

## Chancellor

The goal of the Office of the Chancellor is to enhance and support student life and learning and to advance other initiatives that support Institute life. This report summarizes the high points in the work of the offices that report to the chancellor: the Office of the Dean for Graduate Students, the Office of the Dean for Student Life, and the Office of the Dean for Undergraduate Education. This report also highlights selected initiatives in which the chancellor has been involved. A full report on the work of the various offices is detailed in each respective section of the *Reports to the President*.

### Highlights in Undergraduate Education

This past year has been marked by a number of significant accomplishments in the areas that report to the chancellor. MIT is succeeding in getting its message out to prospective undergraduates. MIT is the premier science and technology institution, where excellence is pursued with a passion, knowledge to address the nation's problems is developed and disseminated, and the science and technology focus is balanced by strong academic and research programs in the humanities, the arts, social science, management, and development.

All of the academic and institutional indicators point to students of high academic achievement that reflects a great promise for leadership. Classes are increasingly diverse and have a near-equal representation of women and men. The qualities are borne out in the statistics and record yields for the class of 2008. More than 65 percent of the offers of admission were accepted. This is up from just under 60 percent five years ago. The new yield percentage is one more indicator that MIT is in the first rank for attracting outstanding students. More than 90 percent of the class is in the top 5 percent of students in America. The numbers of top-ranked students, top test scores, and academic prizes are in the first rank. Students hail from every continent and have demonstrated excellence in the arts, athletics, and in leadership in a host of activities.

There are a number of areas we want to highlight in this section. These include programs and the activities we have undertaken to enhance the educational and community experience. The Committee on Student Life and the Committee on the Undergraduate Program issued a joint report highlighting shortcomings in advising and mentoring of undergraduates. While a number of departments perform this function well, the report documented the uneven array of approaches and the growing interests students have in acquiring more quality interactions with faculty. The report offered recommendations for improving the system for identifying some of the best practices already in place in selected departments, such as additional advisor training for our faculty and administrators, more explicit instructions on the roles of advisors, and a way of framing the mentoring role. The report also recommended that we try more experimentation and prepare a handbook.

The Careers Office, in its outreach to freshmen, has taken a significant step in improving our mentoring by raising with first-year students (about a quarter of the class) the issue of goals and careers. While this effort is not a substitute for engagement with

faculty, it does represent an important component we already know is valuable. The Undergraduate Research Opportunities Program (UROP), in which more than three-quarters of the students participate, is an important component for mentoring and a start for student-faculty interaction.

The chancellor appointed an advisory committee to the Office of Minority Education (OME) to review the strategy, operation, and programs of that office, as well as to advise on the selection of a new director. Historically, the responsibility of the office has been to implement academic support programs for minority students. The chancellor charged the advisory committee with a review of OME to determine what should be the appropriate mission, given the Institute's desire to enhance the experience minority students have at MIT and to prepare them as academic and professional leaders. Also requested was advice on the structure of the office and some aspects of the search, including the type of person who would be most appropriate to fill the new role. The review committee included faculty, students, staff, and alumni.

The committee completed its work at the end of the year. Its report recommended a significant shift in focus. The paradigm shift involves moving from a model that focuses on the deficits students bring to MIT to one that focuses on their assets and promotes a sense of personal efficacy. While academic skills will not be ignored (and recommendations were made about services that ought to be considered), the committee members view this paradigm shift as a major opportunity to create "leaders and laureates."

We took the initial steps to create the Office of Study Abroad. Unlike many of our peers, we have not had such an office and have not until recently been encouraged or supported on international study for credit. When fully staffed, the office will provide support for the Cambridge–MIT Exchange and will work with students and departments to identify other study abroad opportunities. The Office of Study Abroad will also provide support to the Committee on Foreign Scholarships (e.g., the Rhodes, Marshall, and Churchill scholarships). The office will also gather information on available high-quality opportunities that students might pursue independently.

### **Highlights in Student Life**

The division of Student Life Programs (SLP) provides a host of services and programs to both the undergraduate student community and graduate students. The programs and services range from housing and dining to counseling and residential life programs. The office is also responsible for the administration of student discipline and athletics, recreation, and physical education. SLP works closely with other offices, including the Dean for Undergraduate Education, the Dean for Graduate Students, and the Medical Department.

