Stanford engineering reduces requirements

By Matthews M. Chirian

After a two-year curricular review, Stanford University has reduced its undergraduate engineering degree requirements, according to Gil Masters, Stanford's associate dean for student affairs in the School of Engineering.

The Undergraduate Council, composed of 24 faculty members, restructured and tightened a number of courses to focus on engineering fundamentals, according to Bob Eustice, associate dean for academic affairs in the School of Engineering.

The council analyzed the curriculum over a two-year period, Masters said. Stanford had not restructured its engineering curriculum for 15 years.

Stanford, which follows a quarterly academic calendar, requires 180 units for a bachelor's degree. The university cut a total of ten units from the engineering requirements, Eustice said.

"It was as low as we could go and still maintain accreditation," Masters said.

An increase in university requirements represented the curriculum review, Masters said. In recent years, Stanford had strengthened its distribution requirements. This limited the number of electives students could take.

But the most recent addition of a foreign language requirement brought the situation to a head, according to James Adams, head of the Values, Technology, Science, and Society program.

Some students entering Stanford had to retake, out of 180 units to fulfill university requirements, the number of engineering requirements, according to Masters.

"The humanities requirements changed, and we reacted to it," Masters said. "The university has been requiring more courses than ever before."

Under the new curriculum, the minimum requirements for the engineering degree total 107 units. University-wide requirements add another 60 units.

Students can create own program

The School of Engineering also introduced a new option that allows students to design their own majors.

The new degree is designed for students who want a technical background but do not plan to pursue engineering as a career. It is also aimed at students who want to major in an engineering discipline not specifically offered by Stanford.

Many of the students choosing this major plan to attend business school, medical school, or law school, Masters said.

Stanford views the undergraduate engineering degree as providing a basis for technical skills.

"The first degree to really practice engineering is the Master's degree," Eustice said.

The School of Engineering is trying to promote this view, but students are still lured away by high starting salaries for engineers with bachelor's degrees, Masters commented.

The changes have met with "enthusiastic acceptance," according to Masters. A number of students are choosing to graduate under the new requirements. The department is also beginning to see proposals for personally designed majors.

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