Quantum Leap for Engineering

Harvard's division of Engineering and Applied Sciences (DEAS) may soon become a full-fledged school of engineering, under a plan presented in May to the Faculty of Arts and Sciences (FAS) by the division dean, Venkatesh Narayanamurti. During his eight-year tenure, Dean Venky, as he is known, has invigorated the division, replacing a raft of retiring faculty members and expanding the ranks of its professoriate by about 50 percent. His plan to retire this year was forestalled by the resignations of William C. Kirby and Lawrence H. Summers. "It was fairly obvious that you couldn't go recruiting for such an important position without either the dean of the faculty or the president," he said in an interview.

The task of elevating engineering and applied sciences from a division to a school within FAS, a change recommended by the last two Board of Overseers' visiting committees, in 2002 and 2005, was one Venky had anticipated leaving to a successor. But when University provost Steven E. Hyman and the Corporation asked him to stay, he agreed to help carry that vision forward. "It's very exciting," he said. "I wish I were younger. I'd take it for 20 years." (He will, however, give up the FAS position of dean of physical sciences as of June 30.)

For now, the proposed change is primarily one of nomenclature. Undergraduates would still be admitted to Harvard College, and could choose an engineering concentration. DEAS has always been fairly autonomous financially, covering all its expenses except student housing through its endowment and decanal fundraising. It maintains its own communications efforts and development personnel. But the new name is important for several reasons, Venky emphasized at a presentation to the FAS faculty in May. It will greatly enhance the visibility of engineering at Harvard, both within and beyond the University, aiding in the recruitment of students and faculty alike. And it presages a second wave of growth—on the order of an additional 50 percent—in the engineering faculty, which now num-

University People

HARVARD MEDICAL SCHOOL

David E. Clapham

COURTESY OF ROBERT J. SAMPSON

Robert J. Sampson

Superior Scientists

The 72 new members of the National Academy of Sciences elected in April included six Harvard faculty members: **David E. Clapham**, Castaneda professor of cardiovascular research; **Peter T. Ellison**, Cowles professor of anthropology (and past dean of the Graduate School of Arts and Sciences); **Claudia Goldin**, Lee professor of economics; **Eric J. Heller**, professor of chemistry and physics; **Charles H. Langmuir**, professor of geochemistry; and **Robert J. Sampson**, Ford professor of the social sciences.

Arts and Sciences Fellows

PHOEBE SEXTON/HARVARD NEWS OFFICE

Charles R. Alcock

COURTESY OF RICHARD H. FALLON

Richard H. Fallon

JON CHASE/HARVARD NEWS OFFICE

William A. Graham

Eight University affiliates were elected fellows of the American Academy of Arts and Sciences: professor of astronomy **Charles R. Alcock** (director of the Harvard-Smithsonian Center for Astrophysics); Ropes professor of political economy **Albert Alesina**; Tyler professor in constitutional law **Richard H. Fallon Jr.**; O'Brian professor of divinity and Albertson professor of Middle Eastern studies **William A. Graham** (dean of Harvard Divinity School); professor of cell biology **Mark T. Keating**; the Kennedy School's **Steven E. Miller** (director of the International Security Program); professor of economics **James H. Stock**; and professor of sociology **Mary Waters**.

HARVARD MEDICAL SCHOOL

Mark T. Keating

KRIS SNIBBE/HARVARD NEWS OFFICE

Mary Waters

MAGGIE MASTRICOLA/HARVARD NEWS OFFICE

Stephen Owen

Helping Humanities

Winners of the Andrew W. Mellon Foundation's Distinguished Achievement Awards, recognizing "significant contributions to humanistic inquiry," this year include Conant University Professor **Stephen Owen,** an authority on Chinese poetry. The awards, of up to $1.5 million each, support each scholar's work and institution. Past Harvard winners include Cogan University Professor **Stephen Greenblatt**, Goelet professor of medieval history **Michael McCormick**, and Porter professor of philosophy **Christine Korsgaard**.

APS Honorands

Professors elected as members of the American Philosophical Society include Hobbs professor of cognition and education **Howard E. Gardner**; Conant University Professor **Stephen Owen**; Thomas professor of government and sociology **Theda Skocpol**, dean of the Graduate School of Arts and Sciences; and Huntington professor of oncologic medicine emeritus **Paul C. Zamecnik**.

Women of Achievement

Brigham professor of women's health **JoAnn Manson** '75, D.P.H. '87, M.D., a principal investigator for several important studies of women's health, received the College's Women's Professional Achievement Award. Graduating senior **Lauren A.E. Schuker** won the student Women's Leadership Award; the *Crimson* president and Marshall Scholar will study at the Courtauld Institute of Art in London this fall.

