From Imagination to Impact
Empowering graduate students to create the future
Letter from the Dean...........................................................................................................4

Executive Summary ........................................................................................................6

Strategic Theme One:
Supporting Educational Innovation and Excellence ......................................................10

Strategic Theme Two:
Competitiveness in Graduate Funding........................................................................17

Strategic Theme Three:
Administration and Policy............................................................................................22

Strategic Theme Four:
Diversity and Climate....................................................................................................29

Strategic Theme Five:
Holistic Graduate Student Experience..........................................................................34
Executive Summary

Graduate education is central to the mission of MIT and vital to maintaining competitiveness and leadership as a world-class research university. Premier graduate students enable the recruitment and retention of top faculty who wish to work with them, drive research discovery and exploration forward in all fields, contribute to undergraduate teaching and mentoring, and deeply enhance campus life and community. MIT graduate alumni constitute some of the most distinguished scholars, leaders, inventors, and entrepreneurs of the last century and their far-reaching impact has brought immense prestige to MIT. MIT graduate programs train students to acquire the advanced knowledge, skills, and creativity needed to boost economic innovation and prosperity and to solve the world’s most challenging problems of the 21st century.

Today, graduate education at MIT is thriving like never before. MIT’s more than 35 graduate programs, distributed among five schools (Architecture and Planning; Engineering; Humanities, Arts, and Social Sciences; Science; and Sloan School of Management), are ranked among the highest in the nation and the world. MIT is unique in that it has great strength in many of the classical disciplines while possessing an array of mechanisms that result in pervasive interdisciplinary interactions. MIT places strong value on residential graduate education and the resulting interaction within the graduate community, as well as the largely decentralized autonomy of graduate programs and faculty to direct graduate education in their disciplines. The Institute has a vibrant graduate community and student life (e.g. approximately 40% of graduate students live on campus in dormitories), as well as a highly engaged, collaborative, and effective graduate student government. We are proud of our large international student population, as well as the dramatic increases in the percentage of under-represented minority and female students over the last decade, that contribute to the rich diversity of our graduate community. Graduate students today have an unwavering determination to have a positive impact on society and, hence, interest is flourishing in “grand challenge” research areas (e.g., energy, health, infrastructure, etc.), along with student entrepreneurship and the desire to seek a deeper understanding of research in a broad global context. Lastly, currently graduate students ubiquitously use technology for communications, collaboration, research, and social interactions.

Letter from the Dean

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“The mission of MIT is to advance knowledge and educate students in science, technology, and other areas of scholarship that will best serve the nation and the world in the 21st century.”

Now is one of the most exciting times in history for graduate education at MIT. New technological tools are opening up possibilities that could not have been imagined even a decade ago: for recruitment; for building intellectual, collaborative and cross-disciplinary networks; for engaging with alumni; for innovations in teaching and research; and, potentially, for educating society at massive scales.

Simultaneously, significant challenges do exist. Many countries are building up their systems of higher education, and competition for the best students is intensifying among universities around the world. Reduced federal funding, budget cuts, and policy changes are increasing the financial burden to support graduate education. With increasing diversity, expected scientific productivity, and the use of technological tools for both abbreviated and 24/7 communication, it is critical to provide personal support; to facilitate face-to-face advising and mentoring, time and physical spaces for deep thought, study and listening; to foster work-life balance; and to nurture a caring and inclusive campus environment. In addition to creating new, original knowledge at the frontiers of the field, today’s graduates also need the ability to recognize what this new knowledge means in a broader context, and to possess a more extensive skill set in order to act on this new knowledge for the benefit of society. Hence, it is becoming important to provide professional and personal development opportunities in order to prepare students for a range of career paths. MIT is taking a leadership role in these emerging areas in graduate education now to maintain its status as a world-class research institution. Clearly it will be an exciting, challenging, and, ultimately, rewarding journey ahead.

Christine Ortiz
Dean for Graduate Education
Professor of Materials Science and Engineering
Executive Summary

Our mission
The Office of the Dean for Graduate Education (ODGE) supports and serves individual graduate students, programs, and schools in order to make graduate education at MIT empowering, exciting, holistic, and transformative.

Our vision
We have moved past an old paradigm of graduate education in which students primarily interact with a single faculty advisor in an isolated apprentice relationship. We have embraced the vision of a “networked” apprentice model comprising a graduate community of scholars whose members are ever more intellectually and socially engaged, valued, interactive, and rapidly connected to resources, information, each other, multiple mentors, the Institute, the nation, and the world.
Our values
The Office of the Dean for Graduate Education upholds the values of the Institute, including egalitarianism, collaboration, community, and making a difference. The ODGE is especially committed to fostering excellence and quality through the values of dedication to serving students, caring about all members of the community, and inclusivity of diverse backgrounds and perspectives.

