Objective: The goal is to provide students a list of classes that will enhance their background, knowledge and skills in the topical area of Energy Engineering. The Minor covers classes in several fields of science and engineering which encompasses the Department of Energy, Environmental and Chemical Engineering, the Department of Electrical and Systems Engineering and Department of Mechanical Engineering and Materials Science.

A minor in Energy Engineering requires the completion of 18 units selected from the following menus. It is open to any UG student pursuing an Engineering major, students from the Sciences (Biology, Chemistry, Physics) in Arts and Sciences, and the Environmental Studies Major.

Interested departments should expose students to energy and related concepts in their introductory courses.

Basic and Applied Sciences (fundamental content) (2 courses)

- EECE/ChE 320  Thermodynamics OR MEMS 301 Thermodynamics
- MEMS 3410  Fluid Mechanics or ChE 367 Transport I (Fluids)
- EECE/ChE 369  Energy Transfer Processes or MEMS 342 Heat Transfer (Spring)
- ESE 332  Power, Energy and Polyphase Circuits (Spring)

Social Science/Policy/Economics Elective (1 course)

- EnSt 332  Energy and Environmental Issues (Spring)
- EnSt 451  Environmental Policy (Fall)
- EnSt 350 W  Environmental Issues: Writing (Spring)

Electives (Choose 3 courses. One of the courses is required to be chosen from outside your major degree department. A partner department may approve the use of a course listed under Basic and Applied Sciences as an elective.)

- EECE 401  Intl. Experience in Energy, Environment & Chem. Engr.(Summer/Fall)
- EECE 495/594  Energy and Buildings (Fall)
- EECE/MASE 5404  Combustion (Fall)
- EECE/ChE 345  Pollution Abatement & Waste Minimization (Fall)
- EECE/ChE 439  Advanced Energy Laboratory (Fall)
- EECE/ChE 495 D  Biomass Energy Systems and Engineering (Spring)
- MEMS 5422  Solar Energy Thermal Processes (Summer)
- MEMS 5420  HVAC I (Fall)
- MEMS 5421  HVAC II (Spring)
- MEMS 5705  Wind Energy Systems (Spring)
- MEMS 412  Design of Thermal Systems (Spring)
- MEMS 5423  Sustainable Energy Environmental Building Systems (Fall)
- ESE 434  Solid State Power Circuits and Applications (Fall)
- ESE 435  Electrical Energy Laboratory (Spring)
- ESE 437  Sustainable Energy (Spring)

Committee to Oversee Energy Engineering Minor:

Pratim Biswas (EECE, Coordinator); Hiro Mukai (ESE); David Peters (MEMS)

The committee is to ensure that any course added to the above lists contain a significant amount of energy topics and that the entire program be cohesive.