Texas A&M University

ENERGY INSTITUTE

DISCOVERING ENERGY SOLUTIONS, IMPROVING QUALITY OF LIFE

The Texas A&M Energy Institute is a joint institute between Texas A&M University and the Texas A&M Engineering Experiment Station (TEES). The institute engages undergraduate and graduate students, postdoctoral associates, research staff, and faculty members in the study and development of innovative technologies and policies for energy production and energy conservation in the energy transition.

Special attention is paid to elucidating the complexity among the interacting components of energy, economics, law, public policy, and the environment.

With nearly 300 faculty affiliates from nine colleges and schools at Texas A&M, more than 30 Texas A&M departments, two Texas A&M branch campuses, and five Texas A&M University System member institutions, along with a unique community of more than 450 doctoral students and postdoctoral fellows in the Texas A&M Energy Research Society, cutting-edge solutions are being realized through true interdisciplinary collaborations that will address the complexity and challenges of the world's energy future.

MAJOR INITIATIVES

Within its vision of Discovering Energy Solutions and Improving Quality of Life, the Texas A&M Energy Institute has established several major initiatives or is playing an executive role in the operations of interdisciplinary efforts for energy research and education.

MAJOR PARTNERSHIPS:

Within its vision of Discovering Energy Solutions and Improving Quality of Life, the Texas A&M Energy Institute has established several major partnerships to advance interdisciplinary efforts in energy research and education.

- TEXAS A&M ENERGY INSTITUTE — Master of Science in Energy & Graduate Energy Certificates
- TEES GAS & FUELS RESEARCH CENTER — TEES Gas and Fuels Research Center
- CESMII THE SMART MANUFACTURING INSTITUTE — Clean Energy Smart Manufacturing Innovation Institute
- Water-Energy-Food Nexus Initiative
- C3E — Clean Energy Education & Empowerment (C3E) Initiative
- TEES MARY KAY O'CONNOR PROCESS SAFETY CENTER — Mary Kay O'Connor Process Safety Center
- TEXAS A&M Institute of Data Science — Texas A&M Institute of Data Science
- TEXAS A&M UNIVERSITY SUPERFUND RESEARCH CENTER — Texas A&M Superfund Research Center
- RAPID Transforming Process Industries — Modeling & Simulation Focus Area
- AIR EARTH — *Institute Partner:* Air to Earth
- Process Systems Engineering Group
- University Coalition for Fossil Energy Research — University Coalition for Fossil Energy Research
- *Charter Partner:* Royal Dutch Shell

TEXAS A&M ENERGY INSTITUTE RESEARCH THRUSTS

The institute cultivates multi-investigator and multi-institution collaborative research from a variety of funding sources on relevant and leading-edge topics. These efforts center on crossing traditional disciplinary and college boundaries to assemble faculty, staff, students, researchers, and industry representatives, utilizing a systems approach to the energy solutions of the future, looking into energy transitions scenario analysis, as well as sustainability, carbon monetization, and the circular economy as important dimensions.

GRADUATE PROGRAMS IN ENERGY

Designed to create the next generation of leaders in energy, our graduate programs target both students and professionals who want to be educated on the high-impact and interdisciplinary facets of the energy research landscape through quantitative analytical methods and multi-scale systems-based approaches ranging from an overview of energy technologies (fossil-based, renewable, and non-fossil based) to multi-scale energy systems engineering methods, to energy economics, law, security, policy, and societal impact.

The Texas A&M Energy Institute aims to increase student competitiveness in the marketplace and assist students in gaining transferable skills as project managers, financial managers, and other leadership roles. Further, this will ensure that highly skilled graduates are available to meet the evolving needs of industry, government and their communities, as well as address development challenges brought on by the energy transition.

Master of Science in Energy

Through a 10-month long program, featuring thesis and non-thesis tracks, the Master of Science in Energy aims to expose students and professionals to (a) important energy challenges and opportunities, and (b) advances in theory, methods, technologies, and applications delivered by energy leaders from academia, industry, and government, through a module-based structure and a distinguished seminar series.

Emphasis is placed on creating the new generation of energy-educated students and professionals who will be broadly exposed to all components of energy.

Three elective course themes have been designed: Energy Digitization, Energy Policy and Management, and Sustainable Energy. For more details, please visit energy.tamu.edu/education

In-Person/Online

Module-Based

10 Months

Thesis/Non-Thesis

Certificate in Energy

Following a similar modality as the Master of Science in Energy, the graduate-level Certificate in Energy requires only 10 modules and results in 15 credit hours. The courses for the certificate are the same courses as the Master of Science in Energy, and can be completed in a face-to-face modality in College Station or online via distance learning (through a live broadcast or recorded videos).