Our work
The ODGE provides a range of services to support the MIT community and to strengthen external relations. Leveraging the efforts of a small office with a headcount of approximately 20, the ODGE accomplishes its goals by working collaboratively with other MIT units. This entails key partnerships with the offices of the Dean for Undergraduate Education (DUE) and the Dean for Student Life (DSL), academic departments and schools, Resource Development and the Alumni Association, and the Office of the Provost. More specifically, the ODGE aims to improve graduate education and the overall quality of graduate experience; provides and administers central graduate fellowships and responsibly stewards internal and external funds entrusted to the office for that purpose; provides a venue for resolving individual problems facing graduate students; and creates communications that serve the entire graduate student body. Additionally, the ODGE, through the International Students Office (ISO), complies with federal immigration requirements for admitted international undergraduate and graduate students and provides immigration advice for all international students. ODGE’s collaborative work includes interacting with the Committee on Graduate Programs (CGP) to develop, review, and administer graduate student policies and procedures; assisting Resource Development and the Alumni Association with fund raising and stewardship; providing support for meaningful living and learning experiences on and off campus with DSL; and improving processes such as graduate admissions, student financial services, and career counseling in conjunction with DUE.

Our future
The one-year long ODGE strategic planning process involved extensive interaction with and input from graduate students, faculty, administrators, and staff. The focus was on-campus residential graduate education (Cambridge, MA 02139), in the context of a largely decentralized infrastructure at MIT where individual graduate programs and faculty members possess great autonomy in directing graduate education in their disciplines. Five major themes emerged and are summarized below. The framework established by this strategic plan may evolve in the coming years, in particular as MIT’s activities in online education and international engagements develop, and new technological tools emerge with the potential to influence and enhance residential graduate education.
Strategic Theme One: Supporting Educational Innovation and Excellence
This first strategic theme focuses on three main areas: 1) promoting the value and quality of graduate education at MIT through oral, electronic, and print materials; 2) facilitating and supporting innovation in graduate programs and cross-disciplinary interactions to foster intellectual networks, serve as a source of inspiration, and stimulate idea generation; and 3) encouraging academic integrity and responsible conduct of research.

Strategic Theme Two: Competitiveness in Graduate Funding
This objective aims to ensure that all admitted graduate students can complete their chosen degrees in an appropriate amount of time and thrive in the MIT educational environment without imposing undue financial hardship on themselves or their families. In particular, it involves fund-raising, support, and stewardship of graduate fellowships and graduate education initiatives; energizing communications, interactions, and recognition of graduate alumni; and collecting, analyzing and disseminating Institute-wide financial data.

Strategic Theme Three: Administration and Policy
This aim strives to build an office culture of collaboration, teamwork, appreciation, respect, and excellence and to provide the highest quality of services to individual graduate students, graduate programs, and schools. More specifically, it seeks to maximize staff professional development and collaboration, to enhance educational systems and increase digitization in the areas of graduate administration.

Strategic Theme Four: Diversity and Climate
This goal focuses on promoting an inclusive environment that intellectually and socially engages, embraces, and values all members of the MIT community in order to support retention and academic excellence. Proposed activities include assessment; cohort- and community-building; “bridging activities” that better connect students to their graduate programs; Institute-level communications; data collection and management; as well as amplified diversity recruitment efforts.

Strategic Theme Five: Holistic Graduate Student Experience
This pursuit strives to enhance the professional and personal success of our graduate students by strengthening personal support, information access, resource training, work-life balance, transferable skills, and community-building.
MIT General Grad Facts
Academic Year 2011-2012

6,510 total graduate students registered in fall 2011 (59.8% of total student population)

31.6% female

12% underrepresented minority (or URM: Black or African American, Hispanic or Latino, American Indian or Alaska Native, Native Hawaiian or Other Pacific Islander) of U.S. citizens and permanent residents (494 URM students total)

38% international from 98 countries; Largest representation: China [426], India [253], Korea [234], Canada [217], and Taiwan [84]

67% of MIT international graduate students intend to work or continue their education in the US after completing their current degree.

Figure 1: School and Demographic Breakdown of MIT Graduate Student Population

Academic Year 2011-2012
Integrated Postsecondary Education Data System definitions of ethnicity; all demographic categories other than International include United States Citizens and Permanent Residents.

