Computer Science Slump
College Enrollments in the Field Decline Nationwide
by Allan Hoffman
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The information technology slump has reached the halls of academia. Students who once flocked to computer-related majors are rethinking their plans. Informal surveys suggest enrollments of students majoring in computer science have declined 20 percent from the height of the boom, say faculty leaders.

Are comp-sci profs lamenting the trend? Guess again.

"Most faculty would say, 'Yippee!'" says Maria Klawe, dean of engineering and applied science at Princeton University and president of the ACM, a leading professional organization for computing.

Computer science departments were stretched thin by many IT wannabes who, according to their teachers, were drawn to the industry for the glitz of dotcoms and the potential for stock-option riches. They were not necessarily interested in computing as a profession, Klawe notes, adding, "Those students are being filtered out."

"There was a glamour associated with the computing field," says Stu Zweben, chairman of the Department of Computer and Information Science at Ohio State University. "Once that glamour wore off, and they heard stories about people with technical skills being laid off, they said, 'Whoa!'"

During the boom, universities struggled to handle the influx of students seeking to major in computer science and related disciplines. Ohio State, for instance, hiked the major's GPA cutoff to 3.2 -- it's now 2.8. Class sizes increased dramatically at some institutions, while others attempted to hire new faculty and graduate assistants.
"Now that the enrollments are down to a reasonable level, we are able to breathe easier and concentrate on offering quality education," says Sree Nilakanta, associate professor of MIS at Iowa State University.

**Enrollment Declines**

The 2001-2002 Taulbee Survey of computer science enrollments, from the Computing Research Association, indicates "the period of explosive growth in enrollments in bachelor's programs is over."

"We expect that this year we're going to see more evidence of this downturn," says Zweben, who serves on the CRA board.

At Big Ten universities, such as Ohio State, the drop-off ranges from 10 percent to 30 percent, Zweben says.

Princeton's Klawe says the decrease in computer science majors across institutions "seems to be roughly about 20 percent."

One effect of the boom's end seems to be a trend toward students seeking IT-related majors with an emphasis on business, art or other fields.

At New Jersey Institute of Technology, enrollments in computer science have declined but numbers have gone "way up" among the information technology majors, according to Stephen Seidman, dean of the College of Computing Sciences. The IT programs offer concentrations in fields such as e-commerce, multimedia and network security.

Seidman says he sees offering "new and more flexible majors" as one way to handle the declining enrollments. His college will be adding a major in bioinformatics.

Students pursuing IT remain excited about their prospects, even if they realize the field may not bring them riches.

"They still believe that the future of employment will relate to the Internet and Web-based technology in many significant ways," says Martin Ramsay, director of information systems and services at Berea College, a liberal arts college in Kentucky. "For them, technology is simply the way it is -- water to a fish, if you will."

**Faculty Advice**

Faculty offer the following advice to students considering a computing major:
Explore what working in the field will be like by speaking to employers, IT workers and faculty, even if this means delaying a decision on majors.

Computer science may not be for everyone. Consider business-related majors, such as MIS, along with IT-related majors incorporating expertise in other fields, such as biology. Double majors are increasingly popular among comp-sci students. Employers, say Klawe, "really like the idea of getting someone who is strong technically, but also has domain expertise."

Avoid focusing on technical classes to the exclusion of other disciplines, says Klawe. "Everybody's looking for people who have people skills and communication skills and leadership traits, in addition to your technical background," she says.

Think beyond the dotcom boom, current economic woes and concerns about offshoring. Computing remains fundamental to the economy. What's more, says Zweben, "You want to go into a field because you think you're going to enjoy it, not for glitzy or glamorous reasons.

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