SUSTAINABILITY ENGINEERING - MINOR

The undergraduate minor in sustainability engineering serves all CU Boulder students who are interested in obtaining a strong foundation in sustainability principles. The minor exposes students to the drivers, determinants and solutions to modern sustainability problems facing our planet.

Requirements

The minor requires 15 credit hours, at least nine of which must be courses completed on the CU Boulder campus. Students must take six (6) credits of foundational, required coursework and an additional nine (9) credits of approved sustainability-related coursework (electives) offered by several departments, programs and colleges across campus. A cumulative GPA of 2.000 is required in the courses used to satisfy the minor requirements.

Code	Title	Credit Hours
Required Courses		**6**
CVEN 2909	Introduction to Global Sustainability	
CVEN 2919	Sustainability in Action	
Elective Courses		**9**
Students may select any combination of three (3) approved elective courses to satisfy the minor requirement. Electives are listed in the following four categories. Students do not have to take all electives in one category. Students should review the prerequisites of each course before registration.		
Science and Engineering		
AREN 3010	Energy Efficient Buildings	
AREN 4890	Sustainable Building Design	
ATOC 4770	Renewable Energy Meteorology	
CHEM 3251	Sustainable Energy from a Chemistry Perspective	
CHEM 4141	Environmental Water and Soil Chemistry	
CHEN 4480	Solar Cells and Optical Devices for Sustainable Buildings	
COEN 3210	Climate Change and Engineering	
CVEN 3414	Fundamentals of Environmental Engineering	
CVEN 4565	Design of Wood Structures	
CVEN 4834	Special Topics (Solid Waste Management and Resource Recovery)	
CVEN 4969	Water and Sanitation in Developing Countries	
ENVS 1000	Introduction to Environmental Studies	
ENVS 2000	Applied Ecology for Environmental Studies	
ENVS 3033	Governing the Environment	
ENVS 3070	Energy and the Environment	
ENVS 3140	Environmental Ethics	
ENVS 3525	Intermediate Environmental Problem Analysis: Topical Cornerstones	
ENVS 3555	Sustainable Economies	
ENVS 4800	Capstone: Critical Thinking in Environmental Studies	
EVEN 3550	Sustainability Principles for Engineers	
EVEN 3650	Sustainable Energy Systems Analysis	
EVEN 4434	Environmental Engineering Design	
EVEN 4544	Solid Waste Management and Resource Recovery	
EVEN 4969	Water and Sanitation in Developing Countries	
GEOG 2271	Introduction to the Arctic Environment	
GEOG 3402	Natural Hazards	
GEOG 3601	Principles of Climate	
GEOL 1150	Water, Energy and Environment: An Introduction to Earth Resources	
MCEN 4032	Sustainable Energy	
Business, Economics, and Policy		
BUSM 3060	Environmental Sustainability in a Globalized World	
CESR 4130	Sustainable Operations	
CESR 4850	The Sustainable Firm: ESG Strategies and Practice	
ECON 3535	Natural Resource Economics	
ECON 3545	Environmental Economics	
ENVS 3555	Sustainable Economies	
ENVS 3621	Energy Policy and Society	
GEOG 3022	Climate and Energy Justice	
GEOG 4501	Water Issues in the American West	
MGMT 4130	Sustainable Operations	
PSCI 2116	Introduction to Environmental Policy and Policy Analysis	
PSCI 3064	Environmental Political Theory	
PSCI 3206	The Environment and Public Policy	
PSCI 4106	Issues and Challenges in American Green Energy Policy	
SEWL 2000	America, the Environment, and the Global Economy	
Arts, Technology, Media, and Education		
ATLS 4606	Critical Technical Practice	
PLAN 3102	Strategies and Techniques for Sustainable Planning and Urban Design	
PLAN 4101	Sustainable Futures Planning	
History, Sociology, and Environmental Justice		
ENVS 1001	Introduction to Human Dimensions of Environmental Studies	
ETHN 3201	Social Justice, Leadership and Community Engagement Internships	
HONR 4075	Environmental Justice	
PHIL 2140	Environmental Justice	
PHIL 3140	Environmental Ethics	
SOCY 4117	Food and Society	
Total Credit Hours		**15**

Learning Outcomes

By the completion of the program, students will:

- Introduce the historical causes and present conditions of global climate change, and identify the opportunities and limitations of professional sustainability engagement.
- Identify and promote the relevance and role of engineers in supporting global sustainability and increasing prosperity.
- Introduce and identify technological, policy, social and practical solutions to global sustainability challenges.