

CONNECT Sustainability Conference – 12/2/11
Internships & Experiential Learning in Sustainability

Cooperative Education Program
Mass Maritime – George Howe

Cooperative learning requirements built into several majors at Mass Maritime:

- Facilities Engineering
- Emergency Management
- International Maritime Business
- Marine Safety & Environmental Protection

Facilities Engineering Program (FENG) – Cooperative Education:

- Required for graduation
- Summer: 280 hrs., 7 week minimum
- Academic year: 240 hrs.
- Formal sustainability component

FENG coop placements:

- Program has coop placements & partnerships with many employers, including out of state
- Coordinated by Career Services
- FENG students are paid by employers. Not all students in other coop programs are paid.
- Students pay tuition for earning credit.
- Students need to apply; employers select. Some have GPA and other requirements.
- Finding coop placements is difficult; if students find their own placement, they “own” it.
- Alumni & advisory councils big source of coop placements
- Many companies where students are placed have sustainability initiatives. Students are asked to investigate initiatives and report back as part of their experience.

FENG coop objectives include:

- Industry experience
- Human resources
- Environmental health & safety
- Operations, maintenance, & sustainability

FENG coop program outcomes:

- 50% of graduates end up employed by coop employers
- 65-75% of graduates are offered jobs from coop employers

Sea Term:

- All 300 freshmen + 300 upper classmen participate each year
- 45 days at sea is model of sustainability: recycling, conserving resources, etc. Less formal learning than sustainability component of Facilities Engineering Program (FENG).

ATMC Internship Program

UMASS Dartmouth – Jane Staples

ATMC (Advanced Technology & Manufacturing Center)

- Mission is to leverage university resources (faculty & staff) with economic development
- Serves as one of largest internship sites for UMD Engineering students
- One-half of ATMC site is incubator for start-ups; other half is research & partnering lab
- 3 focus areas:
 - ✓ Coastal systems technology
 - ✓ Life sciences
 - ✓ Clean/renewable energy

Sustainability-focused placements for College of Engineering students include:

- ATMC
- Mass Clean Energy Center internship program – funded 6 internships last year
- Engineers without Borders – provides opportunities in sustainable development with humanitarian emphasis. Example: project in Panama focused on a dysfunctional aqueduct causing drinking water quality problems.

Student preparation:

- Important that students are prepared to get hired, to add value to companies
- Service learning experience: students coming out of high schools today are more socially conscious than in recent years past – many have had service learning experience.
- Students and mentor work together to develop a learning plan

Questions to ask in developing internship program:

- Who are our students?
- How do we support them?
- Who are the companies?
- What do the companies need?

Clean Energy Internship Program

Mass Clean Energy Center – Marybeth Campbell

Program information & background:

- Launched in 2011
- Modeled on Mass Life Sciences Center Program
- Two- and four-year students (and recent graduates) eligible to apply
- Stipends provided to clean energy companies to provide 10-week paid internships
- Last year: 117 interns worked at 70 companies; 20 were offered full- or part-time jobs.
- Some students took the initiative to inform companies about the program so that the companies could register to participate.
- 800 students applied; only 22 were community college students, and only 2 of those were placed.
- MACEC wants very much to see more community college students apply.
- Website for more information: www.cleanenergyeducation.org

**SAGE (Sustainability and Green Energy) Internship Program
Bristol Community College – Megan Abella-Bowen**

Program information & background:

- Launched by National Science Foundation Advanced Technology Education grant
- Goal of grant: integrate sustainability into engineering program.
- BCC has advisory boards for each discipline and another for green technologies – source of potential internship placements
- Students work 150 hrs. at \$10/hr. and earn 3 credits

Student preparation:

- Critical for positive learning experience and for maintaining strong relationships with businesses
- Need to help students understand that many different kinds of green jobs exist, offering the possibility of a variety of internship placements and opportunities to help companies
- Work closely with students to help them develop strong resumes
- Team effort among BCC staff and students

Placements & working with employers:

- Efforts made to ensure companies know about BCC's programs
- Building relationships with companies very important
- Important to spend time with employers to try to figure out what they need. Focus on specific projects.
- For some small companies, a student internship may not be a good fit because supervision is needed.

**Environmental Technology Internships & Cooperative Work Experiences
Cape Cod Community College – Catherine Etter**

Program information & background:

- Internships a part of Environmental Technology Program since 1995
- Students must meet eligibility requirements (on website)
- Students earn 1-4 credits, each 70 hrs.
- Students are paid \$10/hr. by college if they work for a nonprofit or municipality. If they work for a commercial company, usually company pays their wage.

Student preparation:

- Need to walk students through resume development
- Need to come up with set of learning objectives signed by students, host site, and college: ensures shared expectations
- Peer mock interviews, including appropriate dress, very effective preparation. Program coordinator allows students to interview her first for experience.

Placements & working with employers:

- Advisory boards serve as potential source for internship placements
- Alumni serving as host sites very effective
- Adjunct faculty: many work in the field and provide another source for placements

Paid vs. unpaid internships:

- Big controversy across country.
- Need to be careful about putting unpaid and/or lower paid workers into work sites where employees have been laid off.