HARVARD MEDICAL SCHOOL

JoAnn Manson

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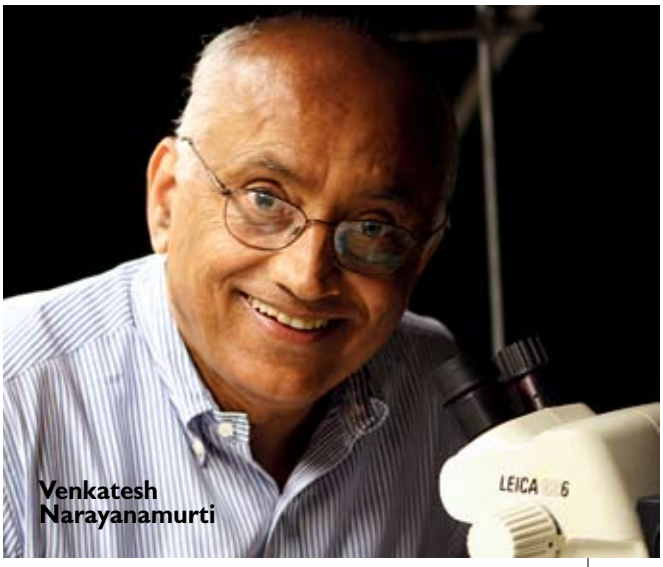
bers near 70. This growth would put the program on a par with the two Venky regards as peers, those of Caltech and Princeton, which have about 110 and 125 faculty members, respectively.

The need to hire more faculty in engineering is driven by the nature of modern scientific inquiry, as well as by issues of cultural literacy. Engineering knowledge is becoming increasingly important in law, business, and government, for example. Furthermore, advances in biology and chemistry increasingly require collaborative engineering expertise. "You cannot even advance in science without a significant presence in engineering research," says Venky, "because you will not be able to do the great science," such as nanobiology. The enthusiasm of other faculties for collaborative inquiry with DEAS suggests that he is right. "Harvard cannot be a great university," he says, "without a great engineering research organization.



Venkatesh Narayanamurti

ELIZA GRINNELL/HARVARD UNIVERSITY

The challenge, he notes, will be to maintain the distinctive, nondepartmental structure of DEAS as the faculty grows. "An individual department," he believes, based on his experience at Bell Labs and elsewhere, "is too small to make moves across disciplines" a key characteristic of its work. But as the school grows, some additional administrative and academic structure will become necessary. Venky will work with faculty groups this summer to ensure that such details as a revised curriculum and strategies for the appropriate mentoring of junior faculty are hammered out; he may hire an external consulting group to further strengthen relationships within DEAS and ties to FAS and other schools. "But I'll be careful," he says. "We need to be relatively lean...so that people have access to the people who are making the decisions, and I am always accountable to the faculty whom I serve."

Reconfiguring the Curriculum

Much work on refashioning the undergraduate curriculum remains for the next academic year, but the Faculty of Arts and Sciences (FAS) concluded its spring meetings by adopting several significant changes. Students will have more time to choose their concentrations, and new options for minor fields of study, encouraging them to investigate diverse disciplines; professors will supervise writing and speaking more directly; and new humanities courses and wholesale changes in the life sciences aim to provide better academic experiences. Together, those measures may help a new committee on general education (the most contested terrain in the three-year curriculum review) progress toward legislation in the fall.

• Concentrations. At its April 18 meeting, the faculty voted that, beginning with the class matriculating in September, students be required "to declare a field of concentration before the end of classes in the third term of enrollment." Harvard has required freshman-year concentration choice, earlier than at other colleges and universities. Given students' need to begin fulfilling other mandates (expository writing, foreign language, the Core curriculum or its general-education successor, and the standard 12 or more term-length concentration courses), many found it hard to explore course offerings and discover a new passion.

To allay concerns in the sciences and engineering that undergraduates might inadvertently foreclose options by failing to pursue needed courses in sequence, students will now have to have "a documented advising conversation with a representative from one or more prospective concentrations" before the end of their first year. The departments may not limit fall courses in the sophomore year to students who indicated an interest in the concentration the prior term.

• Secondary fields. Optional four- to six-course sequences could be offered by departments or standing degree committees; students could be recognized for work in one, alongside their concentrations. Following the vote on April 4, more than a dozen departments began advancing proposals for such sequences to the Educational Policy Committee for review.

• Writing and speaking. FAS voted on May 16 to replace a Core subcommittee focused on expository writing with a stand-alone faculty committee to review the teaching of writing and speaking throughout the College curriculum.

As these changes progressed, faculty members advanced other changes in course content and pedagogy that will, over time, determine directly what kinds of general education and concentration experiences students have.

• Humanities. Following the successful launch of the new introductory life-sciences course, with team-teaching and fresh approaches to classwork and laboratories (see page 56 and "Enlivening Science," July-August 2005, page 62), dean for the humanities Maria Tatar briefed the faculty on May 2 about innovative "portal" courses in that division, "expansive in scope and integrative" of subject matter. Several will appear as "general education courses: humanities" in the *Courses of Instruction 2006-2007*. For example, Stephen J. Greenblatt and Louis Menand will present an "introductory humanities colloquium" covering "major works of literature and ideas" from Homer through Joyce, probing "the kinds of issues addressed in humanistic studies." In a later conversation, Tatar said her colleagues were responding to "real hunger out there among undergraduates for broad-based, integrative courses" investigating large topics in life, literature, and philosophy—in contrast to "boutique model," specialized classes for concentrators. The new courses, varying in size and pedagogy, are "an experiment, a sort of humanities laboratory" that she hopes will "ignite interest" from students, as they have already among faculty members.

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