thirty credit hours of graduate courses with a minimum graduate GPA of 3.000 on a 4.000 scale.

Satisfactory completion of all the core curriculum.

Software Architecture and Design
Software Project Planning and Management
Software Requirements
Software Testing and Quality Assurance

Satisfactory completion of three advanced elective courses.

Advanced Application Programming
Advanced Topics in Software Engineering
Intellectual Property and Information Technology
Object-Oriented Analysis and Design
Service-Oriented Computing
Software Acquisition Practices, Legal, and Economic Issues
Software Generation and Maintenance
Software Metrics and Quality Engineering
Software Reliability and Safety
Software Security
User Interface Design
XML and the Enterprise

Satisfactory completion of three elective courses from available graduate-level course offerings with adviser approval.

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PROGRAM LEADERS

Software engineering is more than programming. Enterprises in every sector need people with the knowledge and skills to manage the development of very large applications. That means overseeing every aspect, including architecture, testing, security, cost control, and team leadership. Software engineers may also specialize in such areas as network security or interface design. This flexible career path is reflected in the master's program at Lyle. Beyond the core curriculum, students can take electives in other subjects of interest. A student concentrating on mobile apps could also study microelectronics, for example; another might take psychology courses for insights into interface design. In every case, the goal is to achieve a balance of technical knowledge and managerial expertise students need to advance.

FIELD EXPERTS

As one of the first schools to offer a master's program in software engineering, Lyle is at the forefront of this critical field. Many of the courses offered are based on recommendations from the Software Engineering Institute, delivered by an expert faculty whose research projects include cloud and mobile computing, semantic web development, software reliability economics, safety engineering, process improvement, and creative computing. Students also learn from guest lecturers drawn from top-flight industry partners. The program itself benefits from the input of an industry advisory panel made up of highly qualified business owners, managers, and IT professionals. For anyone seeking a challenging new career or an opportunity to move up, this master's program at SMU-Lyle offers a practical, proven path.

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Computer Science and Engineering Department

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