

Employer Guide

for Developing Experiential Education Programs



Engineering Professional Development

College of Engineering

THE UNIVERSITY OF IOWA www.engineering.uiowa.edu/epd

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Introduction

The Engineering Cooperative Education and Internship program at The University of Iowa gives students the option of exploring and developing their careers through periods of professional practice. These are institutionally supervised, professional and engineering-related experiences in business, industry, education or government that are recognized by the College of Engineering. It is stressed to students early on in their academic career that in order to be competitive when applying for engineering positions, they need to have some type of experiential education experience prior to graduation.

The program is structured in a way that there is goal setting at the beginning, analysis and reflection at the mid-point and evaluation and feedback at the end. Experiences range from ten week summer internships to multi-term co-ops.

All students in the College of Engineering are eligible to participate in the co-op and internship program upon completion of one full semester in the College. Undergraduates seeking this option must have at least a cumulative GPA of 2.0 and master's candidates must have a 3.0.



What is a Co-op or Internship Program?

Key Characteristics

Co-ops and internships are considered experiential education programs that enrich learning and develop skills. These experiences must follow specific criteria from the National Association of College and Employers (NACE):

1. Students' tasks are an extension of the classroom where academic knowledge can be applied to real life situations.
2. Tasks have clearly defined learning objectives and goals that relate back to the coursework and can be applied in employment situations.
3. Students are given a supervisor with professional expertise and background in the field of the educational experience. Supervisors act as a mentor and provide feedback to the student.
4. The employer and supervisor provide resources, equipment and facilities that aid in the student's learning objectives and goals.

Employer Benefits

Experiential education programs are mutually beneficial to the student and the employer by:

1. Providing opportunities to recruit highly motivated pre-professionals with the goal of transitioning them to full-time positions upon graduation.
2. Developing supervisors' management experiences through interactions with students.
3. Bringing new perspectives and creative ideas to the workplace.
4. Recruiting and evaluating potential employees through a cost-effective process.
5. Reducing training time and increasing productivity upon hiring students into full-time positions.



Developing a Program Plan

The following activities and practices are only a guideline for starting an experiential education program, as processes will vary by employer.

Pre-Employment Activities

1. Create projects and learning objectives. For each project, provide a description of the expectations, skills, duties, responsibilities and how it relates to academic curriculum for the respective engineering department.
2. Determine who will be the student's supervisor and define the relationship between the student, their supervisor and their team.
3. Determine the length of the experience and the timeline for the project(s). See the chart below for the definitions of various types of experiences.

Type	Time Frame	Part/ Full Time	Location	Paid/Credit?
Co-op	Academic Semester and Summer	Full-Time	On-Site	Paid
Internship	Summer or Academic Semester	Full-Time or Part-Time	On-Site	Paid
Research	Anytime	Full-Time or Part-Time	Varies	Paid or Credit

4. Review average co-op and intern salaries and departmental budgets to determine student's rate of pay.
5. Post opening(s) and consider attending the Fall or Spring Engineering Career Fair, screen and interview candidates, and make offer(s).
6. Arrange a start date, end date, hours, rate of pay, travel and housing arrangements, if necessary.
7. Remind student to register the experience with the College of Engineering.



Developing a Program Plan (continued)

Employment Activities

1. Provide an orientation to the company that is similar to the orientation for full-time employees.
2. Provide any necessary job training, review the work objectives, discuss the goals, and offer regular feedback.
3. Direct the student to give written and oral reports on the projects.
4. Offer opportunities to network with other interns (if applicable) and other full-time employees.
5. Conduct an exit interview to get the student's feedback on their experience with the company in order to continue improving the company's experiential education program.

Post-Employment Activities

1. Stay in touch with the student.
2. Provide information about future employment opportunities and benefits to the student.
3. Determine if there is an opportunity for the student to work part-time during the semester or return the following summer.
4. Keep the University informed about further opportunities within the company.

Best Practices

Based on observations and student feedback, we have determined that these practices are important for a successful experiential education experience.

1. Clearly communicate performance expectations.
2. Partner the student with one or more engineers to help review their work and provide ample guidance, supervision and feedback.
3. Give the student meaningful engineering experience that progresses in difficulty and responsibility while showing them the full scope of the many engineering facets.
4. Encourage team involvement and be enthusiastic with the student.
5. Offer opportunities for the student to demonstrate leadership.
6. Deliver a written and/or verbal report at the end of the experience.
7. Treat the student as a full-time employee with the same potential.
8. Provide an opportunity to meet with someone from the executive ranks.
9. Maintain a professional relationship with the student and expect the same in return.



