CLEAN ENERGY

Requirements

The objective of the Clean Energy Minor at Rose-Hulman Institute of Technology is to provide students with technical skills and economic/political background to understand the complexities of creating affordable, clean energy and using renewable energy sources to solve global energy challenges. This multidisciplinary minor will allow students to learn from different disciplinary perspectives and apply their discipline-specific skills toward the adoption of alternative energy sources and implementing technologies to make the current energy sources more sustainable. This minor will prepare students for careers in an energy industry that is trending towards incorporating more renewable sources.

For the minor, students will take a total of 24 credit hours of electives consisting of (note some electives from the lists will have pre-requisite chains that need to be considered before taking):

- MDS 230: Introduction to Renewable Energy (Required)
- HUM H130: Introduction to Sustainability (Required)
- 4 credit hours of elective classes from the list of “Core Technical Classes”
- 12 credit hours from the approved elective list (at least 4 credit hours must be taken outside of HSSA and EMGT departments and no more than 8 credit hours can come from a single course prefix)

Core Technical Classes (must select 1 of the 3):

Code	Title	Hours
CHE 465	Energy and the Environment	4
ECE 371	Conventional & Renewable Energy Systems	4
ME 408	Renewable Energy	4

Approved Elective List:

Code	Title	Hours
Any classes not taken from the Core Technical Classes List		
ME 407	Power Plants	4
ME 426	Turbomachinery	4
CE 250	Sustainable Civil Engineering Design	2
CE 460	Introduction to Environmental Engineering	4
ECE 470	Power Systems Analysis I	4
ECE 452	Power Electronics	4
PH 265	Fundamentals of Nuclear Physics & Radiation	4
PH 405	Semiconductor Materials & Applications	4
ECON S351	Environmental Economics	4
ECON S253	Managerial Economics	4
HUM H239	Introduction to Science, Technology and Society	4
MA 384	Data Mining	4
MA 445	Stochastic Models in Operations Research	4
EMGT 584	Systems Thinking & Evaluation	4
EMGT E581	Multi-Objective Optimization	4
Other classes by approval of minor advisor(s)		