applied mathematics and applied physics to computer science and electrical, biological, chemical, and other engineering disciplines. Schools and centers from throughout Harvard are eager to work closely with SEAS; already, the school is linked in many ways to the Faculty of Arts and Sciences (of which it is technically part) and administers a doctoral program with the Business School in science, technology, and management. In view are joint appointments with the School of Public Health, collaborations with the Law School on issues of privacy and security raised by new technologies, and with the Medical School in bioengineering. In part to facilitate such collaborations, to enhance its role as a “linking” school, and to strengthen the University as a whole, SEAS plans to grow by adding 10 positions in bioengineering and others in energy technologies, nanotechnologies, sustainability, and information science.

Closest to fruition is the joint program in bioengineering, which a University report, released in July, called “the natural next step in the intellectual development of biology, medicine, and engineering...” (see “On the University’s Agenda,” July-August 2008, page 61). Bioengineering plans include the creation of undergraduate and graduate curricula and the establishment of a “flagship” research institute in biologically inspired engineering to be housed in the first Allston science building. (Bioengineering is now offered to undergraduates as a subfield within engineering science. The explosion of student interest is reminiscent, Venky says, of that for computer science a generation ago.)

Citing two of the greatest challenges of the twenty-first century—promoting human and planetary health—the July report emphasized that “the future presents unprecedented opportunities in bioengineering, which could lead to enormous advances of potential societal and economic value,” and recommended that Harvard begin an international search this September for the director for a Harvard University Bioengineering (HUB) program. By next September, Harvard will have established a Ph.D. program and begun recruiting faculty members for fall 2010, coincident with the launch of an undergraduate curriculum and the enrollment of the first class of doctoral candidates. (Although this schedule likely turns on the hiring of a new SEAS dean, possibly delaying its implementation, Venky considers it appropriate that a final resolution await his successor: “Who knows? That person might be a bioengineer.”)

Meanwhile, he will focus on curricular reform. “I believe that the liberal-arts education of the twenty-first century has to be different,” he says, noting that information is no longer centered in Widener Library. “The library made Harvard—we have always had the rarest things, the best repository of knowledge, [but] information now is digital; it is on the Web. Widener Library is very valuable, but it is almost a museum.” Social scientists, even humanists, have to understand and appreciate technology. Areas like economics and government are much more quantitative and data intensive, he points out. Engineers and computer scientists, on the other hand, must be aware of the societal consequences of what they do and the societal problems to be solved.

Even the definition of a broadly educated person must evolve with the changing times, Venky says: “You no longer have a liberal-arts education unless you have some feeling for technology.” After a sabbatical, he expects to help develop an undergraduate curriculum that reflects this view. Within the sciences, it is true to include more experiential, hands-on learning. There may also be changes in the sequence of courses within engineering disciplines, which traditionally start with tough “rite of passage” classes. Venky believes that introducing the joys of engineering early on will help attract and retain a broader range of students—all the more important because attrition among engineering students is a nationwide problem even as engineering skills have become more necessary than ever.

Harvard, Venky says, needs to attract a dean with vision by constructing a signature campus with SEAS as one of the pillars—a statement that says Harvard is serious about science and engineering.

Shanghai Central

Harvard on July 1 opened the newest in an expanding network of international offices, in Shanghai, and is scheduled to launch another this autumn, in Beijing. The outpost is intended to support faculty and student research, internships, admissions, collaboration with local universities, and alumni relations. The official opening came three months after a pan-Asian Harvard Alumni Association conference in Shanghai, keynoted by President Drew Faust, a tangible sign of the University’s large and growing involvement in the People’s Republic and east Asia (see “Connecting with China,” May-June, page 67).

The office (www.fas.harvard.edu/~hcf/chinaoffice.html) was inaugurated in a joint visit by Harvard Business School (HBS) dean Jay O. Light and historian William C. Kirby, who is Chang professor of China studies, Spangler Family professor of business administration, director of the Fairbank Center for East Asian Research—the locus for much of the Univer-
Harvard University’s research in the region—and chair of the Harvard China Fund, a sort of academic venture-capital fund (see “Venturing into China,” November-December 2007, page 77).

The multidisciplinary roles assumed by those two Harvard representatives are appropriate to the new office’s aims. With HBS colleagues, Kirby has been developing a series of case studies on the evolution of rising state-owned and private businesses in China (such as Wanxiang Group, now a multibillion-dollar global auto-parts supplier); the cases are used in a course he co-teaches, “Doing Business in China in the Early 21st Century.” The Harvard China Fund itself (www.fas.harvard.edu/~hcf) recently made a second round of grants to support research on subjects ranging from village development to childrearing to the use of medicines; all involve counterparts in China. Harvard participants come from the schools of design, education, medicine, and public health, plus the Faculty of Arts and Sciences. And Light noted that HBS would deploy a staff person affiliated with its Asia Pacific Research Center, in Hong Kong, in the Shanghai office.

Kirby characterized the new physical presences in China as merely “initial steps” toward further advancing Harvard’s ambitious research and teaching missions in the region.

THE UNDERGRADUATE

Rookie Redux

by Liz Goodwin ’08

I realized that college was over when I opened up the large diploma case to show my family the product of four years’ labor and found a succinct note informing me of an unpaid debt to the University. I was still wearing my polyester cap and gown, and had just walked across the stage. I saw a flicker of alarm cross my aunts’ and uncles’ faces, as if they were momentarily wondering if I had even graduated at all. I posed for pictures showcasing the empty diploma case, trying to laugh it off, but spent the next two hours running around campus in my billowing black robe, frantically trying to get the piece of paper that proved I was a graduate.

The levels of bureaucracy I had to surmount in order to pay off the small sum seemed a harbinger of a more complicated, post-college life. Harvard’s implacable and unadvertised stance on the collection of chump change from its graduates already seemed to belong to a different world from the last four years of extendable deadlines. In fact, the letter might as well have said, “Welcome to the real world, kid. No excuses.”

Luckily, I made it back, diploma in hand, in time for the afternoon Commencement speeches. President Faust had just started speaking when I arrived, and though my recent experience did not endear to me her message about the necessity of Harvard’s behemoth endowment, I was already feeling less grouchy.

When J.K. Rowling’s turn to talk came, the people around me shifted in their seats, trying to get a better look at her. Her point was simple: cultivate an active imagination and do not be afraid to fail. I took her words very seriously, as I think that anyone who can write a character as wise as Dumbledore must have a great deal of wisdom herself. So I asked myself if I had the gifts Rowling said are the most important. Imagination? Check. Courage to fail? On that front, I can be something of a wimp. I don’t like to put myself in positions where I look silly or