



UWP International Experiences in Engineering Physics

“... the opportunity of a lifetime! I was able to experience a new culture, develop lifetime friendships, and build professional networks. This opportunity really made me more marketable after graduation.”

-Meghan, UWP EP class of 2009

Institute for Study
Abroad Programs

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Do EP majors study abroad? Yes, they do! An international experience will provide you with the necessary skills to work effectively in academia, industry or the public sector.

Study abroad can help you ...

- Find great engineering coursework and curriculum
- Understand the field of engineering from an international perspective
- Expand your cross-cultural communication and problem solving skills
- Prepare you to work in an increasingly diverse and international workplace
- Broaden your academic horizons
- Globalize your world view
- Improve your language skills

By its nature, engineering takes place in a cultural context. There is much to be gained from understanding the history and traditions of cultures outside your own. Study abroad is one very exciting way to begin to discover new approaches and build your professional skills.

Set goals and plan for results

Engineering Physics students can study abroad anytime after their first year; however, the best time tends to be between second semester sophomore year and first semester senior year. The process of selecting a study abroad program is similar to selecting your major or minor.

- Begin planning right away. It is never too early to start planning.
- Set some goals. There is not one program best suited for all EP students. There are many good study abroad programs, and the best one for you depends on what you want.
- Prioritize your goals. Consider your long-term academic and professional goals, as well as your on-campus degree requirements.
- Consider short-term and long-term programs.
- Prepare academically. You may need to take language or other prerequisite courses for your chosen program.
- Give yourself time to research and talk to advisers and students who have studied abroad.

With proper planning, study abroad can help you prepare for your professional life in today's global context.

Can I afford to study abroad?

YES! Early planning for study abroad helps you make cost-effective program decisions, and it also helps you prepare your finances through savings, scholarships and financial aid. Financial aid applies to study abroad and, in some cases, your eligibility will increase to cover additional expenses. UWP offers an International Grant and Scholarship for Wisconsin residents and students with demonstrated financial need through the FAFSA.

The Institute for Study Abroad Programs provides resources on these and a variety of other scholarships available to undergraduate students. Please visit <http://www.uwplatt.edu/intprog/educationabroad/funding/index.html> to research all your options

What are my next steps?

Make an appointment for initial advising

Learn about study abroad resources and opportunities by scheduling an advising appointment with a member of the Institute for Study Abroad Programs staff at studyabroad@uwplatt.edu or by calling 608.342.1726.

Investigate Programs

Use the International Programs website www.uwplatt.edu/intprog, resource center and advisors to find a program that fits your goals. For sites with which UWP has an engineering exchange program, see www.uwplatt.edu/ems/internationalwebpages.

Talk to your advisor

Use the International Study Course Approval Form www.uwplatt.edu/intprog/files/Intl_Study_Course_Approval.pdf to get approval from your department chair for major-specific courses. Some study abroad courses have been approved for major requirements. A list of approved courses is available on the website www.uwplatt.edu/intprog/educationabroad/equivalency/index.html.

Academic Considerations

What are the best times to study abroad?

In general, EP majors at UWP may embark on a study abroad any time beginning with their third semester. However, EP majors who wish to pursue courses of study that are not available at UWP (i.e. Aerospace Engineering, Biomedical Engineering, etc.) should have completed the following major requirements before participating in a study abroad program: Modern Physics PH3140; all General Engineering and Engineering Science required courses. These courses can be completed by the end of the fourth semester. Participation in a study abroad program during the third or fourth year may be ideal for many EP majors; the flexible nature of the EP degree works very well with international exchange opportunities.

Students who participate in a study abroad program as seniors should be aware of several important dates. Students who anticipate entering graduate or professional school upon graduation from UWP should be aware of application deadlines and GRE examination dates. Students pursuing Professional Engineer (PE) licensure after graduation should be aware of Fundamentals of Engineering (FE) exam dates.

