Sustainable energy and environmental management emerged as the most pressing issue for modern society. Diminishing fossil fuel energy resources, environmental pollution, global warming and population growth present economic, societal and technological challenges at the scale never before experienced in human history.

The Course introduces the fundamentals of sustainability as related to the environment and energy to both graduate and undergraduate students. Topics include definition and interpretation of sustainability, overview of global warming, and the types and trends of non-renewable and renewable energy resources and their role and impact on society.

The Course combines solid scientific explanations and practical applications of these topics through case studies, video presentations, class discussions and field trips. Past field trips included visits to the Orange County Sanitation District to study the waste-to-energy renewable program and visit to the San Onofre Nuclear Power Plant to have an authentic insight into nuclear energy-to-electricity generation.

The Course culminates by the students completing research projects in small teams. The small team concept promotes collaborations among the students for effective planning, scheduling, organizing and implementation of the projects and encourages reconciling opposing views in a constructive manner.

STUDENT FEEDBACK FOR THE COURSE

- The Professor, handouts and recommended reading material was fantastic. Best class I have ever taken at Concordia!
- Lecture and discussions were very open and interesting! Loved the quantitative examples!
- Just wish the Course was longer!
- I loved the teaching style, the materials and the research project!
- Great projects, lectures and field trip!
- The presentations were great and effective!
- The Course was very beneficial to me!
- The class was fun!
- This was a great class with a great and knowledgeable Professor.
- Very interesting Course and relevant to today’s emerging eco-friendly world.
Dr. Zoltan Mester who teaches the Course has over 30 years of industrial, environmental, academic and consulting background. His past career includes both managerial and technical positions at major petrochemical, oil, and engineering & environmental firms. Dr. Mester is an expert in environmental issues including sustainability, pollution prevention, air quality, waste management, and industrial hazard evaluations. His expertise also includes chemical process evaluations and statistical experimental designs for process optimization. Dr. Mester has 4 US patents on his name and over 70 scientific and technical publications and presentation. He is on the scientific board of a venture capital firm advising for investment opportunities in alternative energy and sustainable products.

In addition to his consulting practice Dr. Mester teaches courses and conducts seminars on energy and environmental issues at the University of Southern California, University of California, Irvine, Chapman University and Concordia University and at professional meetings. Dr. Mester also provides expert witness litigation support in multiple aspects of environmental science. Dr. Mester holds a Ph.D. in chemistry from the Massachusetts Institute of Technology, and an M.S. in chemical engineering from the Technical University of Budapest, Hungary.

View Dr. Mester’s website at: 
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