SUSTAINABLE ENERGY ENGINEERING MINOR

The procurement of sustainable energy is one of the major challenges facing humanity in the twenty-first century. The Sustainable Energy Engineering minor is therefore designed for undergraduate, engineering students who are interested in applying their knowledge of engineering fundamentals, analysis, and sustainable design principles to clean energy generation and efficient utilization. Students will gain foundational understanding of energy technologies and the energy industry, including technological, policy, and economic considerations related to sustainable energy. Completion of the minor requires 14 credit hours of core requirements plus 6 credit hours of electives. Although this minor can more easily fit the program requirements of undergraduate students pursuing engineering degrees, it is open to non-engineering students.

OTHER INFORMATION

This minor is comprised of courses offered through all three engineering departments at UVM – Civil & Environmental Engineering, Electrical & Biomedical Engineering, and Mechanical Engineering – and Physics. The minor is offered to give our students pursuing accredited disciplinary engineering degrees an added interdisciplinary credential toward pursuing careers in sustainable energy fields.

REQUIREMENTS

Core Requirements		
CEMS 3910	Energy Policy and Economics	3
EE 2125	Circuits I	4
or EE 2145	Electrical Engr Concepts	
or EE 2175	Electrical Circuits & Sensors	
EE 3315	Electric Energy Systems	4
ME 1210	Thermodynamics	3
Electives (Minimum 6 credits from the following)		6
CEE 4570	Sustain Resource Recovery Dsgn	
CEE 5850	Geo-energy Systems	
EE 3310	Low Carbon Electric Power	
EE 3320	Power Electronics	
EE 5310	Power System Analysis	
ME 3260	Renewable Energy Harvesting	
PHYS 1200	Energy and the Environment	
PHYS 3400	Thermal & Statistical Physics	

PRE/CO-REQUISITES

MATH 1248	Calculus II	4
PHYS 1500	Physics for Engineers I	0 or 4
CHEM 1400	General Chemistry 1	0 or 4
Note: Some elective courses require additional prerequisites.		