Meeting general education requirements

Participation in a study abroad program (3 credits or more) fulfills the university's international education requirement and most study abroad programs provide multiple opportunities for meeting other general education requirements. Engineering Physics majors may be able to fulfill General Education requirements in both liberal arts (courses in history, fine arts and foreign languages are some options) and Social Sciences (including courses in economics, geography and sociology), depending on program offerings. Students should work closely with their academic advisor as they build their schedule of courses for their time abroad.

Fulfilling requirements in the Engineering Physics major

It is possible for EP majors to meet program specific requirements, but this will vary considerably between study abroad programs. If a course equivalency sheet for Engineering Physics is available for a program of interest (for example, a particular study abroad program), it should be consulted. Most likely, though, no course equivalency sheet exists for the program of interest, so it is critical to work closely with your academic advisor early in the planning process so that courses can be evaluated and potentially included in your major requirements.

All Engineering Physics majors also should take into consideration the following specific program requirements that only are offered in one semester of a full academic year at UWP: EP4220, EP4210, EP3240 and EP4010 are fall only; EP4140 and EP4930 are spring only.

Emphasis in Electrical Engineering or Mechanical Engineering

Several overseas programs exist with courses that will meet EP's Professional Engineering requirements; these sites have been reviewed by UWP faculty in Mechanical Engineering and Electrical Engineering, and we refer you to the international advising sheets for those programs. The UWP EP Professional Engineering course requirements are readily completed overseas.

'Special' emphases

An exciting option is to enroll in courses overseas that are not offered at UWP, combining an outstanding cultural experience with a unique educational opportunity. Students pursuing this option should complete as many prerequisite courses as possible, in order to take advantage of the unique, upper-division course offerings at these sites. Some representative programs are shown below.

- *Photonics, Photonics Engineering and Advanced Optics* programs exist at Hochschule Darmstadt (Germany); the University of Newcastle and Macquarie University (Australia); the University of Dundee (Scotland).
- *Biomedical Engineering*: Cork Institute of Technology (Ireland); Swinburne University of Technology (Australia)
- *Aerospace Engineering*: Kingston University (London)
- *Mechatronics*: Massey University (New Zealand); University of Newcastle (Australia)
- *Instrumentation Engineering*: Cork Institute of Technology, Galway-Mayo Institute of Technology (Ireland); Macquarie University (Sydney, Australia).
- *Energy Engineering*: Galway-Mayo Institute of Technology (Ireland); University of Dundee (Scotland)

Sample Study Abroad Programs

Programs vary in their level of integration and the level of independence required. Some offer transfer credit rather than UWP resident credit. Consider your own level of interest and preparation when reviewing the programs below, and consult with your academic advisor or the Institute for Study Abroad Programs office to determine which program is the best fit.

Africa and the Middle East

Morocco

Al Akhawayn University, Ifrane

<http://www.aui.ma/>

Founded in 1993 by Royal Dahir (charter), Al Akhawayn University in Ifrane (AUI) opened its doors to students in January 1995 at a completely modern and networked campus, with instruction in English. The university is coeducational, residential and primarily undergraduate. The outlook is international and tolerance is promoted and expected of the students, staff and faculty belonging to over 25 nationalities. Al Akhawayn would be a fine choice for a student not yet at the Professional Elective level in their curriculum. This program is offered through CCIS, our affiliate partner.

Americas

Mexico

University of the Americas-Puebla

<http://www.udlap.mx/internacional/english/students>

The Universidad de las Americas-Puebla (UDLA) is Mexico's premier private university often called the "Harvard of Mexico." While learning Spanish at this outstanding academic institution, you will also have opportunities to explore the vibrant Mexican culture surrounding you. UDLA is a private, liberal arts institution accredited in both the U.S. and Mexico. The Centro Internacional de Lengua y Cultura was created to offer courses to international students interested in the Spanish language and Mexican culture. UDLA offers courses (in Spanish) in Mechatronics, Mechanical Engineering, Electrical Engineering, and Chemical Engineering. This program is offered through UW-La Crosse, our affiliate partner.