The division continued to make programmatic progress as well as improve operational areas. Even as new programs were developed and implemented, it continued to improve operations, hire and train new staff, improve facilities, and build stronger relations with faculty and students. This was all the more difficult to accomplish amid an environment with a flat budget and increasing costs for utilities.

During FY2005, the division made major strides in dining. This is an area where major upgrading had been in progress for three years. Large deficits, poor quality of food, and weak operations plagued the dining service. We now have more and better facilities and better food that makes for a significant improvement in the dining experience. The present goal for expansion is to make it possible for a larger number of students to take advantage of the new dining opportunities. While we made good progress (e.g., number of meals and financial bottom-line improvements), there are limitations. For example, several of our residence halls were built to include apartment-like living and contain kitchens. Others have floor or suite kitchens. Students in these areas have established a variety of dining habits, and there is no tradition of common dining. We believe that the newly expanded facilities such as dining halls in McCormick and Baker will draw students from other residence halls to make the systems financially sustainable in FY2006 as planned.

Service learning continued to expand. The Public Service Center, which supports our activities in service learning, is far more than a venue for campus volunteer work. While it does perform this service, it encompasses an even larger set of activities and acts as a resource for faculty, students, and staff. There is rapid growth in the number of projects and the number of faculty who are involved in connecting service projects to regular curricular goals. While there is much increased attention paid to service learning in volunteer projects, there is growing interest to connect these service projects to extracurricular activities. There are approximately 20 faculty members who have been involved with service learning. In addition, there are lecturers and academic staff who have initiated projects. We also have a very wide range of class types represented—from a senior mechanical engineering core project design class to freshman advising seminars and elective public service design seminars.

The chancellor and the chair of the faculty appointed an advisory committee to review the student disciplinary system. This was undertaken in consideration of the fact that we have two disciplinary systems. One, directed by the dean for student life (DSL), focuses on system administration, infractions in the dormitories and Fraternities, Sororities, and Independent Living Groups (FSILGs), and in the management of investigations. The Committee on Discipline (COD), on the other hand, is the faculty committee and is charged with the general responsibility for student discipline. The Committee on Discipline typically deals with the more serious cases. With these two systems, there were inefficiencies and overlapping responsibilities that had to be restructured. There were also issues about how best to handle administration of the cases and procedures for investigations. The committee, chaired by Professor Lorna J. Gibson, worked on these issues during the year. At the end of the year the committee made recommendations that created a more unified system, clarified roles and responsibilities between COD and DSL, and created a pathway for improvements in the administrative processes.

Enhancing support for student development has been a goal of the Office of the Chancellor for several years. In the past four years, we have sponsored a number of experiments and demonstrations to advance leadership development as a major element of this thrust. During this same period, other leadership initiatives have emerged in the Sloan School of Management and in the School of Engineering. The programs have in

common a commitment to provide students tools of personal efficacy based on the belief that this efficacy will be a major enhancement to an already strong academic program.

Our goal for leadership development is to provide the opportunity for as many students as possible to become familiar with the theory of leadership, an opportunity to develop skills and practice those skills, and finally, venues in which to reflect upon their experiences in taking action. While we have many initiatives in place, they are neither highly coordinated nor sufficiently leveraged. The dean for student life is following up with plans for a leadership development center that will develop programs and coordinate with academic programs and courses.

The chancellor is a member of the Board of the Cambridge-MIT Institute (CMI)—a strategic alliance between Cambridge University in England and MIT. The British government sponsors CMI to assist it in enhancing governmental entrepreneurship, productivity, and competitiveness. This past year was the fourth year of the program's life. There is strong interest in the British government to continue the program past its September 2006 contract end. Planning for a Phase 2A (dissemination and documentation) and Phase 2 (a new program) is underway. Some modifications of emphasis and significantly less government funding are both likely. An evaluation of the program, completed in July 2005 by an independent committee, found great strengths in the program and many contributions to program goals.

The Graduate Students Office (GSO), under the leadership of Dean Isaac M. Colbert, continued its collaboration with a variety of Institute offices and student groups to foster graduate student life. The office continues awarding student life grants, and its services support graduate students in other ways. Increasingly, graduate students want to participate in social and community life in dormitories, in service projects, and in social life. There was strong advocacy for affordable health insurance and for greater support in career planning. The Graduate Student Council is a strong partner in this effort.

