Contact

Sandeep Kumar, Ph.D.,
Professor
Civil & Environmental Engineering
Email: skumar@odu.edu
Phone: (757) 683 3898
http://www.odu.edu/directory/people/s/skumar

Visit www.odu.edu/eng for more information and to apply.
Overview

The Interdisciplinary Minor is for students who would like to learn about energy engineering fundamentals, socio-environmental impacts of energy systems, renewable energy, and novel energy engineering technologies. The Minor will enhance their abilities to integrate knowledge from different disciplines with concepts used in energy engineering and offer the students the opportunity to be recognized for study in this growing interdisciplinary field.

The Minor program will:

✓ Expose students to energy engineering fundamentals and a system approach to energy systems and their sociological, economic, and environmental impacts

✓ Enhance students’ ability to integrate knowledge in relation to various energy technologies and primary resource vectors such as fossil, nuclear, and renewables

✓ Expose students to novel energy engineering concepts and technologies such as smart grids, integrated generation systems, storage, transmission, and distribution systems

✓ Foster a better understanding of public policies to provide greater momentum to the energy industry

✓ Teach the environmental impacts of the various energy systems

Eligibility

• The Minor is open to students in all Majors, and will be especially applicable to those in Engineering, Physics, Chemistry, Ocean and Earth Sciences, and Environmental Health

Course Requirements

• Twelve credit hours at the 300 or 400 level.
• A 2.00 or better grade point average in all Minor courses

Select four courses from the following list of 3 credit hour courses. Only one (1) course can be applied to both the student’s Major course of study and to the Minor.

- CEE 459 Biofuels Engineering
- CET 355 Sustainable Building Practices
- ECE 303 Introduction to Electrical Power
- ECE 403 Power Electronics
- ECE 471 Introduction to Solar Cells
- ECON 447W Natural Resource and Environmental Economics
- EET 370T Energy and Environment
- EET 483 Introduction to Smart Grids
- EET 485 Electrical Power Systems
- ENGN 411 Energy Management and Policy
- ENGN 412 Fundamentals of Energy Conversion and Transmission
- MAE 411 Mechanical Engineering
- MAE 413 Power Systems Theory and Design
- MAE 416 Energy Conversions
- MAE 430 Introduction to Solar Energy Engineering
- MET 300 Solar Thermal Engineering
- MET 450 Thermodynamics
- MET 471 Energy Systems
- MET 483 Nuclear Systems
- OEAS 415 Waves and Tides
- PHYS 415 Introductions to Nuclear and Particle Physics