These data include all regular degree candidates, as well as “special” (non-degree) students; they exclude exchange and visiting students, as well as domestic and international students on study abroad.
Supporting Educational Innovation and Excellence
The ODGE carries out activities that support innovation and excellence in graduate education and foster information exchange and best practices among graduate programs.
The ODGE carries out many activities that support innovation and excellence in graduate education and foster information exchange and best practices among graduate programs, including, for example: maintaining membership on Institute committees such as the Committee on Graduate Programs (CGP), The MIT Council on Educational Technology (MITCET), and the Graduate Academic Performance Group (GAPG, chaired by the Dean); sponsoring on ad hoc committees such as the Task Force on Teaching and Learning Spaces (TLS); supporting monthly graduate administrator roundtables; and serving as a resource for information on the Graduate Policies and Procedures (GPP). The ODGE helps promote cross-disciplinary interactions through various projects under the Graduate Student Life Grants program and the Graduate Women’s Reading Group, as well as through support for many student groups such as TechLink.
## Figure 2: Graduate Programs Offered at MIT, Academic Year 2011–2012

*Interdisciplinary. Note: each program may offer multiple types of degrees

<table>
<thead>
<tr>
<th>School</th>
<th>Program name</th>
<th>Program code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Architecture and Planning</td>
<td>Architecture</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Center for Real Estate</td>
<td>RED</td>
</tr>
<tr>
<td></td>
<td>Media Arts And Sciences</td>
<td>MAS</td>
</tr>
<tr>
<td></td>
<td>Urban Studies and Planning</td>
<td>11</td>
</tr>
<tr>
<td>Engineering</td>
<td>Aeronautics and Astronautics</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>Biological Engineering</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Chemical Engineering</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Civil and Environmental Engineering</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Computation for Design Optimization*</td>
<td>CDO</td>
</tr>
<tr>
<td></td>
<td>Computational and Systems Biology*</td>
<td>CSB</td>
</tr>
<tr>
<td></td>
<td>Electrical Engineering and Computer Science</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Engineering Systems*</td>
<td>ESD</td>
</tr>
<tr>
<td></td>
<td>Harvard–MIT Program in Health Sciences and Technology*</td>
<td>HST</td>
</tr>
<tr>
<td></td>
<td>Materials Science and Engineering</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Mechanical Engineering</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Nuclear Science and Engineering</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>Transportation*</td>
<td>1CT</td>
</tr>
<tr>
<td>Humanities, Arts and Social Sciences</td>
<td>Comparative Media Studies</td>
<td>CMS</td>
</tr>
<tr>
<td></td>
<td>Economics</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>History, Anthropology, and Science, Technology, and Society</td>
<td>STS</td>
</tr>
<tr>
<td></td>
<td>Linguistics and Philosophy</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>Political Science</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>Program in Science Writing</td>
<td>21W</td>
</tr>
<tr>
<td>Sloan School of Management</td>
<td>Management</td>
<td>15</td>
</tr>
<tr>
<td>Science</td>
<td>Biology</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Brain and Cognitive Sciences</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Chemistry</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Earth, Atmosphere and Planetary Sciences</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Mathematics</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>Microbiology*</td>
<td>7MBD</td>
</tr>
<tr>
<td></td>
<td>Physics</td>
<td>8</td>
</tr>
<tr>
<td>Interdisciplinary</td>
<td>Leaders for Global Operations* (Engineering and Sloan)</td>
<td>LGO</td>
</tr>
<tr>
<td></td>
<td>Operations Research*</td>
<td>OR</td>
</tr>
<tr>
<td></td>
<td>Polymer Science and Technology* (Engineering and Science)</td>
<td>PPST</td>
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<tr>
<td></td>
<td>Systems Design Management* (Engineering and Sloan)</td>
<td>SDM</td>
</tr>
<tr>
<td>Woods Hole Oceanographic Institute</td>
<td>Joint Program with Woods Hole Oceanographic Institute*</td>
<td>WHOI</td>
</tr>
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</table>
To further this agenda, the ODGE has defined several key goals.

**Promote the Value and Quality of Graduate Education at MIT Through Oral, Electronic, and Print Materials**

The academic excellence, accomplishments, and intellectual and research contributions of individual graduate students will be researched, acknowledged, celebrated and publicized using the latest communication tools and venues.

The value and competitiveness of an MIT graduate education will be emphasized by collecting, aggregating, and publicizing relevant data, such as job placement and marketability statistics, graduate program rankings, funding and fellowship data.

The unique strengths of a residential MIT graduate education and how it prepares graduate students for a diversity of career paths will be articulated and publicized.

Information on Institute-wide activities and initiatives in graduate education will be collated and disseminated internally and externally.

**Facilitate and Support Innovation in Graduate Programs and Encourage Cross-Disciplinary Interactions**

To nurture a rich environment that promotes interchanges that are vital to innovation and cross-pollination, the ODGE proposes to do the following.