The Graduate Student Office also has responsibility for Institute initiatives for minority student recruiting and works with CONVERGE, a minority recruiting initiative in the Provost's Office. Twenty-five students were invited to visit MIT during the fall term. While the program showed some promise, the actual results were quite limited. We are reviewing the program with an eye toward enhancements in the 2005–2006 academic year to make the program more effective.

### **Challenges in Student Life and Learning**

While we have had considerable success in advancing student life and learning, there are areas that represent continuing challenge or areas of emerging concern. At the beginning of the year, we were concerned with the amount of crowding in our residence halls. While not as serious as the crowding experience three years ago, it does underscore the need to build more housing so that our enrollment matches our educational capacity and is not limited by availability of accommodation. The planning for new dormitories continued, based on a charge from the chancellor and the executive vice president. A proposal and a program for a new residence hall were presented at the end of the year.

We continue our work to strengthen the FSILG sector through Project Aurora. The project grew out of a task force report two years ago that set a path for strengthening campus fraternities. The stakeholders— alumni, students, MIT administrators— are now working much more effectively together and are focusing more energy on implementing the recommendations of the FSILG task force.

Fraternities and sororities provide important community and residential settings as well as support for students. Over the years, membership has eroded for a number of reasons, ranging from natural fluctuations, the decision to have all freshmen on campus, improvements in on-campus residential communities, and the shifting interests of our students. Our efforts focus on reversing membership declines, boosting chapter financial strength, improving operations, and increasing overall awareness of the value these communities offer.

The count is gradually improving in a growing number of groups. We still have 36 active chapters, plus three additional active alumni corporations. This past fall, more than three-quarters of all incoming male freshmen were involved in the rush period and more than half of them chose to affiliate with a fraternity or ILG.

The MIT administration has continued to step up its commitments in a variety of ways— from increasing staff to supporting fund-raising to arranging data connections. We have also provided high-speed data connections, support for a cooperative to earn savings on purchases, training in financial management and marketing, regulatory support, and other services. We continued to provide financial grants as well.

We are also concerned about the erosion of financial support from faculty for the UROP program. This three-year decline is a function of the shifting patterns of faculty research as well as a reduction in research funding in certain long-standing programs. While general and programmatic support of the program from both faculty and students remains strong, the reduction in research funding in certain areas represents a challenge. UROP with wages is critical for the majority of our students who receive financial aid and for all students who participate in the summer program.

In our residence halls, the cost of energy, additional communication charges, and deferred maintenance combined to drain the financial reserves of the housing system that more properly could be used for enhancements to the residential system. These shocks to the system are not all one-time events, and they fundamentally challenge us to manage our facilities more effectively and strategically.

While the recently completed campaign was very successful and exceeded both the initial and revised goals, the financial aid and graduate fellowships portion of the campaign did not reach its target amount. The gain, significant and appreciated, was substantially below what is needed to meet our commitment to need-blind admissions and need-based financial aid. We also need fellowships to remain competitive in graduate programs where research assistantships are not readily available.

Although the challenges outlined above are significant, they are embedded in an institution that has taken advantage of many opportunities available in recent years and has achieved great excellence. MIT is an institution where student life and academic strength have improved greatly, as shown by indicators of student satisfaction in the many new programs and services (that address issues previously identified), as seen in fraternities that are strong components in residential life and are now more stable, and as exhibited by student excitement and the passion for learning and discovery that has never been stronger.

All of these markers are valuable assets. The cost pressures associated with many of the challenges outlined above are shared by many of our peers; nevertheless, costs are vital to our competitiveness.

### **Special Highlight**

In the section below, we highlight the K–12 and Educational Outreach activities of MIT. This collection of activities speaks powerfully to the passion of MIT faculty and students to share their knowledge with the community and bring the passion for learning to young people in the Boston area. The challenge in the future is to engage them more strategically and with a level of focus that will give greater significance to our many efforts.

#### **MIT K–12 Education**

The Committee on MIT K–12 Educational Outreach Programs, cochaired by Dean Kim J. Vandiver and Professor Eric Klopfer, has now taken on many of the tasks formerly held by the Council on Primary and Secondary Education. To initiate a new outreach effort, a large organizational meeting (which included about 25 people), with President Susan Hockfield in attendance, was held in February 2005. An MIT K–12 Midway in the State Center was held during the inauguration activities for President Hockfield. This was a huge success and included representatives from around 20 programs. A new web site, with current programs listed, is now up and running at <http://web.mit.edu/k-12edu/>.

