

ENERGY SCIENCE (ENSC)

ENSC 110 Energy in Perspective

Description: Scientific principles and historical interpretation to place energy use in the context of pressing societal, environmental and climate issues.

Credit Hours: 3

Max credits per semester: 3

Max credits per degree: 3

Format: LEC

Prerequisite for: ENSC 311; ENSC 395; SCIL 300

ACE: ACE 9 Global/Diversity

ENSC 220 Introduction to Energy Systems

Description: Overview of energy systems, sources, transformations, efficiency, and storage. Fossil fuels, biomass, wind, solar, nuclear, and hydrogen. Sustainability and environmental trade-offs of different energy systems.

Credit Hours: 3

Max credits per semester: 3

Max credits per degree: 3

Format: LEC

Prerequisite for: ENSC 311; SCIL 300

ENSC 230 Energy and the Environment: Economics and Policy

Description: Introduction to the economics of energy. How the economic system determines production and consumption. The linkages between economic and environmental outcomes. How future energy use can be influenced by economic, environmental, trade, and research policy.

Credit Hours: 3

Max credits per semester: 3

Max credits per degree: 3

Format: LEC

Prerequisite for: ENSC 311; SCIL 300

ENSC 300 Energy Science Seminar

Description: Overview and evaluation of existing energy problems and solutions, covering technological, environmental, economic, business, and political issues.

Credit Hours: 1

Max credits per semester: 1

Max credits per degree: 1

Format: LEC

ENSC 311 Energy Science Study Tour

Prerequisites: ENSC 110, ENSC 220, and ENSC 230

Description: Identification of energy related enterprises that represent the breath of the industry and prioritizing these as candidates for inclusion in the tour.

Credit Hours: 1

Max credits per semester: 1

Max credits per degree: 1

Format: LEC

ENSC 395 Internship in Energy Science

Prerequisites: Sophomore standing; ENSC 110; and permission.

Description: Structured practical experience under the supervision of an energy science professional.

Credit Hours: 1-3

Min credits per semester: 1

Max credits per semester: 3

Max credits per degree: 5

Format: FLD

ENSC 496 Independent Study in Energy Science

Prerequisites: Sophomore standing and permission.

Description: Individual or group project in research, literature review, or extension of course work.

Credit Hours: 1-3

Min credits per semester: 1

Max credits per semester: 3

Max credits per degree: 6

Format: IND

ENSC 499H Honors Thesis

Prerequisites: Good standing in the University Honors Program and permission. AGRI 299H recommended.

Notes: Requires conducting a scholarly research project and writing a University Honors Program or undergraduate thesis. Letter Grade Only

Credit Hours: 3-6

Min credits per semester: 3

Max credits per semester: 6

Max credits per degree: 6

Format: IND