

The Department of Energy, Environmental & Chemical Engineering

Opportunities for undergraduate students



Department of Energy, Environmental & Chemical Engineering

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Many students have the eventual goal of securing a career in industry or research. An important step in attaining that goal is to experience on-the-job training during the summer months. A summer internship in industry or a research laboratory is a good way to expand your classroom experience.

Internship Search Tips

- Utilize on campus resources such as the Career Center, located in the Danforth University Center and Lopata Hall.
- Search early for summer employment. Many students begin their searches as early as November of the previous year.
- Use the information and contacts in this brochure (back cover) as a beginning for your search.
- Consider a co-op if you can dedicate more than the summer months to a company.
- Contact faculty or academic advisors to learn more about opportunities for on campus research projects.
- Consider participating in our department's International Experience Class. These programs are detailed in this brochure.
- Engage in an Industry Plant Tour. The department offers two plant tours each fall.

Cover: Thailand, 2017

International Experience Class

The international experience class (E33 EECE 401, 3 credits) is designed for undergraduate students in the Department of Energy, Environmental, and Chemical Engineering. The highlight of the class is a visit to McDonnell Academy partner universities.

HIGHLIGHTS

- pre-visit orientation meetings and pre-program seminars
- summer international travel for two weeks
- classes at partnering universities
- field trips to local industries, regulatory agencies and laboratories
- cultural and social programs
- analysis of experience, projects, discussions, presentations and research papers

REQUIREMENTS

- Undergraduate students must be in good standing with a minimum overall GPA of 3.0.
- Application deadline is October 15 of each fall. Acceptance is announced in December. Students and faculty traveled to China, in 2008, to South Korea in 2009, to India in 2010, to Hong Kong in 2011 and Brazil in 2012, Australia in 2013, Singapore in 2014, Turkey in 2015, Hungary in 2016, Thailand in 2017. They will travel to Taiwan in 2018.

Summer 2018: Taiwan

international experience in energy, environmental & chemical engineering

Register for this Fall 2017 3-credit class and visit Taiwan during the summer of 2018. This is an approved engineering elective class in the Department of Energy, Environmental, and Chemical Engineering.

HIGHLIGHTS

- students will visit National Taiwan University and National Chiao Tung University for two weeks
- projects will focus on biotechnology, petrochemical and environmental engineering science
- interact with students
- socio-cultural programs
- internship opportunities
- continue project work in fall semester at Washington University in St. Louis

REQUIREMENTS

- undergraduate students must be in good standing with a minimum overall GPA of 3.0
- applications with essay due October 15

Email Ray Ehrhard at rehrhard@wustl.edu for more information

Undergraduate students pursuing a chemical engineering degree can earn one of three related minors:

- Environmental Engineering Science
- Energy Engineering
- Nanoscale Science & Engineering

EECE offers three minors available to students pursuing a BS degree in Chemical Engineering. The 21-22-unit Environmental Engineering Science minor prepares students to seek an entry-level position as an environmental engineer, scientist or analyst. The 18-unit Energy Engineering minor gives students a broad coverage of courses in Energy Engineering, and engage in energy related research underway at WashU. Requirements are listed on our website: eece.wustl.edu The Nanoscale Science & Engineering minor will enhance student's knowledge and skills in the area of nanotechnology. The minor consists of courses, labs, and a project with a participating faculty in the Nanotechnology minor program.

Senior undergraduate resume book

A senior undergraduate resume book is prepared by the department in September every year to assist students in obtaining placement. This book is forwarded to more than 100 potential employers. For details, contact Irma Adams (jadams@wustl.edu).

Washington University Master of Engineering in EECE

This coursework based master's program requires 30 credits and is a pathway for a professional engineering career in industry. Students can choose a set of electives to obtain certificates in the following specialized tracks:

- Advanced Energy Technologies
- Environmental Engineering Science
- Technology for Environmental Public Health & International Development
- Energy & Environmental Nanotechnology
- Energy & Environmental Management

A joint MEng-MBA degree is also available.

Industry Opportunities

The following companies (partial list) have hired EECE students for various internship experiences. For more information, contact the Career Center: careers.wustl.edu. Sue Kruessel, suekruessel@wustl.edu, can assist you with placement for Internships and jobs.

Abengoa Bioenergy
bioenergy.abengoa.com

Anheuser-Busch
www.anheuser-busch.com

Boeing
www.boeing.com

Burns & McDonnell
www.burnsmcd.com

Cabot Corporation
www.cabotcorp.com

Corning Corporation
www.corning.com

Curium
curiumpharma.com

DuPont
www.dupont.com

Emerson
www.emerson.com

Environmental Quality Management, Inc.
www.eqm.com

Exxon Mobil
www.exxonmobil.com

Jacobs
www.jacobs.com

L'Oreal Inc.
www.loreal.com

McKinsey & Company
www.mckinsey.com

MilliporeSigma
www.emdmillipore.com

Monsanto Enviro-Chem Systems, Inc.
mecsglobal.com

**National Corn-to-Ethanol
Research Center**
www.ethanolresearch.com

Pfizer
www.pfizer.com

Poet Energy
www.poetenergy.com

Procter & Gamble
pg.com

On Campus Research Opportunities in EECE

Our professors are engaged in cutting edge research in a variety of areas. For more information, visit eece.wustl.edu. Students can directly contact faculty members for more specific information.

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National Laboratories & Government Agency Opportunities

Department of Energy
Science Undergraduate
Laboratory Internship (SULI)
www.scied.science.doe.gov

**United States Environmental
Protection Agency**
EPA Intern Program
www.epa.gov/ohr/eip.html

National Science Foundation
Research Experience for
Undergraduates
www.nsf.gov