

# ENERGY ENGINEERING, MINOR

Requirements for a minor may be completed at any campus location offering the specified courses for the minor. Students may not change from a campus that offers their major to a campus that does not offer their major for the purpose of completing a minor.

## Program Description

The minor in Energy Engineering is designed to provide students in engineering, science, and energy business and finance (EBF) with additional courses, exposure, and experiences to the principles and applications of energy engineering. Courses available to students include thermal sciences; petroleum and natural gas processing; renewable/sustainable energy; chemistry of fuels; electrochemical, chemical, and nuclear energy conversion processes; physical processes in energy engineering; air pollution; and green engineering and environmental compliance. As a result, the selection of this minor can provide additional career options for students in a wide range of offerings at Penn State.

## What is Energy Engineering?

Energy engineers are equipped with required engineering knowledge and skills needed to solve problems in the production, processing, storage, distribution, and utilization of energy. Energy processes include natural resources, such as the extraction of oil and gas, as well as from renewable or sustainable sources of energy, including biofuels, hydro, wind, and solar power.

## You Might Like This Program If...

- You aspire to be a lifelong learner, problem solver, and leader in the energy industry.
- You excel at math, science, and engineering and seek a broad overview of energy fields.
- You are interested in a well-rounded education in all facets of the energy market, including renewable energy.

## Program Requirements

Requirement	Credits
Requirements for the Minor	18

## Requirements for the Minor

A grade of C or better is required for all courses in the minor, as specified by Senate Policy 59-10 (<https://senate.psu.edu/policies-and-rules-for-undergraduate-students/59-00-minors-and-certificates/#59-10>). In addition, at least six credits of the minor must be unique from the prescribed courses required by a student's major(s).

Code	Title	Credits
<b>Additional Courses</b>		
<i>Additional Courses: Require a grade of C or better</i>		
Select 9 credits of the following:		9
EGEE 302	Principles of Energy Engineering	
EGEE 304	Heat and Mass Transfer	
EGEE 411W	Energy Science and Engineering Lab	
EGEE 420	Hydrogen and Fuel Cells	
EGEE 430	Introduction to Combustion	

EME 301	Thermodynamics in Energy and Mineral Engineering	
Select 9 credits of the following:		9
EGEE 433		
EGEE 437	Design of Solar Energy Conversion Systems	
EGEE 438	Wind and Hydropower Energy Conversion	
EGEE 441	Electrochemical Engineering Fundamentals	
EGEE 451	Energy Conversion Processes	
EGEE 464W	Energy Design Project	
EGEE 470	Air Pollutants from Combustion Sources	
FSC 431	The Chemistry of Fuels	
FSC 432	Petroleum Processing	

## Academic Advising

The objectives of the university's academic advising program are to help advisees identify and achieve their academic goals, to promote their intellectual discovery, and to encourage students to take advantage of both in-and out-of class educational opportunities in order that they become self-directed learners and decision makers.

Both advisers and advisees share responsibility for making the advising relationship succeed. By encouraging their advisees to become engaged in their education, to meet their educational goals, and to develop the habit of learning, advisers assume a significant educational role. The advisee's unit of enrollment will provide each advisee with a primary academic adviser, the information needed to plan the chosen program of study, and referrals to other specialized resources.

READ SENATE POLICY 32-00: ADVISING POLICY (<https://senate.psu.edu/policies-and-rules-for-undergraduate-students/32-00-advising-policy/>)

## University Park

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## Contact

### University Park

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