CBEE Internship Introduction

- Students are highly encouraged to pursue internship opportunities to increase their readiness for work or graduate school.

- Students work on projects which require applications of their engineering skills. The nature of the projects vary greatly from company to company but often involve process studies, special testing, statistical analysis, data acquisition and analysis, development of training manuals, safety, etc.

- Students can work in industry, government, or at universities on undergraduate research programs (REU)
Where do students work?

- Students can work for corporations, government agencies or universities.
- Number of students with internships is going back up after a low in 2009, but student enrollment is also increasing.
- Not all students who want internships can find them, so be prepared to work hard to find an internship.
- OSU summer research positions are a significant employer of CBEE students.
### What industries employ CBEE interns?

<table>
<thead>
<tr>
<th>Industry</th>
<th>Interns</th>
<th>Leading Intern Employers</th>
<th>MECOP Students</th>
<th>Leading MECOP Employers</th>
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</thead>
<tbody>
<tr>
<td>Bio / Pharmaceuticals</td>
<td>17</td>
<td>Life Technologies, Bend Research, Bayer Healthcare, Genentech, Hilmar Cheese Co</td>
<td>7</td>
<td>Oregon Freeze Dry, Carestream Health</td>
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<td>Wineries</td>
<td>10</td>
<td>E.J. Gallo</td>
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<td>Chemical Processing</td>
<td>18</td>
<td>Emerald Kalama, Pacific BioDiesel, Ashland Chemical, Monsanto, PPG Industries</td>
<td>5</td>
<td>Linde</td>
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<tr>
<td>Plant Design / Process Control</td>
<td>4</td>
<td>CH2M Hill, ANR Group, Johnson Controls</td>
<td>4</td>
<td>CH2M Hill</td>
</tr>
<tr>
<td>Water / Wastewater</td>
<td>1</td>
<td>CH2M Hill</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oil and Gas</td>
<td>2</td>
<td>Shell Oil, BP Alaska</td>
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<tr>
<td>Semiconductor processing,</td>
<td>16</td>
<td>WaferTech, Hewlett Packard, Intel (including Ultimate Engineering Experience program), Maxim, Triquint</td>
<td>24</td>
<td>Siltronics, Intel, ON Semiconductors, SolarWorld, Novellus, Rogue Valley Microdevices</td>
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<tr>
<td>Electronic Materials</td>
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<tr>
<td>Metals and Materials</td>
<td>2</td>
<td>Lisin Metallurgic, Precision Cast Parts</td>
<td>9</td>
<td>Selmet, Wah Chang, Toyo Tanso</td>
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<tr>
<td>Miscellaneous</td>
<td>11</td>
<td>Nalco</td>
<td>16</td>
<td>Boeing, Viasystems, Frito Lay, Medallion Cabinets</td>
</tr>
</tbody>
</table>

**NOTE:** This is 2010 – 2012 internship data.
CBEE interns also work for government agencies

Students have worked for government agencies including:

- NASA
- Jet Propulsion Laboratory
- US Navy
- Oregon Department of Transportation
- Department of Homeland Security
- National Institute of Health
- Portland Bureau of Environmental Services
- Portland Water Bureau and other city water and wastewater departments
- PNNL (Pacific Northwest National Laboratory)
- Army Research Lab
- Tribes of the Umatilla, WISE (through AiChE),
- State of Oregon PROMISE
CBEE students do university research

- These opportunities are sometimes called an REU - Research Experience for Undergraduates

- REUs are hosted by universities across the US, including OSU, and are usually funded by the National Science Foundation or another government agency. A group of undergraduate students is hosted by the university and given the opportunity to do research alongside graduate students and researchers.

- REUs include stipends and sometimes travel and living expenses.

- REU information is posted on the website and reminders are sent to the CBEE-jobs mailing list. Be sure to check the start dates – some start in early May and will not work for OSU students.

- Students participated in REU programs at universities including: MIT, University of Washington, several University of California locations, Stanford, Northwestern, Johns Hopkins, Colorado School of Mines, University of Nebraska, OHSU and others. Both sophomores and juniors receive REU internships.

Opportunities at Oregon State

- Students can work for OSU CBEE professors on their research projects. Sometimes this is funded partially through URISC.

- OSU Energy Efficiency Center, IDES, Eco-informatics Summer Institute, Center for Sustainability Material Chemistry, Oregon Climate Change Research Institute are all places on campus that for which students have worked.
Where were the internships located?

These charts include data from the last 4 summers. The employment locations have been similar for most of these years; opportunities in Portland increased last summer for industry and government internships.
How do you increase your chances of getting an internship?

- **Be flexible & open minded.** Consider going someplace you wouldn’t want to live forever. Apply for jobs that are not directly in your field of interest (especially if this will be your first internship).

- **Be persistent & start early.** Some companies only hire fall term. But remember there are still good internships that become available throughout the school year. Some companies wait until spring term to make internships available.

- **Use Career Services.** Have your resume reviewed by Career Services. Attend the career fair. Look for openings on Career Services website. Attend CBEE club meetings and meet company representatives.

- **Apply for an REU.** (research experience for undergraduate students) at a university or a program run by a government lab or agency. These are especially good opportunities for anyone possibly interested in graduate school. However, a high GPA and US citizenship or permanent residency are required for most REUs.

- **Read the CBEE newsletter and join the cbee-jobs list.** Apply for internships that you see listed there. Don’t be afraid to apply to corporate websites, in many cases it is the only way to apply. We often get sent listing by alums that send you to corporate websites to apply.
What can you do after your first year?

- **Most engineering employers want students who have finished there second or third year in engineering.**

- **Work hard at any job you can get.** This will help you when you are looking for an internship. Many employers have told me they prefer interns with work experience of any type.

- **Apply for a Johnson Internship.** Johnson Internships are for students who have completed their first year in CBEE. You apply late winter term. Most interns work for CBEE professors, these are paid internships but they are funded privately by a generous alumni (Pete Johnson). More information about this opportunity can be found at: [http://cbee.oregonstate.edu/students/prospective/scholarships/applying.html](http://cbee.oregonstate.edu/students/prospective/scholarships/applying.html)

- **Apply for the Intel Ultimate Engineering Experience.**
What resources are available?

- Register for Beaver JobNet, check it and the NACELink site regularly.

- Read the CBEE internship webpage to learn about local employers and lots of information about where you can search for jobs. [http://cbee.oregonstate.edu/students/internships/](http://cbee.oregonstate.edu/students/internships/)

- Attend the OSU Career Services Career Fairs. Attend both Fall and Winter terms with many copies of your resume. Research companies offering internships in your field before you attend. Follow-up with likely employers.

- Attend the information sessions/pizza feeds organized by CBEE club. Some companies visit the department for an evening information session followed by interviews in the department the next day. This is a good way to learn about what is involved in a summer internship at that company. Look for information on-line and on posters around Gleeson.

- Join the list-serve for students interested in CBEE internships. When new opportunities become available they are mailed to the list-serve. To sign up go to [https://secure. engr. oregonstate. edu/mailman/listinfo/cbee-jobs](https://secure. engr. oregonstate. edu/mailman/listinfo/cbee-jobs).

- Read the CBEE Bulletin. It is e-mailed to all CBEE students.

- Bio Careers Expo at OSU - held in the Spring (April 10 this year), this is a good opportunity to meet local Bio Tech employers.