» Build Cross-Cutting Intellectual Networks. New cross-departmental and cross-school events will be organized for the graduate population to serve as sources of inspiration, stimulate idea-generation, and help build intellectual networks.
The ODGE will foster cross-cutting intellectual networks to support idea-generation, innovation and collaboration.

» **Share Best Practices.** New mechanisms for interdepartmental exchange of information and best practices will be explored, in particular to support innovation within graduate curricula, advising and mentoring, pedagogy, and admissions practices.

» **Information Exchange.** Forums for information gathering and dissemination on topics and trends related to graduate education will be created. Examples may include hosting visiting seminar speakers, and organizing workshops on topics in graduate education.

» **Online Graduate Education Initiatives.** The ODGE will serve as a resource for initiatives involving online aspects of graduate education and will think strategically about how to utilize online technology to enhance residential graduate education (e.g. building intellectual communities, enhancing recruitment, providing resource information, etc.).

» **Teaching and Learning Spaces.** We will contribute information on teaching, learning and community space requirements to the 2030 physical plant renovation process, including, for example: technology-enabled spaces for global and interdisciplinary collaborations.

» **International Engagements.** The ODGE will collate and disseminate best practices for international engagements involving graduate students—for example in the areas of policy; program quality assurance; risk management; cultural training and adjustment; and academic integrity.

**Encourage Academic Integrity and Responsible Conduct of Research**

In keeping with the values of the Institute, the ODGE will further promote the critical need for academic integrity and responsible conduct of research among the graduate population. We will collaborate with the Office of the Vice President for Research and the Ombuds Office to pursue mechanisms to increase the number of graduate students who receive academic integrity training. This will include developing a communications plan and engaging in a broad dialog with faculty members, department heads, and school deans on this issue; writing an academic integrity handbook specifically for graduate students; and developing clear guidelines, policies, and best practices for graduate students who are involved in entrepreneurship.
We must ensure that all admitted graduate students complete their chosen degrees in an appropriate amount of time, and thrive in the MIT educational environment without imposing undue financial hardship on themselves or their families.
Competitiveness in Graduate Funding

Source: Sip Khoon
Today’s graduate student desires not only attractive first-year funding but also financial security throughout the next several years of schooling and a low debt burden upon graduation. Traditionally, funding at MIT has relied heavily on sponsored research assistantships in the STEM (Science, Technology, Engineering and Mathematics) fields. These assistantships are further supplemented by external competitive and internal fellowships, teaching assistantships, and loans. We must ensure that all admitted graduate students can complete their chosen degrees in an appropriate amount of time, and thrive in the MIT educational environment without imposing undue financial hardship on themselves or their families. As part of our ongoing work, the ODGE provides and administers central graduate fellowships and responsibly stewards internal and external funds entrusted to the office; we collaborate with The Office of Resource Development and the MIT Alumni Association on fund-raising and stewardship.

Figure 3: Breakdown of MIT Doctoral Student Funding, Academic Year 2010–2011

<table>
<thead>
<tr>
<th>Funding Mechanism</th>
<th>No. Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research Assistant</td>
<td>1,853</td>
</tr>
<tr>
<td>Fellowship*</td>
<td>1,126</td>
</tr>
<tr>
<td>Teaching Assistant, Instructor G</td>
<td>400</td>
</tr>
<tr>
<td>Not Supported Through MIT</td>
<td>200</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>3,633</strong></td>
</tr>
</tbody>
</table>

*Internal and external
The following objectives support increased competitiveness in graduate funding.

**Fund-Raising**
The ODGE will support the efforts of individual graduate programs, schools, the MIT Office of Resource Development, the MIT Alumni Association, and the MIT senior administration in fund-raising for graduate education. We will target the following areas:

» **Fellowships.** Support will be provided for fund-raising for graduate fellowships; fellowship information will be disseminated broadly in oral, electronic, and print form; fellowship application support will be provided through workshops, panels, and interaction with current fellows and fellowship program managers, for example; and fellows will be engaged to provide firsthand accounts of their experiences that demonstrate the impact of a fellowship on their academic and research progress.

» **Graduate Education Initiatives.** Additional areas of fund-raising in graduate education will be explored, including excellence in graduate research awards, diversity activities, and professional and personal development.

» **Graduate Education Proposals.** Proposals will be developed for graduate education activities to present to current and prospective donors. These proposals will outline the strategic vision for graduate education at MIT, tell personal stories, demonstrate specific outcomes and potential for broad impact, and provide opportunities for giving.

