Requirements for a Concentration in Energy Technologies

The concentration in Energy Technologies is designed to easily allow engineering students to acquire a basic understanding of the environmental impacts of various energy generation and utilization technologies and design environmentally sustainable engineering systems.

Students planning to pursue a concentration in Energy Technologies should declare their intent as early as possible to facilitate course planning, and in no case later than May 1 of the junior year.

The concentration in Energy Technologies can be earned by any student within the College of Engineering by fulfilling the following requirements:

1. A sequence of four courses (16 cr) consisting of one required course (4 cr). One or two restricted electives (4 cr each), and one or two additional courses (4 cr each) chosen from the list below. Only one CAS GE course from the list below can be used towards the concentration.

   **Required Course:**
   ENG EK 335 – Introduction to Environmental Engineering – 4 cr

   **Restricted Elective** (at least one; both can be taken):
   ENG EK 408 – Introduction to Clean Energy and Storage Technologies – 4 cr

   **Additional Courses:** (Choose remaining courses from the list below but no more than one CAS GE course)
   CAS GE 250* – The Fate of Nations: Climate, Resources and Institutions – 4 cr
   CAS GE/IR 304* – Environmentally Sustainable Development – 4 cr
   CAS GE 309* – Intermediate Environmental Analysis and Policy – 4 cr
   CAS GE 420* – Methods of Environmental Policy – 4 cr
   ENG ME 533 – Energy Conversion – 4 cr
   ENG EC/ME/SE 543 – Sustainable Power Systems – 4 cr
   ENG ME/MS 545 – Electrochemistry of Fuel Cells and Batteries – 4 cr
   ENG EC 546 – Assessment of Sustainable Energy Technologies – 4 cr
   ENG EC/MS 573 – Solar Energy Systems – 4 cr
   ENG EC 583 – Power Electronics for Energy Systems – 4 cr
   SMG SI 453** – Strategies for Environmental Sustainability – 4 cr

   **Students should check availability of courses each semester; not all courses are offered every semester.**

2. **Experiential Component Requirement:** Completion of a well-defined experiential component in the "energy" or "environmental" area. A senior design project, laboratory research, industrial internship or a directed study can satisfy this requirement. This requirement must be approved by the Concentration Coordinator and the Experiential Component Approval form must be submitted to the Undergraduate Records Office.

   After its completion, a written summary of the experiential component must also be submitted for approval (see Experiential Component Approval form and/or college Energy Technologies concentration webpage: [http://www.bu.edu/eng/academics/programs/concentrations/etee/](http://www.bu.edu/eng/academics/programs/concentrations/etee/) for more information).

**Notes:**
* CAS GE 250, 304, 309 and 420 satisfy the Social Science elective requirement. They cannot be used to satisfy a Technical/Advanced/Professional Elective.
** SMG SI 453 satisfies the General Education Elective requirement. It cannot be used to satisfy a Technical/Advanced/Professional Elective.