Sustainable Development Track in Course 2-A

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Two tracks are possible in this program. One track, in Engineering for Sustainability, is intended for students interested in work on sustainability in the context of US industry or in other industrialized settings. The other track, in Engineering for International Development, is intended for students interested in applications of technology for the developing world.

This track can be complemented by appropriate an HASS concentration. It can also be coupled to the minor program in Environmental Engineering Science, Applied International Studies, as well as several HASS minors.

For both tracks, one takes the required departmental core and three second-level subjects. The remaining 60 units define the track.

**Required Departmental Core Subjects (78 units)**

2.001, 2.003J, 2.005, 2.009, 2.670, 2.671, 18.03

**Second-level Subjects (36 units)**

*Take three of these (may substitute one Course 2 restricted elective by petition):*

2.002, 2.004, 2.006, 2.007, 2.008

**Engineering for Sustainability Track (60 units)**

*Take 36 units from the following:*

1.020 Ecology II: Engineering for Sustainability (12 units).
1.080/1.107 Environmental Chemistry and Biology (18 units). Prereq: 3.091/5.111; 7.012
2.65J Sustainable Energy (12 units).
2.813 Environmentally Benign Design and Manufacturing (12 units). Prereq: 2.008.

*And at least 24 units from the following subjects:*

2.63J Applications of Technology in Energy and the Environment (12 units).
2.965J International Supply Chain Management (6 units).
ESD.128J Global Climate Change: Economics, Science, and Policy (9 units). Prereq: 18.02, 2.005, 15.010
14.42 Environmental Policy and Economics (12 units). Prereq: 14.01; 14.30 or permission.
17.181 Sustainable Development: Theory, Research and Policy (12 units).
Engineering for International Development Track (60 units)

Take 36 units from the following subjects:
1.851J Water and Sanitation Infrastructure in Developing Countries (units arranged)
2.65J Sustainable Energy (12 units).
2.722J D-Lab: Design (12 units). Prereq: 2.670
4.235 Sustainable Settlement Design in Developing Countries (units arranged).

And 24 units from the following subjects:
2.63J Applications of Technology in Energy and the Environment (12 units).
4.23J/11.465J Special Interest Group in Urban Settlements: SIGUS Workshops (units arranged)
4.230J/11.468J SIGUS Workshop: Learning from Communities (units arranged)
17.181 Sustainable Development: Theory, Research and Policy (12 units).
SP.721/11.025 D-Lab: Development (12 units)
SP.723 D-Lab: Dissemination (9 units)

Minor Programs
Minor programs and HASS concentrations can be combined with the 2-A Sustainable Development Track to provide a more in depth experience.

Environmental Engineering Science Minor (Administered by Course 1)
The Minor in Environmental Engineering Science consists of the following subjects:

1.018 Ecology I: The Earth System (12 units)
1.020 Ecology II: Engineering for Sustainability (12 units)
1.101 Introduction to Civil and Environmental Engineering Design I (6 units)
1.102 Introduction to Civil and Environmental Engineering Design II (6 units)
1.080 Environmental Chemistry and Biology (12 units)
1.107 Environmental Chemistry and Biology Laboratory (6 units)

and one of the following four subjects:
11.122 Society and Environment (12 units). HASS.
14.01 Principles of Microeconomics (12 units). HASS.
17.32 Environmental Politics and Policy (12 units). HASS-D, CI-H.

Substitution of equivalent subjects offered by other departments is allowed, with permission of the minor advisor. However, at least three subjects must be Course 1 subjects. [Comment: Subjects 1.101 and 1.102 have additional prerequisites in Course 1, and so it is recommended that substitutes for these two subjects be discussed.]
Applied International Studies Minor (Administered by Course 17)
The Minor of Applied International Studies is interdisciplinary and consists of six subjects arranged into three areas:

- **Area I: Language and Culture** (two or three subjects)
- **Area II: International Politics, Economics, and History** (two or three subjects)
- **Area III: International Experiences** (one or two subjects)

A wide variety of courses satisfy these requirements, and a suitable program can be developed by the student and approved by the minor advisor. **In addition to course work, students are required to have a stay abroad of at least three months.**

HASS and Other Minors
The HASS Minors consist of 6 subjects, which can include the 3 to 4 subjects in a HASS Concentration. Additional minor programs that offer subjects relevant to Sustainable Development include:

- Economics
- Public Policy
- Science, Society, and Technology
- Toxicology and Environmental Health
- Urban Studies and Planning