

ACCESS ABILITY

MASTER OF SCIENCE | SOFTWARE ENGINEERING

CLOUD DECISIONS

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.

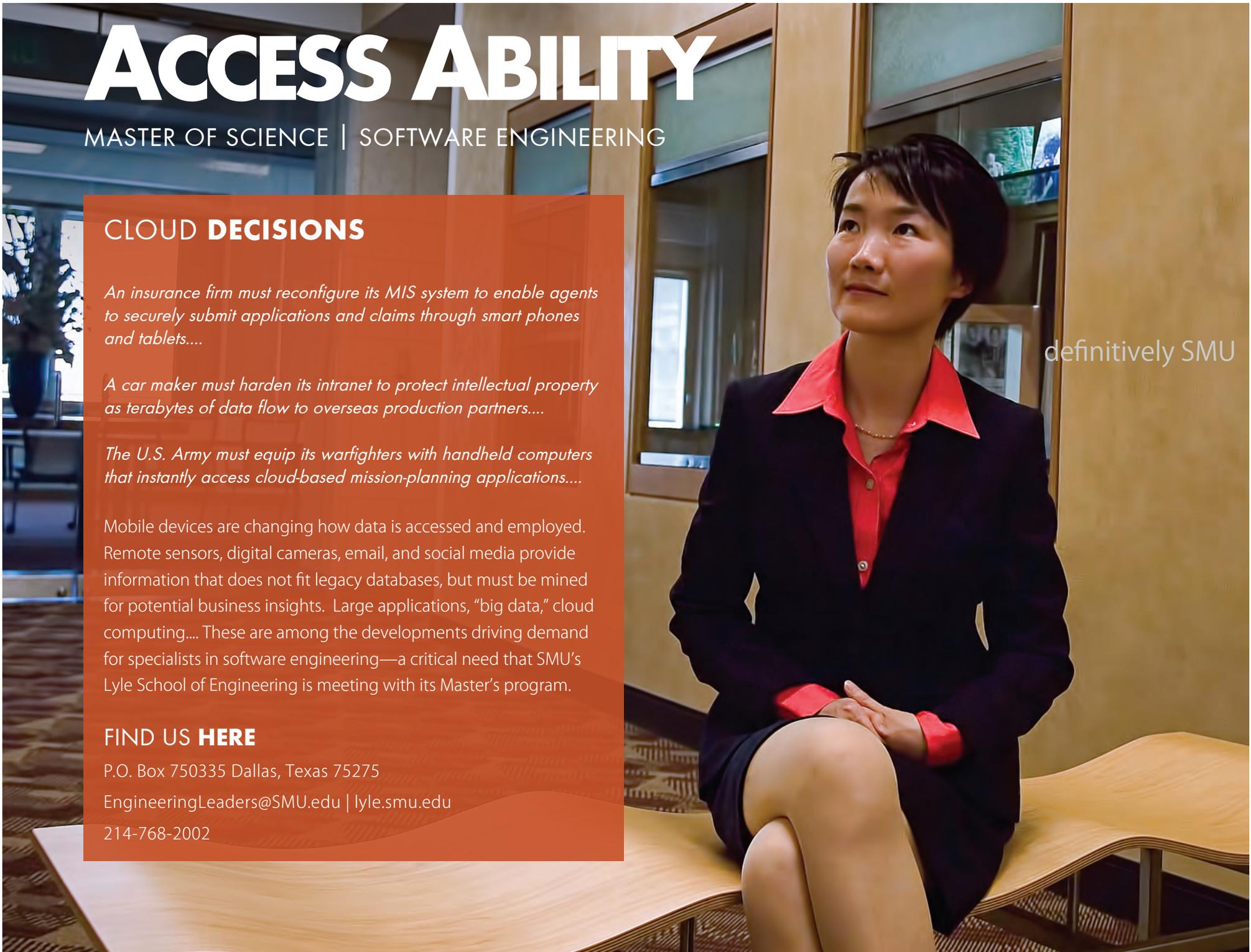
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definitively SMU



Somewhat naively, I used to think that all there was to software was coding. SMU's Master's program in Software Engineering, however, has broadened my awareness and consciousness of all facets of the software life cycle. The faculty and curriculum at SMU have armed me with the knowledge to make better informed decisions, enabling me to operate on a level above my peers.

Lewis Sykalski
Software Engineer | Aerospace and Defense – Military Aircraft Manufacturer

ACADEMIC PROGRAM

Thirty term-credit hours of graduate courses with a minimum graduate G.P.A. of 3.00 on a 4.00 scale.

Satisfactory completion of all the core curriculum.

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

Satisfactory completion of three advanced elective courses.

- Systems Engineering for Software Intensive Systems
- Advanced Java Programming
- XML and The Enterprise
- Distributed Java Enterprise Computing
- Software Security
- Software Generation and Maintenance
- Object-Oriented Analysis and Design
- Software Metrics and Quality Engineering
- Software Acquisition Practices, Legal, and Economic Issues
- User Interface Design
- Software Reliability and Safety
- Advanced Topics in Software Engineering

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



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PROGRAM LEADERS

BALANCE **SKILLS**

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

FORWARD **CONTENT**

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.