Developing a Program Plan (continued)

Roles and Expectations

The employer is expected to:

- Develop learning objectives for each student that prepares them for professional engineering.
- Give the student a workplace that complies with all federal and state laws and regulations regarding safety, equal employment opportunity, nondiscrimination and harassment.
- Provide a supervisor with a professional background. The mentor shall provide regular feedback to help develop the student's professional skills.
- Review and sign the University's Experience Agreement Form verifying the student's experience within two weeks of the start date.
- Complete the University's end of term student evaluation on the student's performance relative to the goals they were to accomplish. Both forms will be provided by the student.

The student is expected to:

- Understand the desired outcomes for the project.
- Complete all work terms with employer.
- Follow all standards of professional and ethical conduct.
- Try to achieve the highest performance in all work.
- Register for the appropriate co-op and internship course and complete all assignments.

The College of Engineering is expected to:

- Inform students about the benefits of experiential education programs and opportunities with various employers.
- Develop new opportunities for students by working with industry and government partners.
- Work with the engineering departments to determine the academic components for the Experiential Education Program.



Orienting and Training Students

The primary objective of orienting and training students is that with some direction and guidance they can be successful. Orientations normally provide information about where to get advice, what resources are available and the expectations of the student. Below are some questions to answer and tips to follow to make sure the student is successful in the position.

Organizational Structure

- Who are the student's direct and indirect supervisors?
- What is the hierarchy of the company?
- What are the responsibilities of the student's assigned department?
- What are responsibilities of other departments the student may need to interact with?
- Does the student know everyone within their department?
- Do they understand how the facility is organized?
- Do they understand the culture, goals, and history of the company?

Student Responsibilities and Objectives

- What is the student's role in the project and department?
- What project(s) will be assigned? - Be sure that the student's project is specific, measurable, achievable, relevant and timed. This will ensure that the student is working in timely manner towards a task they can understand.
- What resources are available to the student?
- Does the student deal with clients, vendors and/or other departments?
- Is there any training necessary?
- To what capacity will the tasks be performed with and without supervisor approval?

Monitoring the Student Progress

- Is the supervisor available when the student needs help?
- Can the supervisor periodically check-in with the student?
- Can the supervisor provide constructive criticism and feedback?
- Does the supervisor allow the student to participate in professional meetings?
- Does the supervisor make the student feel welcome by giving a tour of the facility, introducing them to other employees or providing material on the company?



Managing and Supervising

Transition from Classroom to Workplace

For students, transitioning from the classroom to workplace can be difficult the first time they work at a company. They will need to learn about how the company operates while trying to understand how to apply their knowledge to a project.

Supervisors should understand that students will look at them as mentors that will help this transition. Something we have found to assist in the transition is a regular informal meeting to provide feedback with regards to their performance. During this meeting students will be given an opportunity to:

- Report on their project
- Ask questions
- Discuss ideas
- Learn about how their work contributes to the department
- Discuss where they can grow and learn

At these meetings, supervisors will have an opportunity to reinforce the student's knowledge and performance as well as address any concerns that they student may have about their project.

Evaluations

As a part of the University of Iowa's experiential education program, students must perform an evaluation of their experience. Similarly, the supervisor will be asked to evaluate the student on their work. They will be able to comment on:

- Quality and quantity of work
- Oral and written presentations skills
- Problem solving skills
- Academic preparation
- Ability to use resources and take direction
- Completion of the assignment
- Acceptance of responsibility and criticism
- Work attitude

These evaluations will help the student understand what they did right and how they can grow. It would also be beneficial to evaluate the student during the project so they can have a chance to grow within the company.



