WHAT ENERGY LEADERS SAY ABOUT OUR PROGRAM

“The multi-disciplinary structure and system approach of the new course of study will provide a more informed understanding of the complexity of Energy, a central determinant of economic development, environment and climate change. This new and timely course would improve the knowledge base for problem solving.”

— Nay Htun, PhD, Research Professor, Department of Technology and Society, Stony Brook University; Former UN Assistant-Secretary General, United Nations Development Program and United Nations Environment Program

“[The TSM] program really broadened my view on how technology interacts with society and how we can take a more systemic approach to assess and manage the benefits and risks that technology brings to society. The friendly academic environment made it very easy for me to go through two important transitions, from Chinese culture to American culture, and from a technical discipline (mechanical engineering) to a more interdisciplinary and exciting field (technological systems management).”

— Lan Xue (TSM ’86), PhD, Professor and Dean, School of Public Policy and Management, Tsinghua University, China

“This is an excellent program. It is extremely important that our future leaders understand technology and that our future engineers understand the policy implications of new technologies and how to integrate them into society. This program links energy technology and policy, and has a flexible curriculum. Graduates will have great potential for a successful career as energy leaders.”

— Robert B. Catell, Chairman, Advanced Energy Center; Former Chairman, U.S. National Grid; and Former Chairman and CEO, KeySpan Corp.
THE PROGRAM

Stony Brook University’s Department of Technology and Society offers a course of study in Energy Technology and Policy (ETP) leading to the Master of Science in Technological Systems Management (TSM). This program is designed for students (including mid-career professionals) who are interested in energy issues from the perspectives of corporations, government and non-governmental organizations.

Students in the program take core courses that provide conceptual background in energy issues, technology management, public policy and business strategy; topical courses in alternative energies, electric power systems, advanced energy technologies and systems, and environmental planning; and method courses including engineering economics, financial analysis and engineering, statistics and data analysis, technology assessment, and policy analysis.

ETP is offered as both a part-time and full-time program. A full-time student can complete the program in one calendar year (three semesters including summer), or may extend up to two years to take additional courses for greater depth and breadth. Academic progress for a part-time student is even more flexible. A student may take two to three years to finish the program.

The program has a flexible curriculum to accommodate the needs and interests of individual students. Working with the student, the faculty advisor designs a tailored curriculum for each individual student (see sample curricula on next panel). We also offer this program, with a specially tailored curriculum, to a cohort of mid-career students on or near their work site.

DEGREE REQUIREMENTS

To obtain the Master of Science in ETP, a student must meet the following requirements:

- Complete a minimum of 30 post-baccalaureate credits
- Complete four core courses: EST 581, EST 582, EST 583, EST 592
- Complete five elective courses, with one course from each group
- Keystone project: Complete the MS TSM project course EST 599; or an internship (at least one semester) in energy areas, plus an academic report on the internship

CORE COURSES

Fall EST 581 Methods of Socio-technological Decision Making
Fall EST 592 Sustainable Energy Technology, System, Market and Policy
Spring EST 582 System Approach (emphasis on Technology-Society Systems)
Spring EST 583 Electric Power Systems

ELECTIVE COURSES*

Students must complete five elective courses, with one course from each of the Groups A through E below, and a keystone project.

Group A: Science and Engineering Approach to Energy Systems
Group B: Environmental Sciences and Tools
Group C: Quantitative Methods and Tools
Group D: Economics, Business, and Management
Group E: Social Sciences and Public Policy
Group F: Keystone project: EST 599 Special Project or Internship

SAMPLE CURRICULA

Here is a look at the course of study for students planning for a career in engineering companies:

1. EST 581 Methods of Socio-technological Decision Making
2. EST 582 System Approach (emphasis on Technology-Society Systems)
3. EST 583 Electric Power Systems
4. EST 592 Sustainable Energy
5. EST 580 Advanced Technology Assessment (from Group A)
6. M AR 587 GIS: Display and Analysis of Environmental Data (from Group B)
7. AMS 553 Simulation and Modelling (from Group C)
8. EMP 502 Management Accounting and Finance (from Group D)
9. PO L 507 Law and Ethics (from Group E)
10. Keystone project: EST 599 or Internship

*The full list of courses is available on our website at www.stonybrook.edu/est/etp.