## Minor in Sustainable Energy Systems Engineering

Clarkson University offers a Minor in Sustainable Energy Systems Engineering to all students who meet the prerequisite requirements. Our reliance on energy-rich sources of fossil fuels has enabled growth of modern society, increasing our mobility, industrial growth, domestic comfort, abundant food supply, and economic prosperity. Engineers are among the many types of professionals that need to understand the limits of our present energy systems and lead us to a future in which we can continue to provide reasonable energy resources for human quality of life. This minor emphasizes that all engineering disciplines are necessary to develop and assess technologies to both increase the efficiency of our energy use and advance renewable and alternative energy sources.

A total of 21 credits is required for this minor. Depending upon the student's major, between 9 – 12 hours of this 21 credit total are in addition to the major's core requirements. A student must complete the course requirements as follows:

**Required Course (3 credits each)**

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| Introduction to Energy Systems | ES238 |
| Alternative Energy Systems | EE/ES438 |
| Thermodynamics | ES340 or CH271 |
| Industrial Ecology | CE486 |
| Capstone Design (with specific Energy Focus) | one of: AE451, CE490, CE491, CE492, CH481, EE412, ES456, ME446 |
| Policy Choice | one of: EV 200/300, POL 470, PHIL 391, POL/SOC 395 |
| Technology Choice | one of: CH434, CH421, EE331, ME310, ME324 |