» **Graduate Alumni.** To better engage MIT graduate alumni, communications and interactions with them will be energized. To do so, opportunities for graduate alumni will be developed to support and become personally involved in graduate education at MIT through social, intellectual, and professional development activities. There will also be a greater recognition of former students through the creation of electronic and print materials on the historical, scientific, cultural, and societal contributions of graduate alumni.
**Stewardship**

Enhanced stewardship strategies for existing internal fellowships and awards managed by the ODGE will be created. To do so, donors will receive firsthand accounts of the valuable knowledge and experience students gain through fellowships. These materials will emphasize the positive impact the fellowship or award has had on a student’s academic and research career. In addition, a culture of philanthropy will be fostered among the next generation of graduate alumni. By developing materials that demonstrate to graduate students where their funding comes from, the seed of giving back will be planted.
Financial Data Collection, Analysis, and Information Dissemination

To meet our objective for data collection, analysis and information dissemination, the ODGE will focus on three main strategies, as follows.

The first is facilitating funding packages. The extent of need by school and department for recruitment funding packages will be assessed. Expected support levels for all admitted students will be communicated to graduate programs, assigning different levels for different degree types (for example, professional and research master’s degrees, and doctoral degrees).

The second is to provide clear information on funding mechanisms and levels for admitted students prior to arrival and enrollment.

And third, a better illustration of MIT’s support of graduate students is proposed by constructing a data template on graduate funding for inclusion in “Grad Facts.”
Administration and Policy
The ODGE strives to provide the highest quality of services to individual graduate students, graduate programs, and schools in the areas of finance, petition handling, visa assistance, communications, policy issues and personal support. We are committed to building a culture of collaboration, appreciation, respect, teamwork, and excellence.
The ODGE strives to provide the highest quality of services to individual graduate students, graduate programs, and schools in the areas of finance, petition handling, visa assistance, communications, and personal support. The office works with the Committee on Graduate Programs to develop, review, and administer graduate student policies and procedures. We are committed to building a culture of collaboration, appreciation, respect, teamwork, and excellence. Due to needs precipitated by federal immigration mandates, the International Students Office has already made significant progress towards its transition to digital by licensing out the software framework SUNAPSIS™ (a comprehensive immigration case management software system). In collaboration with the Institute-wide initiative “Digital MIT,” we will increase our efficiency through enhanced student systems and further digitization.

**Digital ODGE**

In collaboration with MIT Information Systems and Technology (IS&T), ODGE business processes will be converted from paper-based to electronic systems. We will work with IS&T to refine and improve enterprise systems where the ODGE serves as business owner (such as WebGradAid and Grad Dental) and those that are critical to the work of the ODGE (MITSIS, Student Financial Services, Registrar, e.g.). In addition, standardized datasets will be created to use for internal and external fellowship data, funding documentation for groups, and events and programs, for example, to allow for more consistent messaging.

**Team-Building and Collaboration**

In collaboration with MIT Human Resources, consistent and frequent staff team-building activities will be carried out that facilitate communication, develop leadership skills, build trust, and enhance collaboration. Communication and collaboration will further be strengthened with individual departments and other offices on campus that serve graduate students. To successfully fulfill this initiative, we will:
» Carry out team-building self-assessment surveys, report results to ODGE staff, and create strategies for building on strengths and exploring areas of opportunity.

» Create an ODGE-generated list of successful team practices of high-performing teams and disseminate to staff.

» Create opportunities for staff across ODGE units to work together, interact, and give presentations.

» Offer opportunities for information dissemination on the activities of different units within the ODGE.

» Invite graduate officers, administrators, and staff involved in graduate education to give presentations on their work at ODGE staff meetings.
Staff Professional Development

Working with MIT Human Resources, we will strive to present ODGE staff with opportunities for skill development and advancement. To increase professional improvement, staff career tracks will be mapped and individualized development activities such as seminars, conferences, workshops, and mentoring opportunities will be strategically planned. In addition, advanced training seminars will be offered on topics such as conflict mediation, unconscious bias, crisis management, and negotiations.

Other keys to these efforts include creating and circulating an internal list of staff responsibilities; establishing a staff rewards and recognition program; and developing a training and orientation manual for all ODGE staff that will include administrative, financial, and programmatic modules on a core set of skills.

Financial management

A number of strategies have been designated in the coming years to ensure successful financial management. Quarterly budget reports that show expenses and projections for each key area will be created. Policies and procedures for managing financial transactions with clear guidelines for spending limits and authorizations will be developed. In addition, cost-sharing opportunities with other MIT offices that serve graduate students will be investigated, along with efficiencies gained by streamlining business practices through automation.
Graduate Admissions
The ODGE will steward the implementation of the recommendations made by the Task Force on Improving Graduate Admissions Processes. This will include the Institute-wide adoption of the graduate admissions system developed by the Department of Electrical Engineering and Computer Science over a timeframe of three admissions cycles, in a manner allowing graduate programs to opt in and commercial vendors to be phased out.

