

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.

REQUIREMENTS

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| 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

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|---|-------------------------|--------|
| 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. | | |

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.