

## Cooperation draws attention

Internships in engineering program may become a national model

By David Stauth  
OSU News Service

A sophisticated internship program for engineering students at Oregon State University is so successful it could become a model that changes the face of higher education, university officials say.

This Multiple Engineering Cooperative Program, or MECOP, is now entering its 19th year in the OSU College of Engineering after nearly two decades of steady expansion.

It's working with 42 private companies, has expanded from just one to nine different engineering disciplines and will soon be serving 200 or more students who often have multiple job offers by the time they graduate.

But MECOP is in a league by itself, educators say, in the level of cooperation between academia and private industry, its self-supporting financial structure and the methods by which it delivers exactly the type of college graduates that industrial executives say they so desperately need.

"There's not another program like this, period," said MECOP coordinator Gary Petersen. "We are producing the best qualified engineering graduates in the Pacific Northwest, and private industry volunteers the financial support."

The program's zooming popularity and rave reviews from business leaders have prompted state officials to take a closer look at what MECOP so clearly is doing right, Petersen said.

"There are a lot of internship options at a university, but MECOP is a real educational collaboration between higher education and the private sector," Petersen said.

### Program gives students edge

By Stephen Swanson  
OSU News Service

Starting pay for Oregon State University graduates who participate in the school's Multiple Engineering Cooperative Program (MECOP) is markedly higher than average, students say.

"The average student in OSU's Multiple Engineering Cooperative Program makes \$6,000 to \$8,000 a year more in salary than the non-MECOP student," said Ira Crisp, a mechanical engineering major from Eugene who graduates in March.

The core of the program is two six-month internships completed in students' junior and senior years. Internships take place with any of 42 companies in the state, including such giants as Intel and Hewlett Packard. Participating companies pay interns a minimum of \$11.50 an hour, and some companies pay more.

"Everyone gives up a little to make it work, but in the long run, the student, the company and the university come out winners."

It takes MECOP students longer to get their degree, because it is designed to be a five year program that includes two separate six-month internships. Students are paid 70 percent of an entry level engineer's wage to offset much of the cost of their education.

MECOP began modestly with three companies in 1978 and selected its first seven manufacturing engineering students in 1980. Now, more than 40 firms participate and there's a waiting list of companies seeking admission.

Intel, Boeing, Tektronix,

"I worked for Boeing in Portland and in my second internship, I worked for Oregon Freeze Dry in Albany," said Ian Itchner, a 1993 OSU engineering graduate from Molalla.

Once he had his degree, several companies, including Boeing and Oregon Freeze Dry, expressed interest in hiring him, Itchner said.

"The MECOP experience helped make me more successful in school, and then helped me excel in the work place," said Itchner, who now works as a process development manager at Oregon Freeze Dry.

Real world experience gained in MECOP helps students understand concepts presented in class, said Justin Huttula, a 1996 OSU graduate who is now working at Intel in Hillsboro.

"And it definitely helped me to get a job," Huttula added. "Both of the companies I worked with during my internships offered me jobs."

Hewlett Packard, OREMET Titanium, Freightliner, Mentor Graphics, Wah Chang, Roseburg Forest Products, Oregon Freeze Dry, Rogue Wave Software - many of the large and small manufacturing firms in the Pacific Northwest have embraced MECOP.

Students, Petersen said, get work experience, learn their strong and weak points, make informed course selections, help pay for their education, are more motivated in class and develop maturity beyond their years.

Private industry, he said, provides feedback to university curriculum, gains a pool of well-trained engineers, gets a healthy injection of youthful enthusiasm

and a preview of potential employees in a real work setting.

And the university keeps its curriculum current, develops a bridge to industry, and provides an up-to-date educational experience for its students that wouldn't otherwise be possible in many fast-changing professions.

"What makes MECOP so successful is that it's driven by industry," Petersen said. "We don't go to businesses offering them the students we have. We find out from business what they are doing and what they need, and see whether our students can help with that need."

This insistence upon a careful fit between the needs of the company and the abilities of the student, Petersen said, requires MECOP to grow slowly. Students are screened, interviewed, and prepared. Industry "mentors" are trained in how to work with them. Both student and company are repeatedly evaluated and needed adjustments made as the internship progresses. Students eventually return to share their successes, failures and experiences in meetings with their peers and other university officials.

By the time the process is complete, students have not only a solid education at OSU but also a level of experience, confidence, people skills, teamwork, organizational abilities, and real-world exposure that is unmatched by other approaches. And they're in demand - in the past couple years MECOP companies themselves have hired 90 percent of the program graduates.

MECOP, Petersen said, is not something that would work only for engineers, which traditionally have high rates of employability.

"I'm convinced that this type of applied education is possible in virtually any field and is the way of the future," he said. "We could obviously build programs with business, pharmacy, forestry or education students. But long term we could also see it expand into other fields."