

Master of Science Information Engineering and Management



As Information Technology (IT) becomes ever more tightly woven into the fabric of commerce and government, and as IT applications grow in breadth, capability, and complexity, so grows the demand for professional expertise in IT governance, controls, risk management, and assurance.

In recent years, the explosive utilization of information has led to a critical shortage of qualified individuals to engineer and manage this information. In North Texas alone, more than 1500 openings for Information Technology Risk Managers or Information Technology Auditors wait to be filled. Prospective IT Auditors and IT Risk Management Analysts who obtain the necessary training and certifications can reasonably expect to find immediate, stable, high-income employment opportunities.

At SMU, the Bobby B. Lyle School of Engineering has responded to this demand by creating a new track within its Master of Science in Information Engineering and Management: IT Governance and Controls. Developed for alignment with the industry-standard ISACA International Model Curriculum, this specialized sequence is only the fourth such offering in the United States. The program consists of ten courses, blending advanced information engineering and managerial techniques with focus topics

Engineering leaders ... shaping tomorrow.



For more information, please email EngineeringLeaders@smu.edu, call 214-768-2002, or visit lyle.smu.edu.

covering IT control concepts and procedures; technical, environmental, logical, and physical security issues, as well as IT governance structures.

Lyle's MSIEM/ITGC sequence is an outstanding tool for career changers and for technical workers in organizations where engineers are critical, but business knowledge is needed. As such, its objective is to utilize differing undergraduate backgrounds and work experiences in conjunction with the Information Engineering and Management program to produce specialists who can balance business and technical skills, yielding a competitive advantage through a well-conceived IT strategy.

SMU ENGINEERING LEADERS MASTERS SERIES

ADMISSION REQUIREMENTS

Bachelor's degree in an engineering or technical discipline. The technical requirement may be waived with sufficient relevant work experience.

An undergraduate grade-point average of 3.00 or higher on a 4.00 scale.

DEGREE REQUIREMENTS

Course requirements for the IT Governance and Controls Track in MSIEM are structured in four pedagogical groups:

Foundational courses: enterprise and information systems fundamentals (9 TCH)

- Enterprise Fundamentals
- Information System Architecture
- Information System Design Strategies

Business context courses: foundational concepts applied to the construction of information systems and the management of operations (6 TCH)

- Management of Information Technologies*
- Production Systems Engineering

Depth courses: advanced information engineering for strategic systems and managerial decision support (6 TCH)

- Information Engineering and Global Perspectives
- Decision-Support Systems

Focus courses: specialization for practitioners within the IT industry (9 TCH).

- Managing IT Controls*
- IT Security and Risk Management*
- Other EMIS, computer science or engineering courses with advisor approval

Access ISACA.org for international information or ISACANTX.org to reach the North Texas Chapter.