#### **MIT/Wellesley Teacher Education Program**

In AY2005, MIT's Teacher Education Program (TEP), led by Professor Eric Klopfer, again reached a milestone in teacher licensure. Continuing a program that started two years ago, MIT students were provided with a pathway to licensure entirely at MIT. This year, TEP had 13 students licensed for teaching. The program is a success and has attracted great interest in students. Through this program, MIT should continue to contribute to the field of teacher education.

Over the last two years, TEP has strengthened its relationship with the Cambridge Public Schools through new projects. At the same time, it has furthered relationships with Arlington High, the Boston Public Schools (including Boston Latin, an exam school), and the Boston Community Leadership Academy, as well as the Brookline Public Schools. Dr. Klopfer has continued the NSF-funded project to train teachers using new technologies to improve science learning. TEP has also started an educational technology program in biology education with five Boston metro schools. This was recently spotlighted on

Channel 4 evening news. We are delighted that Professor Klopfer has become the first holder of the newly created Joseph B. ('54) and Rita P. Schaller career development professorship in teacher education.

### **Outreach Programs**

Many outreach programs (over 50) at the Institute are now catalogued on our web page.

### **Teacher Sabbaticals**

The Class of 1952 Educational Initiatives Fund launched the MIT Teacher Fellows Program, which brings middle and high school teachers together with MIT faculty. Not only is this program effective in helping teachers develop new and creative ways to teach math and science, but also it allows MIT faculty to share their expertise in the development of K–12 math and science curricula.

Mr. Kenneth Brody, retired from Boston Technical High School, returned to MIT in AY2005. Mr. Brody continues to serve as the secretary of the Network of Educators in Science and Technology (NEST). Additionally, he arranges tours of MIT for NEST teachers and students. We are pleased to have precollege educators with us. Their understanding of the needs of classroom teachers is essential to the development of MIT's agenda in K–12 education.

### **Center for Materials Science and Engineering**

With encouragement from the National Science Foundation, MIT's Center for Materials Science and Engineering (CMSE) is working to make research experience available to in-service teachers on the campuses of all 63 member institutions. During the summer of 2005, there were five such teachers and five returning teachers and their students at MIT in a variety of center and laboratory settings: CMSE, the Biotechnology Process Engineering Center, and the Center for Environmentally Benign Semiconductor Manufacturing.

### **Science and Engineering Program for Teachers**

Professor Ronald M. Latanision directs the Science and Engineering Program for Teachers, with Professor Eric Klopfer as codirector. The program shares the council's goal of science literacy for all students. The means to a good education is through an enthusiastic, knowledgeable teacher. Since 1989, this program has endeavored to give educators a unique perspective of how the basic sciences, mathematics, and engineering are integrated to meet the technological challenges and needs of commerce and society. Our Science and Engineering Program for Teachers continues each summer with sustaining support from MIT alum, H. Johan von der Goltz '60, founder and general partner of Boston Capital Ventures. During the program week of June 26 to July 2, 2005, 14 MIT alumni clubs and several individual alums through their business foundations will sponsor 50 of the 60 teachers participating in the program.

The alumni of this program, now totaling approximately 1,000 people, become members of the Network of Educators in Science and Technology. This past summer, NEST members came to MIT's campus for a two-day meeting to participate in a Sustainable

Energy Program featuring the Cape Wind Farm Project, Green Fuel Inc., the MIT Laboratory for Energy and the Environment, and the Department of Chemistry.

Six Siemens scholars have again been identified from among the participants in the Science and Engineering Program for Teachers. The Siemens Foundation will support these teachers during their visit to MIT. In addition, the foundation provides the resources for one MIT Siemens teacher fellow; this individual will spend seven weeks on campus in a research lab identified by the Center for Materials Science and Engineering. The object of this effort is to make research experiences available to in-service teachers.

More information about the Science and Engineering Program for Teachers and the Network of Educators in Science and Technology can be found on the web at <http://web.mit.edu/cpse/>.

Our goal in the coming year is to explore how best to leverage the many initiatives we have in place into a stronger and more effective set of program and services.

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*More information about the Office of the Chancellor can be found online at <http://web.mit.edu/chancellor/>.*