

## Duke University Energy Initiative

Energy education at Duke capitalizes on the University's broader Energy Initiative, a university-wide interdisciplinary collaboration focused on advancing an accessible, affordable, reliable, and clean energy system. Duke students—at all levels—will gain the training, skills, and experiences needed to play leadership roles in a rapidly evolving energy future. For more details, see [energy.duke.edu](http://energy.duke.edu).

## Undergraduate Curricular Offerings

Register for an Energy Gateway course, go deeper with an Energy Depth course, or enroll in a curricular program, such as the undergraduate Energy and Environment certificate, or the Energy Engineering minor. For more details see reverse side and [energy.duke.edu/education](http://energy.duke.edu/education).

## Co-Curricular Activities

Participate in the many energy events and activities:

- ❖ Energy Speaker Series (visiting guest speakers)
- ❖ Power Lunches (lunchtime seminars)
- ❖ Energy Mix (social networking events)
- ❖ Duke University Energy Conference (annual each fall)
- ❖ Energy Industry Fundamentals (annual each fall)
- ❖ Power Trips (local and regional field trips)
- ❖ Energy Mentoring Conversations (group chats with industry professionals)

Visit [energy.duke.edu](http://energy.duke.edu) for details on our events and campus energy activities, and to sign up for energy news by email.

## Undergraduate Student Energy Clubs

Join a student club engaged in energy-related learning, including:

- ❖ Duke Undergraduate Energy Club
- ❖ Smart Home Student Club

For more details see our [Student Energy Clubs page](#).

## About Bass Connections

Bass Connections in Energy offers a unique team based learning opportunity for students and faculty by crossing boundaries through problem-focused education—boundaries among disciplines, educational levels, and schools; geographic boundaries; and boundaries between the university, business, civil society, and government. Bass Connections is fully integrated with other energy education programming at Duke.

## Project Teams

Project teams connect undergraduate and graduate students, faculty, and external experts to pursue energy problems requiring cross-disciplinary solutions. Teams for 2015-2016 will become active during the Fall semester.

Each project team will establish three core connections:

- ❖ Between the academy and the broader world,
- ❖ Across disciplinary expertise, and
- ❖ Across learner levels.

Visit [energy.duke.edu/education/bass-connections](http://energy.duke.edu/education/bass-connections) to learn more about the new project teams and how to apply.

Register for course credit through ENERGY 395/396 (see reverse side) or a departmental project course.

## Contact Information

- ❖ Website: [energy.duke.edu/education](http://energy.duke.edu/education)
- ❖ Email: [energyinitiative@duke.edu](mailto:energyinitiative@duke.edu)
- ❖ Phone: 919-613-1305 for general information or call 919-684-1394 to speak with Stacy Peterson, Energy Education Program Coordinator
- ❖ Location: Gross Hall; on the corner of Science and Towerview Drive

# Undergraduate Energy Curriculum

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## Energy-related Curricular Programs

- Certificate in Energy and Environment, Trinity College of Arts & Sciences and Pratt School of Engineering
  - Minor in Energy Engineering, Pratt School of Engineering
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## Energy Gateway Courses

- [Energy and the Environment \(EOS/ENV/PUBPOL 330\)](#)
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## Energy Project Courses

- [Connections in Energy: Project \(ENERGY 395/396\)](#)
- Energy and Environmental Design: Capstone Project (ENV 452L/EGR 424L)

## Energy Depth Courses

### *Energy Technologies, Systems, and Science Courses*

- Special Topics in Chemistry: ENERGY SCI & ENG PART I (CHEM 590)
- [Environmental Engineering \(CEE 462L\)](#)
- Energy, Engineering, and the Environment (ME 461)
- Solar Cells (ECE 496-01)
- [Intro. To Electrical Energy Conversion \(ECE 496.07\)](#)
- [Sustainable Cities and Urban Design \(ENV 590.37\)](#)
- [Petroleum Exploration \(ENV 590.51\)](#)
- [Transportation and Energy \(ENV 630\)](#)
- [Energy Technology \(ENV 631\)](#)
- [Air Pollution: From Sources to Health Effects \(ENV 642\)](#)
- [The Climate System \(EOS 511\)](#)
- [Water Quality and Health \(EOS 524\)](#)
- Intro. to Energy Generation, Delivery, Conversion & Efficiency (ENRGYEGR 310)
- [Bioenergy \(ENRGYEGR 490.01\)](#)
- Renewable Energy Technologies (ENRGYEGR 490.01)
- Energy for the Built Environment (ENRGYEGR 490.02)
- [Intro to Electrical Energy Conversion \(ENRGYEGR 490.04\)](#)
- [Modern Power Systems \(ENRGYEGR 490.05\)](#)
- Transportation Energy (ENRGYEGR 490.06)
- [Our Changing Atmosphere: From Air Pollution to Climate Change \(ENV/ENERGY 239\)](#)
- Applied Big Data Science: Energy Data Analytics and Policy (PUBPOL/ENERGY 590.08)
- Power for Mechanical Systems (ME 490.01)

### *Energy Economics and Business Courses*

- [Energy Finance \(ENERGY 620\)](#)
- [Economic Analysis of Current Energy Issues \(ECON 325S\)](#)
- [Economics and the Environment \(ECON 439/ENV 363\)](#)
- [Resource and Environ. Econ. I \(ENV 520/ECON 530/PUBPOL 576\)](#)
- [Climate Change Economics \(ENV 640/PUBPOL 585\)](#)
- [Applied Energy Economics \(PUBPOL/ENERGY 590S\)](#)

### *Energy Policy and Law Courses*

- [Energy Economics and Policy \(ENERGY/ENV 635\)](#)
- U.S. Environmental Policy (ENV 212/PUBPOL 275)
- [Environmental Politics \(ENV 577\)](#)
- [Energy and U.S. National Security \(PUBPOL/ENV 583S\)](#)
- Climate Change Policy (ENV 590.55)
- [Green Germany \(GER/ENERGY 364S/HIST 250/ENV 366\)](#)
- [Energy and Society: Latin American Energy Systems \(LATAMER/ENV/ENERGY 390/PUBPOL 290.15\)](#)

### *Energy Modeling and Assessment Courses*

- Environmental Life Cycle Analysis and Decision (ENV 638L)

## Experiential Energy Courses

- Israel Experience: Environment, Science, Technology, and Innovation (EOS 406)

❖ Courses that are underlined signify a hyperlink to the syllabus for this course, available online.

Course offerings change, so students should consult the current university course schedule for updated listings and for information regarding pre-requisites.

For an online listing of these and other classes, please visit [energy.duke.edu/education/energy-courses](http://energy.duke.edu/education/energy-courses).