Specific strategies for this initiative include:

» Creating a project team consisting of EECS, IS&T, the ODGE, and Central Admissions (DUE) and establishing roles and responsibilities of project team members.

» Developing a detailed implementation and communications plan that includes necessary Institute financial/staffing support.

» Assembling an ad hoc Committee on Graduate Admissions (CGA) to serve as the primary Institute body for review and oversight of the centralized graduate admissions transition.

Policy
The organization, categories, and content of the online Graduate Policies and Procedures (GPP) will be updated and improved. In collaboration with other offices, the GPP will be cross-referenced and linked with other online MIT policy documentation, including Institute and departmental guidelines (such as graduate manuals).
The ODGE strives to increase the diversity of the graduate student body and to foster a nurturing, caring, and inclusive campus environment which is critical to retention, time-to-degree, and academic excellence for all students.
We have seen significant increases in the diversity of the graduate population at MIT, and we must continue our efforts to increase the applicant pool and yield.

MIT’s graduate students come from a wide variety of backgrounds and countries. Currently, 38% of our graduate students are international and hail from 98 countries. However, there is still much work to be done to increase the domestic diversity of MIT’s graduate student body. The ODGE advances this goal through the ongoing work of recruitment through the MIT Summer Research Program (MSRP) and by partnering with other universities that educate the undergraduates we wish to attract. Over the last decade we have seen significant increases in the percentage of under-represented minority (URM) and female students attending MIT, and we must continue our efforts to increase the applicant pool and yield. Simultaneously, fostering a nurturing, caring, and inclusive campus environment is critical to retention, time-to-degree, and academic excellence for all students. Current initiatives include the Power Lunch series, the First-Year Mentorship Program, the Graduate Women’s Group, the Jeanty Teas for international students, and various projects under the Graduate Community Fellows Program.

Figure 4: Percentage of under-represented minority graduate students of US citizens and permanent residents disaggregated by ethnicity (1998-2012)
The ODGE can take these efforts even further through the following initiatives.

**Climate Enhancement**
The following methods will foster an inclusive climate that intellectually and socially engages, embraces, and values all members of the MIT community in order to promote retention and academic excellence.

**Assessment**
In collaboration with the Office of Institutional Research, qualitative and quantitative information will be gathered to assess and monitor the experiences and climate for the graduate population. Surveys and focus groups, among other methods, will be used to identify and understand barriers and contributors to success.

**Cohort and Community Building**
Cohort and community building activities (for example, support of student groups and clubs) will be strengthened and supported to combat isolation, facilitate networking, encourage work-life balance, provide a motivating support structure, and enhance information exchange.

**“Bridging” Activities**
The ODGE will provide support and information on best practices to graduate programs in order to more closely connect students with their laboratories and departments and to facilitate intellectual and social interactions between groups of different nationalities and cultural and ethnic backgrounds. Examples may include:

- orientation activities which acclimatize new graduate students to the culture of doctoral education
- adviser matching assistance
- facilitating the creation of a network of mentors, including peer, post-doc, faculty, and alumni, compiling and disseminating best practices for mentoring of a diverse cohort
- tutoring programs and peer mock oral qualifying exams
- dissertation boot camps
- establishing best practices for information dissemination of resources, financing, transparency of policies, and nomination opportunities.
- encouraging participation in student government and student groups
Institutional Culture of Inclusivity

In order to foster a culture that embraces diversity, we aim to:

» acknowledge, celebrate, publicize, and articulate the academic excellence, accomplishments, intellectual contributions, and impact of individual graduate students of diverse backgrounds in oral, electronic, and print materials.

» emphasize prestige and awareness in all diversity initiatives, programs, and fellowships and the positive correlation between diversity and excellence.

» facilitate student engagement at the Institute level (i.e. on Institute committees).

» establish recognition and rewards for students and mentors as they progress over the academic hurdles.

Data Collection and Management

An autonomous annual data template, collection, and analysis process for diversity data on admissions, yield, retention, time-to-graduation, and job placement will be created.
Figure 5: Graduate Climate Trilevel Strategy

<table>
<thead>
<tr>
<th>Target Individual Graduate Students</th>
<th>Bridging Activities</th>
<th>Institutional Environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cohort and community building; social and intellectual</td>
<td>Resources and finances</td>
<td>Publicize, acknowledge, and celebrate accomplishments</td>
</tr>
<tr>
<td></td>
<td>Transparency of policies and opportunities</td>
<td>Emphasize prestige and excellence; positive correlation between diversity and excellence</td>
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<tr>
<td></td>
<td>Faculty and postdoc advising and mentoring</td>
<td></td>
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<tr>
<td></td>
<td>Participation in student government and student groups</td>
<td></td>
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<tr>
<td></td>
<td>Professional development</td>
<td></td>
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<tr>
<td></td>
<td>Alumni engagement</td>
<td></td>
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<tr>
<td></td>
<td>Rewards and Recognition</td>
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</tr>
</tbody>
</table>