Asia and Oceania

Australia

University of Newcastle, Australia

www.newcastle.edu.au/

The University of Newcastle is a progressive, dynamic institution recognized for research achievement and teaching innovation, with a wide selection of engineering courses in Mechanical Engineering, Electrical Engineering, Photonics and Chemical Engineering. This program is offered through the Institute for Study Abroad Programs (11 Royce) and the International Exchange Programs office (100 Otts).

Swinburne University of Technology, Melbourne

www.swinburne.edu.au/

Swinburne has a strong reputation in Australia and overseas as a provider of career orientated education and as a university with a commitment to research. The university maintains a strong technology base and important links with industry, complemented by a number of innovative specialist research centers which attract a great deal of international interest. Swinburne has several courses in Electrical and Mechanical Engineering. This program is offered through CCIS, our affiliate partner.

Macquarie University, Sydney

www.mq.edu.au/

Macquarie's location within the high-technology corridor of northwestern Sydney enables close relationships with some of the world's most successful companies. Macquarie has programs in Photonics Engineering, Instrumentation and Control Engineering, Software Engineering and several varieties of Electrical and Communication engineering. This program is offered through CCIS, our affiliate partner.

New Zealand

Massey University, Auckland or Wellington

www.massey.ac.nz/

Massey University is New Zealand's largest university. Massey features degrees in Mechatronics and several branches of Electrical/ Communications Engineering – be sure your courses are offered at the correct campus site! This program is offered through CCIS, our affiliate partner.

China

City University of Hong Kong

www.cityu.edu.hk/

City University is one of eight Hong Kong higher education institutions funded by the government of the Hong Kong Special Administrative Region of the People's Republic of China. Established in 1984, City University now has 18,000 full-time and part-time students offering more than 100 academic programs in a wide range of disciplines, including Physics and Materials Science, Electronic Engineering, and Manufacturing Engineering. This program is offered through UW-LaCrosse, our affiliate partner.

Europe

Germany

Hochschule Darmstadt, Darmstadt
www.fh-darmstadt.de/

Darmstadt's educational program is project-based. This makes determining course transfers a challenge; however, several Engineering Physics students have had outstanding experiences at Darmstadt, and gained expertise in Optics beyond UWP's course offering. This program is offered through the International Exchange Programs office (100 Ottis).

Ireland

Cork Institute of Technology, Cork
www.cit.ie/

Cork has a wide range of engineering disciplines, including Applied Physics and Instrumentation, Instrument Engineering, and Biomedical Engineering, in addition to the "traditional" assortment of ME and EE courses. This program is offered through the International Exchange Programs office (100 Ottis).

Galway-Mayo Institute of Technology, Galway
www.gmit.ie/

GMIT has courses in Electrical and Mechanical Engineering, as well as Energy Engineering, and Physics and Instrumentation. This program is offered through the International Exchange Programs office (100 Ottis).

Scotland

University of Dundee, Dundee
www.dundee.ac.uk/

The University of Dundee is one of the UK's leading universities, internationally recognized for its expertise across a range of disciplines including science, medicine, engineering and art. Students at Dundee can select courses from a wide range of disciplines, including Renewable Energy, Microelectronics and Photonics, Electronic Engineering and Mechanical Engineering. This program is offered through CCIS, our affiliate partner.

Short-term and Language Programs

For a short-term international experience in science or engineering, students could consider a summer international Research Experience for Undergraduates (iREU), or an International Research Experience for Students (IRES). These are funded by the National Science Foundation (NSF), and are competitive: students apply and are selected by the program organizers. Students participating in an iREU or IRES receive a stipend for travel expenses and also for living expenses. Recent programs have included research in: optics in Paris, gravitational physics in the UK or Japan, and functional nanostructures in Poland. The NSF website can connect you to the current batch of programs:

NSF REU home page: <http://www.nsf.gov/crssprgm/reu/>

Click on "Search for an REU Site," then select "International Science and Engineering."

NSF IRES home page: http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=12831

Scroll to the bottom for a list of programs; selecting "Abstracts of Recent Awards Made Through This Program" will give a list of all programs that the NSF recently funded.

