



OUR URBAN PLANET IS IN CRISIS

Global shifts in power are altering society rapidly, while exploding economies in the far reaches of the world are consuming building products and non-renewable resources at an alarming pace. When coupled with skyrocketing energy costs from increased demand, the depletion of non-renewable energy resources, and concerns about diminishing air and water quality, the need for sustainable design becomes self-evident.

As humanity awakens to the enormous economic, technological, and environmental shifts occurring across the globe, leaders in academia, enterprise, and government must take action today to preserve the world we live in for future generations.



ECOLOGICAL LEADERSHIP...

LYLE ENGINEERING LEADS THE WAY

In response to this global crisis, SMU's Lyle School of Engineering has created the Environmental and Civil Engineering Certificate in Sustainability. Designed to educate concerned professionals in such fields as engineering, architecture, construction (commercial as well as residential), transportation, energy development, urban planning, government, and environmental science, this series of courses will create awareness for the world's pressing ecological issues.

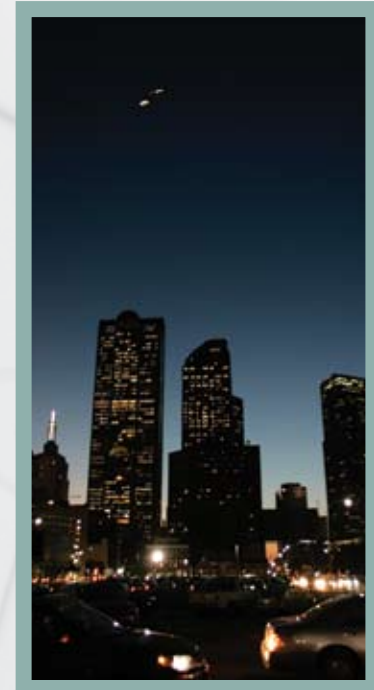
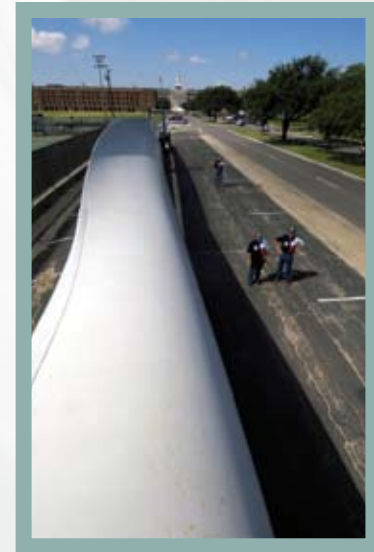
Upon completion, participants will be challenged to take leading roles in sustainable design through an interdisciplinary understanding of sustainable design concepts and practices integrating design, technology, engineering, science, law, and the humanities. Comprehending the relationship between today's resource use and future economic, social, and environmental conditions, they will understand how to mitigate – or even eliminate – the negative impact of human consumption of natural resources, creating communities that preserve the ability of the surrounding natural environment to support its inhabitants indefinitely.

Students will have access to elite, industry practitioners and a selective, premier center of learning that cultivates innovators and global perspectives. They will expand their quantitative and fundamental scientific understanding of the technologies underlying sustainable practices and use modern tools for measuring sustainability – such as life cycle assessment and sustainability indicators – to apply that knowledge to planning and design of physical structures in group projects.

ADMISSION AND COMPLETION REQUIREMENTS

To be eligible for enrollment, prospective students must have an undergraduate degree in engineering or science, or five years of directly relevant professional experience (plus permission of the program director).

The professional certificate will be awarded upon successful completion of the courses listed with a grade of B or better in each course. The courses must be completed within three years of admission into the program.



GREEN TECHNOLOGIES...



OFFERED IN A SEMINAR-STYLED EXECUTIVE FORMAT

Like other certificate programs at Lyle, Sustainability is characterized by small class sizes, highly knowledgeable instructors, and the use of insightful case studies that typify the global challenges students are likely to face.

The curriculum is covered in a distinctive, fast-paced executive format that is designed to meet the needs of working professionals. Seminar-styled classes meet on five alternating Saturdays for eight (8) hours each in a learning environment that conforms to a strict set of criteria, adheres to the standards set by SMU for enhanced classroom instruction, and meets the guidelines set by our accrediting agencies.

ENROLLMENT IS LIMITED ... IF YOU ARE ONE OF THE FEW CONTACT US NOW

For information on admission requirements, courses, costs, and detailed schedules, contact EngineeringLeaders@smu.edu or call 214-768-2002.

AT LYLE ... OUR SOLUTIONS ARE SUSTAINABLE

Centered in Dallas, one of the nation's most vibrant international cities, SMU's Bobby B. Lyle School of Engineering emphasizes top-notch technical expertise combined with a broad range of knowledge and skills in business, entrepreneurship and the humanities. Our goal is to produce not only highly qualified engineering professionals, but also highly accomplished leaders who are able to think critically, plan strategically, communicate effectively, and manage adeptly in a fast-changing global environment.

At Lyle, no problem's too big.

CHANGE AGENTS...

SUSTAINABILITY COURSES

To earn the Certificate in Sustainability, students must complete the following three required core courses:

Introduction to Sustainability

In this introductory course, students will master the basic concepts in sustainability. Drawing on a range of sources, including selected books and readings, the course explores the idea of total connectedness – the ramifications and benefits of sharing global resources – with particular emphasis on North Texas. Issues explored include air quality and energy supply, sustainable construction, water use, transit and other related areas of resource use, and waste generation. Multiple guest lecturers with varying areas of expertise and viewpoints will present real-world applications to illustrate best practices. **ENCE 7328**

Methods and Technologies for Sustainability

Discover the technologies and methods employed in sustainable design and analysis. Topics include the scientific understanding of alternative energy systems, water reuse and supply, and state-of-the-art materials created for sustainability. Students will discuss methods for assessing sustainability, including life cycle assessment and sustainable indicators. **ENCE 7329**

Design for Sustainability

Creating a sustainable built environment creates its own unique challenges. An in-depth examination of resource use at the regional and project specific level is followed by a study of specific techniques for designing and constructing sustainable buildings. Students will also have the opportunity to compare measurement systems for sustainable properties and recognize the implications and value of the USGBC's LEED system. **ENCE 7330**