**Increasing Diversity in the Applicant Pool**

The ODGE has crafted additional strategies to attract greater numbers of URM applicants to MIT. One method is to focus on external recruitment efforts. A targeted regional strategy will be developed and implemented to recruit externally from our peers and key Minority Serving Institutions (MSIs) using pool data from the Integrated Post-Secondary Educational Data System (IPEDS). For example, the existing Grad Clinic will be expanded; groups of key faculty from MSIs and from MIT will engage with each other more deeply; geographic nodes of alumni of color will be leveraged; and key academic programs such as Minority Access to Research Careers (MARC) and the Louis Stokes Alliance for Minority Participation (LSAMP) will be leveraged.

Another method will be to develop web and print materials to support recruitment efforts at other colleges, universities, symposia, and career fairs. The ODGE will also explore online recruitment opportunities—such as developing an online version of our Grad Clinic—and will survey current enrolled students to assess which recruitment mechanisms are most effective.

**Yield**

To increase our yield of diverse students matriculating to MIT, two strategies will be implemented. In collaboration with the departments, schools and faculty supervisors, multi-year diversity fellowship commitments will be developed. Secondly, the ODGE will assist in the recruitment of diverse students who are admitted to MIT graduate programs by providing more individualized attention. For example, one of the Deans will call the student personally to congratulate him or her and send personalized congratulations letters.
Holistic Graduate Student Experience
Personal support, access to resources, work-life balance, and community are increasingly important to the academic, professional, and personal success of our graduate students.
Personal support, access to resources, work-life balance, and community are increasingly important to the academic, professional, and personal success of our graduate students. Furthermore, in addition to creating new, original knowledge at the frontiers of the field, today’s graduates also need the ability to recognize what this new knowledge means in a broader context, and they must possess a more extensive skill set to be able to act on this new knowledge for the benefit of humanity. Hence, professional and personal development activities are needed that serve to prepare students for a range of career paths. Ongoing services of the ODGE include advising and counseling; providing a venue to resolve individual problems facing graduate students; substantive funding in support of community, including the Graduate Student Life Grants and the Graduate Community Fellows program; support for student activities via the Graduate Student Council; and professional and personal development programming such as the Path of Professorship workshop. In 2010, MIT completed a Survey of Graduate Women (Figure 6), which surfaced valuable data regarding how well MIT currently meets the needs of graduate women and how MIT can further improve the quality of life of all graduate students. The following goals are informed by this data and will amplify efforts toward a holistic graduate student experience.

**Figure 6: Importance of Graduate Women Support Functions, 2010 Survey of Graduate Women**

Percent responding “Very important” or “Essential”

<table>
<thead>
<tr>
<th>Support Function</th>
<th>20%</th>
<th>40%</th>
<th>60%</th>
<th>80%</th>
<th>100%</th>
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</thead>
<tbody>
<tr>
<td>Career planning guidance</td>
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<tr>
<td>Information regarding existing MIT resources for graduate women</td>
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<tr>
<td>Encouragement for women students to take on leadership roles</td>
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<td>Personal counseling or confidential support</td>
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<tr>
<td>Opportunities for MIT offices to share relevant information</td>
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<tr>
<td>Mental health support from a health professional</td>
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<tr>
<td>Connections with alumnae (female alumni)</td>
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<tr>
<td>Opportunities to learn how to communicate more effectively with male colleagues and advisors</td>
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<tr>
<td>Programs that build community amongst women at MIT</td>
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<tr>
<td>Workshops on topics related to graduate women</td>
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<tr>
<td>Events and programs that address feelings of isolation</td>
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<tr>
<td>Events that welcome new graduate student women</td>
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<tr>
<td>Conflict resolution training</td>
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</table>
Personal Support

In order to provide our graduate students with the personal support they require to become engaged, successful citizens of the MIT community and the world, six specific areas are targeted. We will:

» Conduct a Needs Assessment. In collaboration with the Office of Residential Life and Spouses&Partners@MIT, the ODGE will survey the landscape to understand the unique needs and interests of graduate students, with particular attention to families in the MIT community (for example, affordable and available daycare and employment for spouses).

» Build Collaborations. The ODGE will partner with the Division of Student Life to build collaborations between the offices. We will send referrals to and publicize Community Wellness programs and activities in order to raise visibility and use in the graduate community. In addition, we will engage their staff in ODGE programs such as MSRP, ISO, Orientation, student groups, among others.