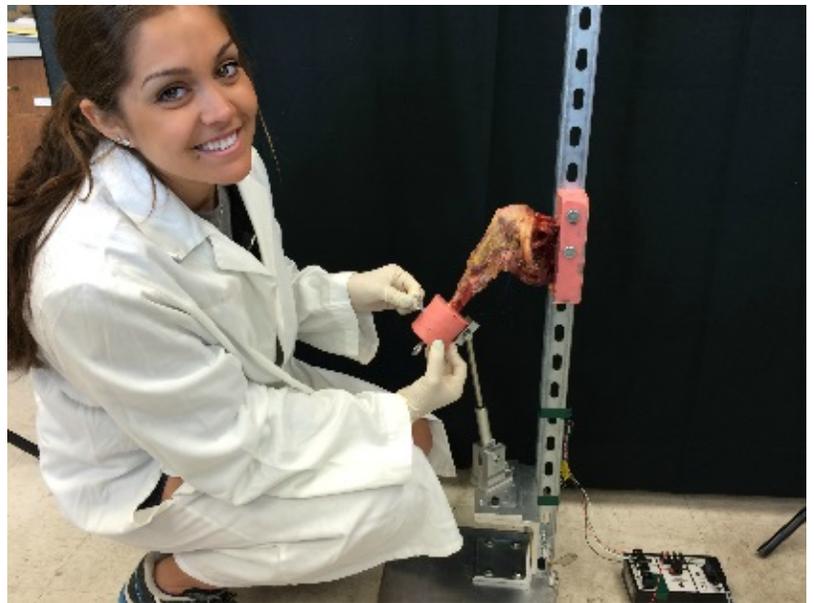
Legal Issues

Paid vs. Unpaid Internships or Co-ops

While unpaid internships are unusual for engineering majors, the employer should understand laws surrounding unpaid internships. The U.S. Fair Labor Standards Act (FLSA), which applies to all companies that have at least two employees directly engaged in interstate commerce and annual sales of at least \$500,000.00, severely restricts employer's ability to use unpaid students or trainees. It does not limit an employer's ability to hire paid students.

You do not have to pay students who qualify as leaders/trainees. The U.S. Department of Labor has outlined six criteria for determining trainee status:

1. Students cannot displace regular employees.
2. Students are not guaranteed a job at the end of the Internship/Co-op (though you may decide to hire them at the conclusion of the experience).
3. Students are not entitled to wages during the Experiential Education Program.
4. Students must receive training from your organization, even if it impedes the work.
5. Students must get hands-on experience with equipment and processes used in your industry.
6. Students' training must primarily benefit them, not the organization.



Legal Issues (continued)

International Students

When recruiting international undergraduate and/or graduate students, common visa types employers will see are the F-1 and the J-1 visas.

“An F-1 visa is granted to a person coming to the United States to attend college, university, seminary, conservatory, academic high school, elementary school or other academic institution or language training program approved by the U.S. Attorney General for study by foreign students. The visa holder plans to return home after completing studies. This is the most common non-immigrant visa for an international student attending undergraduate and graduate school. Students are granted F-1 status until the completion of the academic program and 12 months of post-program practical training. The purpose of the F-1 visa is to provide an opportunity for study in the United States. Anything outside of study, including employment, is an exception to the visa. Authorization for employment is strictly limited to certain situations.

- The student holding F-1 status for a full academic year and in good academic standing may work off campus. Such work authorization is granted when the student has sustained unforeseen economic hardship. Also the student may not work more than 20 hours per week when school is in session but may work full time during holidays and vacations, including breaks between terms, provided the student intends to register for the next school term.
- Curricular Practical Training (CPT) An F-1 student may perform curricular practical training prior to the completion of the educational program as part of his or her educational experience. The Immigration Naturalization Service (INS) defines this type of training as ‘alternate work/study, internship, cooperative education or any other type of required internship or practicum that is offered by sponsoring employers through agreements with the school.
- Post Completion Practical Training (OPT): This is temporary employment directly related to the student’s major area of study that takes place after the student completes a full course of study. Authorization for this training may be granted for a maximum of 12 months of full-time or part-time work. Those on a student visa can only gain authorization once for this type of training.”

The above information is adapted from the National Association of Colleges and employers (NACE). For more information on these and other legal issue related to hiring, see NACE at www.nacweb.org.

Frequently Asked Questions (FAQ's)

1. When do students start co-ops or internships?

Students can start a co-op or internship after completing one semester of coursework at the University of Iowa. Although some companies will hire freshman to develop early relationships, many companies will hire sophomore, junior, and senior students that have completed core and major-specific engineering courses.

2. What is the difference between a co-op and an internship? Do employers have to offer both options?

The main difference between a co-op and an internship is the duration of the experience. A co-op is a minimum of one semester and one summer offering increasing responsibilities or complex projects. Internships are typically a semester or summer. Both will either begin at the beginning of an academic semester or summer break. An employer does not have to offer both positions. The decision is based on what works best for the employer.

3. When do employers start looking for an intern if they want them to start work in the summer?

Normally internships are posted at least two months prior to the start date. This will allow a one month period for students to apply and time to complete the interview/hiring process. The process varies greatly from company to company as some employers will hire interns in the fall for the following summer while others hire them in the spring semester.

4. Can a student have more than one experiential education experience? If the employer likes their intern and would like to extend the internship, how do they go about this?

Yes, there is no limit on the number of internships or co-ops a student can complete. Extending an offer is at the employer's discretion; however, they must be certain that they student has communicated with their academic advisor to discuss how it will affect their academic progress.