Other opportunities

... develop or improve second language skills

Engineers, like all professions, are increasingly operating in an international community. Developing second language skills would be an incredible asset, regardless of the area of emphasis. Many study abroad programs present opportunities for developing or improving second language skills, from Spanish to French to Chinese. Language courses also can fulfill general education requirements in the Humanities.

... engage in fieldwork, directed research or internships

With careful planning, it may be possible to engage in educational opportunities beyond the classroom while studying abroad. Independent research, assisting with local health or school programs, and other such opportunities may be possible. Working closely with your academic advisor, the Study Abroad Office, and on-site coordinators of study abroad programs, will be essential in arranging these opportunities — but the extra effort will certainly be worth it.

Beyond Study Abroad

Your opportunities for significant overseas learning are not limited to study abroad. Whether as an alternative to study abroad or a complement to it, you might want to consider an overseas work, internship, volunteer or travel experience. To explore your options, begin by visiting the Institute for Study Abroad Programs office for more information on specific opportunities. These learning abroad programs may be combined with directed study to generate academic credit.

Work abroad

Most countries prohibit students from taking paid employment without a work permit. Programs, including British Universities North America Club (BUNAC) (Australia, Britain, Canada, Ireland and New Zealand) and Centre d'Échanges Internationaux (CEI) (France), provide you with a work visa and offer resources to help you find a job and housing on your own.

Internships abroad

Students sometimes arrange non-credit, free-standing internships either through established programs that connect them with a host company or organization, or through faculty or other connections. You can do an internship while you are still a student or after you graduate. Internships are rarely paid. Many programs will search for placements based on your academic and career interests but cannot guarantee an internship in any particular field. Other programs have pre-arranged placements in specific fields.

Volunteering abroad

A volunteer abroad opportunity gives you the chance to give your time and energy to a community while strengthening your language skills and learning about a new culture. A host of organizations arrange opportunities for you to volunteer abroad in many different areas, from working with children to helping construct a community clinic. A few notable examples include Engineers Without Borders, which has an active UWP student chapter serving communities in Ghana with engineering service trips (www.uwplatt.edu/org/ewbuwp); Earthwatch, which offers short-term expeditions all over the world; Cross-Cultural Solutions, offering two to 12 week programs (Brazil, China, Costa Rica, Ghana, Guatemala, India, Peru, Russia, Tanzania and Thailand); and Alliance Abroad (Argentina, Brazil, Costa Rica, Ecuador, India, Peru, South Africa, and Spain).

International travel

Virtually any travel is educational to one degree or another and the Institute for Study Abroad Programs offers a host of resources to help your travel preparations, including a travel library and selected travel guides. Passport photos are available for a small fee from the Office of Public Relations located in the basement of Brigham Hall. Please call 608.342.1195 for an appointment.

After graduation

Seek new international experiences

Consider longer-term work or volunteer opportunities abroad after graduation. Council on International Educational Exchange (CIEE) places graduates in five- or 10-month paid teaching positions in Chile, China, Spain and Thailand; the Japan Exchange and Teaching (JET) Program offers paid English teaching positions in Japan; and WorldTeach offers placements around the world, some of which are fully funded by the host government. Peace Corps offers graduates the opportunity to serve a longer-term role in a well-established program by working on education, health and other projects.

Incorporate learning abroad into your resume

Whatever you decide to do after graduation, you will want to include your learning abroad experience on your resume or graduate school application. Learning abroad can lead to the beginning of intercultural competence that is appealing to potential employers and graduate schools alike. When including learning abroad in your resume, highlight the skills you gained and what you learned while abroad. Did you become proficient in a language? Did you gain research experience through conducting an independent study project? Did you develop skills on an international work or internship experience? Have you become knowledgeable in some aspect of your host country's culture? You will want to make the connection to the actual skills you gained through your experience abroad – connections that will not always be obvious to an employer. The Institute for Study Abroad Programs Office has re-entry resources to help you make your learning abroad experience an essential component of your career pathway.