» Connect Students to Resources. Mechanisms will be developed to direct graduate students—international, underrepresented minority and female students—to resources such as the ODGE website, other online resources, videos, and the student life and learning webpage.
» **Provide Resource Training.** In conjunction with collaborative partners, resource training will be provided for ODGE staff, graduate administrators, and graduate officers that enhances the ability to prevent issues and respond to the critical needs of graduate students. Such training will address a number of areas, including cultural sensitivity; identifying early warning signs for graduate student issues; wellness and its relationship with performance; the manifestation of trauma; coping with loss; mediation and conflict resolution; dealing with academic integrity issues; and handling complaints.

» **Focus on Harassment.** In order to provide a safer environment for our students, an assessment will be carried out on the prevalence of harassment, stalking, and bullying; work will be conducted to understand the legal framework of these issues; and to support, promote, and advocate prevention of and quick response to these issues.

» **Create a Student Case Database.** A student information software platform and database will be implemented and utilized for tracking student cases related to support, advising, and leaves of absence.

**Community**

In order to foster an increased sense of community among MIT graduate students, greater focus will shift to pre-orientation programs, family support, and the inclusion of off-campus students.

In focusing on pre-orientation, the India pre-orientation program for incoming graduate students may be expanded to other countries. In this model, incoming graduate students from a particular country engage with one another before departing for MIT. In the same spirit, cohort and community-building programs may be developed.
Today’s graduates need the ability to recognize what new knowledge means in a broader context, and to build a more extensive skill set in order to act on their knowledge.

To encourage and increase family support, programs that effectively serve the identified needs of graduate student families will be publicized, developed, and bolstered in conjunction with collaborative partners.

To strengthen the sense of inclusion among off-campus students, communications and engagement mechanisms will be developed to reach out to off-campus graduate students around ODGE activities.

**Professional and Personal Development**

Finally, the ODGE will institute a number of professional and personal development initiatives to enable our graduate students to grow and succeed. They include:

**The Professional Development Portal (PRO-DEPOT)**

We will create a comprehensive and engaging online knowledge repository of audio and video content related to personal and professional development. The ODGE will take the following actions:

- Mine TechTV, MIT World, and similar online library websites for relevant audio-visual content.
- Develop in-house audio-visual and editing capabilities.
- Digitally capture and post on the ODGE website relevant professional and personal development activities sponsored by the ODGE, MIT offices, and student groups.
- After mining and posting current content, assess the breadth, depth, quality, and degree of duplication; analyze in terms of core competency areas; identify where gaps exist to guide the development of future programming.
Foundational Skills Program
A coherent, personalized professional development program will be explored that potentially uses blended (e.g., combination of online/in-person) learning with collaborative partners such as DUE and DSL. The goals of program will be to:

» develop mechanisms for integration with graduate curricula and research
» assess the need for central versus discipline-based training
» survey alumni as to key skills needed for different career paths.

International Engagement
In collaboration with MIT International Science and Technology Initiatives (MISTI), more graduate students will be encouraged to engage in international exchange programs.

External Awards
A targeted list of honorific awards will be created and publicized, for which graduate students will be nominated annually.

Work-Life Balance
Web and print materials will be used along with ODGE programs to focus on enhancing work-life balance and time-management for graduate students.
Figure 7: 2011 Enrolled Graduate Student Survey—Professional Development
Please indicate the extent to which your graduate education at MIT is enhancing these skills. Percentage of respondents selecting “To a great extent”

- Becoming an expert in my field
- Keeping up with current advances in my field
- Knowing the latest research techniques
- Presenting research results to an audience of peers
- Working in a team
- Writing papers for publication
- Collaborating with other researchers
- Understanding principles of ethical conduct of research
- Understanding how an academic organization works
- Facilitating interdisciplinary interactions
- Leading a team
- Negotiating with people in a position of authority
- Supervising others
- Teaching
- Writing grant proposals
- Managing a research group or laboratory

Masters | Doctoral
ODGE would like to extend gratitude to all faculty, staff, and students who participated in the listening tour that helped to shape our strategic plan. Many thanks to the ODGE Faculty Advisory Board, and to Chancellor Eric Grimson and President Rafael Reif for their great intellectual contributions and financial support, both of which were critical in the development of the strategic plan and new initiatives. We would like to acknowledge President Emerita Susan Hockfield and former Chancellor Phillip L. Clay for their input, support and guidance. Lastly, we would like to acknowledge the Office of Institutional Research for their extensive work in compilation and analysis of relevant data used in the development and presentation of the strategic plan.