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High-paying jobs make graduate students scarce

By Reid Warren

The engineering field is currently a "hot" item in nationwide employment circles because of the high demand for quality engineering graduates.

But the high demand is a double-edged sword that cuts right to the heart of problems the UNL Engineering College is now facing.

Many engineering graduates are being offered \$20,000 to \$25,000 right after college.

Most students, rather than suffer relatively poor paying years as graduate students, are accepting higher paying jobs.

Those high-paying jobs are leading to a shortage of graduate students, which leads to a shortage of professors, according to Edward Anderson, UNL's associate dean of Engineering and Technology and director of the Engineerign Research Center.

"There's no question about it," Anderson said, "it's a problem of extreme consequences.

"Graduate studies are based on economic reasons. It's a fact of life today.

"Nobody comes to graduate school to get rich," Anderson said. "You have to consider what it costs to live. Somebody has to put groceries on the table."

And because engineers are in such high demand today. Anderson said, it's hard for a graduate to accept low pay in lieu of a higher offer.

Making the problem more serious is the fact that many graduate students quit school after achieving their master's degree, and forego a doctorate.

Many teaching jobs

Anderson said that last year there were 60 people to fill 400 nationwide job openings to teach mechanical engineering.

"We fell short 330 to 340 teaching jobs," he said, because only 20 percent of 350 graduates went into education, the rest entering private industry. "You can stand that for a while, but it has reached a point where trimming (graduate students) further cuts into the quality of education."

Jim Blease has one more year before he receives a master's degree in chemical engineering.

Chance for experience

The temptation to accept a \$23,000 job after graduation was strong, Blease said, but graduate school offered him a chance for practical experience and valuable research, not to mention a still higher paying job after his degree.

But Blease said that a master's degree is where he draws the line, for now, in furthering his education.

"I'm giving into the pressure matter," he said. "This is where I have to cut out.

"I wouldn't consider academia unless I have been in industry for a while," Blease said. "The financial reward is much greater (in industry)."

Blease said his graduating class totaled about 30 students, and that there are now five full-time graduate students with three coming from Taiwan.

And just one of the students is going after a doctorate, Blease said.

Teachers retiring

This is a critical situation at UNL because, according to Anderson, "we're looking at a large amount of faculty retirement (in engineering) in the near future."

And the money shortage the engineering college is facing worsens the problem.

"It's a multi-pronged problem," Anderson said. "Rather than let the quality decline, we're servicing fewer students,"

But Anderson stressed money is not the only cause of problems.

"Money certainly helps," he said, "but even if we hired 100 percent of the people we graduated, we'd still have shortages."



Anderson said if faculty salaries were doubled there still would be teaching spots that stayed empty.

Engineering and Technology Interim Dean Lyle 1. Young called it a matter of supply and demand.

The engineering college will suffer shortages, Young said, until it can supply enough money to fulfill students' demands.

"It's very difficult to keep students to go for a master's degree," Young said.

"I would think we'd be able to increase the percentage of graduate students if they could get at least half the money (that is offered by industry)."

Anderson also said there is no real economic advantage to becoming a professor.

Trend to continue

Anderson said he predicted the trend won't stop for another 20 to 30 years.

"I don't see it stopping for a long time," he said. "We're eroding away with even more slots becoming available.

"Salaries just keep getting better and better and the demand keeps increasing.

"This is just the crest of the wave. What's going to follow I don't know."

Increasing the problem is the fact that society is becoming more technological each day, Anderson said.

"Our scientific literacy is decreasing, but our daily livelihood is based on technology."

Anderson said he would like to see courses offered to non-engineering majors, much the same way literature courses are offered to non-English majors. But the money is not there.

"I would like to see it happen," Anderson said, "but I don't see that as happening,".

Gasohol overview conference subject

Technological advances in the production and use of agriculturally derived fuel alcohol will be the focus of a conference March 12-13 at the Nebraska Center for Continuing Education.

sponsored by the Nebraska Gasohol Committee, the UNE Energy Research and Development Center and the UNL Division of Continuing Studies, the conference is designed to provide an overview of new production technology, alcohol fuel use project financing and easohol marketing. Topics such as the use of Nebraska geothermal resources in alcohol production and the dehydration of ethanol with commeal will be discussed in the production session of the conference. The session on fuel use will include aviation applications for alcohol fuels, the potential for using vegetable oil in diesel engines and a report on the "sonic nozzle," a device that allows the use of ethanol in diesel engines. Marketing and financing sessions will identify ethanol and by-product markets as well as federal sources for project financing.

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