5. Do students work 40 hours per week and five days a week?

The schedule should be coordinated between the employer and the student. Many internships expect the student to work 40 hours per week, 5 days a week. In order for the student to register their internship as a full-time experience, they need to be averaging 30-40 hours per week. Part-time internships need to average around 20 hours per week. Many companies are flexible to allow students to enroll in a class but it is important to discuss the student's availability early on so both parties can agree on a schedule.

Frequently Asked Questions (continued)

6. Do companies have to provide housing to students?

Companies are not required to provide housing but it is encouraged to provide housing, offer a stipend or make recommendations of housing options. This will increase the competitiveness for the position and make the commute more manageable for students.

7. Are employers obligated to hire the student full-time after graduation?

No, students and employers are not obligated to offer a full-time position after graduation. However, if the employer is happy with the student's performance, they may extend an offer for full-time employment at any time.

8. What level of compensation is typical for an internship or co-op?

The hourly wages can vary depending on the student's skills and experiences and the resources available to the employer. The hourly wage normally ranges from \$12 to \$20 per hour. For more information about average wages by major, visit our website at:

<http://www.engineering.uiowa.edu/epd/co-ops-internships> .

9. What if a student isn't performing well during an internship?

The College of Engineering encourages the employer to work with the student to improve their performance, as would be done with a full-time employee. However, if the relationship between the student and the employer does not improve, it can be terminated by either party.

10. Does the supervisor have to complete the end of term evaluation if the company has their own assessment process?

It is strongly encouraged the evaluation be completed by the supervisors for several reasons: it provides feedback based on key factors the University identifies for the students, it is used by the University for ABET accreditation, and it is used to improve the internship experience and process.

11. Is it necessary to sign the Experiential Education Experience Agreement?

Yes, it is necessary because it ensures that both parties are aware of the expectations. The form must be on file with the College of Engineering. A job offer letter may be submitted instead of the signed form.

Recruiting at Iowa

Fall and Spring Engineering Career Fairs

Each year the College of Engineering holds two career fairs, one in late September/early October and another in early February. This is a great way for students to meet over 100 engineering, manufacturing, consulting and governmental organizations to discuss full-time, co-op and internship opportunities.

The College of Engineering finds most companies tend to have the most success when they have a consistent presence on campus. Whether your company has just-in-time hiring needs, is interested in developing stronger ties to the college, or is simply wanting to stand out at the career fair, we'll work with companies on an individual basis to develop a targeted strategy around your recruiting needs.

Hireahawk Job Postings and On-Campus Interviews

Employers are encouraged to create an account on our on-line recruiting system, Hireahawk, to assist in the recruitment process. Hireahawk allows employers to easily post co-ops, internships, and full-time positions; have direct access to student résumé books, and request and manage on-campus interviewing schedules. Registration is easy and free to all employers. Create an account at: careers.uiowa.edu/hireahawk.

Employers are invited to visit campus to conduct on-campus student interviews, hold information sessions, speak at seminars, or visit with student organizations. Hireahawk, makes it easy for employers to post positions, receive resumes, and select those they would like to interview. It is recommended that reservations be made at least 3-4 weeks in advance to provide effective promotion; however, interviews can be arranged with little notice to meet just-in-time hiring needs. On-campus interviewing starts the day after the Engineering Career Fair and runs through early December and starts up again in early February and runs through mid-April. A few of the options for an on-campus interview include:

- Schedules for full-time and/or co-op & internship positions
- Prescreened or open schedules
- Interview time slots of 30, 45 or 60 minutes

Interviews will take place on the 3rd floor of the Pomerantz Career Center. The Pomerantz Career Center has over 20 spacious interview suites equipped with a table, chairs and high speed internet access. Rooms vary in size and are designed to accommodate 4-6 people. Employers can relax in a lounge complete with coffee, cold drinks, snacks, telephone, and internet access.

Recruiting at Iowa (continued)

Other On-Campus Opportunities

In addition to the Engineering Career Fairs and HireaHawk, there are many other opportunities to generate name recognition on campus. Some of the opportunities include:

- **Lunch and Learns:** Employers may present about their company to students and answer questions afterwards.
- **Resume Reviews:** Employers set up table and a time frame in which students may come and show their resume to recruiters. The recruiters can inform students what their company and other employers look for in a resume.
- **Mock Interviews:** Employers help students practice interviews with companies they are interested in or help students who want general interview practice.
- **Department Specific Seminars:** Every major has a seminar in which they learn about leadership skills, basic skills for their field or learn about companies. Employers are given an opportunity to come speak about their company to students and give advice to about how the recruiters got to their place in the company.
- **Student Organization Presentations:** Student organizations are a great way for employers to reach out because these groups have mock interviews, resume reviews, plant tours, and general recruiting presentation opportunities.

