

MANAGE RISKS

Systems engineering, born at the dawn of the Space Age, brought engineering principles to the management of government sponsored programs of unprecedented complexity. Success then was defined simply in terms of meeting performance targets. Now, programs must meet complex sets of requirements, driven not only by their sponsors but also by an increasingly diverse range of stakeholders—political, environmental, financial, and societal.

The result is a rising demand for engineers who can blend all decision elements—human and technical—into holistic systems that achieve results. Those who can manage to focus on critical details without losing sight of the overall vision are leaders. In every realm of advanced manufacturing and construction, including and especially aerospace and defense, systems engineering provides the intellectual framework required for mission success.

FIND US **HERE**

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214-768-2002

MISSION DEFENSE

MASTER OF SCIENCE | SYSTEMS ENGINEERING

definitively SMU

CONCEPT SOLUTIONS

THINK **PROCESS**

SMU Lyle meets customer needs in its Master's program in Systems Engineering. In this rich, 30-hour experience, students acquire and nurture critical thinking skills required to clearly define a project and its goals. They assess risks and alternatives to make valid management and engineering choices. Most importantly, from a systems thinking perspective, they conceive a complete end-to-end solution that directs a project through its entire life cycle. In the process, students acquire the upper-level management skills and enhanced engineering knowledge that help enable them to meet their own professional goals.

ACHIEVE END STATE

VALIDATE **PRODUCT**

Developed by Dr. Jerrell Stracener, the Systems Engineering Program (SEP) at SMU is unique in its focus, faculty, curriculum, and partnerships. From its inception in 1994, the SEP has developed around the particular needs of the aerospace and defense (A&D) industry. Because of this, we've enjoyed active collaboration and expert guidance from the U.S. DoD and systems engineering practitioners at Bell Helicopter, Lockheed Martin, Raytheon, Sikorsky, Vought, and many other leading A&D organizations. The fact that most of our students and faculty work in the nation's A&D community, both industry and government, and hold DoD security clearances adds even greater depth to this challenging program, **Unique by Design™**.

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SMU's MSSE program has allowed our company to make a long-term investment in its future viability by educating engineers in useful subject matter they might not otherwise hear about. I worked for 20 years before I began my Master's. I thought I knew all there was to know about engineering. I soon came to realize that my knowledge of what really mattered in engineering complex systems was about to change. Dr. Stracener broadened our horizons and focused our efforts where they matter corporately—on the bottom line.

Roger Carver

Senior Staff Electronics Engineer | Defense – Electronic Systems

MASTER OF SCIENCE | SYSTEMS ENGINEERING

ACADEMIC PROGRAM

Thirty term-credit hours (30 TCH) of graduate courses with a minimum graduate G.P.A. of 3.00 on a 4.00 scale.

Satisfactory completion of five core courses (15 TCH).

Systems Analysis Methods
Systems Engineering Process
Integrated Risk Management
Systems Reliability, Supportability, & Availability Analysis
Systems Integration and Test

Satisfactory completion of five courses (15 TCH) from the following.

Systems Engineering Design
Software Systems Engineering
Systems Architecture Development
Systems Engineering Planning and Management
Systems Engineering Leadership
Systems Reliability Engineering

Human-Systems Integration
Logistics Systems Engineering
Systems Life Cycle Cost and Affordability Analysis
Systems Test and Evaluation
Collective Systems Design
Innovation in Systems Design
Systems Engineering Tools
Six Sigma for Systems Engineering
Supply Chain Systems Engineering
Operations Research Models
Engineering Economics and Decision Analysis
Optimization Models for Decision Support
Production Systems Engineering
Reliability Engineering
Statistical Quality Control



SMU | BOBBY B. LYLE
SCHOOL OF ENGINEERING

SEP | SYSTEMS ENGINEERING PROGRAM

EMIS DEPARTMENT

ENROLL NOW