

Office of Minority Education

The mission of the [Office of Minority Education](#) (OME) is to promote academic excellence, build strong communities, and develop professional mindsets among students from underrepresented minority groups, with the ultimate goal of developing leaders in the academy, industry, and society. OME supports MIT's academic mission to provide the best possible education for all students while serving the nation's need to have underrepresented and underserved students in science and engineering disciplines pursue higher education and achieve success in these fields.

Over the last academic year, OME offered a rich and robust portfolio of excellent programs and services designed to support the overall success of all MIT students, with a particular focus on students from underrepresented groups. Below are details and highlights of some of the key accomplishments during AY2014.

OME Signature Programs

Interphase EDGE

Interphase EDGE (Empowering Discovery | Gateway to Excellence) is a two-year scholar enrichment program that includes a seven-week summer session as well as programming during the academic year (through the end of sophomore year). The focus of the summer program is to give scholars an introduction to the MIT experience by exposing them to the rigors of a full subject load and to life on campus. In addition, the Interphase EDGE curriculum is uniquely designed to impart pivotal concepts that will increase long-term academic success. The program not only will give students an "edge" on their MIT experience but will catalyze their success beyond MIT. During the summer and the academic year, scholars participate in a range of personal and educational seminars and activities designed to ensure their smooth transition into college life. Throughout the academic year, scholars continue to build upon the relationships created during the summer by attending biweekly meetings with EDGE advisors and monthly professional and academic enhancement events, including programs that expose them to various career pathways.

The inaugural 2012 cohort of Interphase EDGE scholars consisted of 78 scholars. The 2013 Interphase EDGE cohort consisted of 70 scholars. OME staff members, two deans, and one staff associate II, who manage the Interphase EDGE program, served as the first-year advisors for all 78 of the 2012 scholars. However, with the increased involvement of faculty in first-year advising, the Interphase EDGE staff served as first-year advisors to only about half of the 2013 cohort. The Interphase EDGE advising component is a critical aspect of the new Interphase model. The program's advising philosophy is one of increased access, personalized attention or high touch, and proactive engagement, and we believe it has yielded notable, although preliminary, results. For example, with the 2012 scholars and with the 2013 scholars who had Interphase EDGE staff as their first-year advisors, we saw declines in fall-semester fifth-week flag rates of 18.2% and 13.5%, respectively. Prior to implementation of the new Interphase EDGE model, higher flag

rates were observed (e.g., 42.9% in 2010 and 20.3% in 2011). Although these are early indicators, we believe that there is a correlation, which suggests that the new Interphase EDGE model is trending in a positive direction.

An additional aspect of the new model is academic year programming. Throughout the year, first-year Interphase EDGE scholars attended faculty mixers, “impostor syndrome” workshops, and workshops designed to help them choose a major prior to their sophomore year. In August 2013, second-year Interphase scholars participated in a two-day retreat at the Connors Conference Center. The primary objectives of the retreat were to reconnect cohort members, to help them reflect on lessons learned during their first year at MIT, to reestablish their connection to the MIT community, and to help them begin the process of thinking about their post-MIT lives or pathways. In addition to the retreat, Interphase EDGE advisors held monthly individual check-ins with the sophomores, connected them to various MIT programs and resources, and facilitated informal focus groups to discuss program outputs.

Finally, Interphase (founded as Project Epsilon in 1968) started on MIT’s campus in 1969, and 2014 marked the 45th anniversary of the program. This was timely and fortuitous given that this was the first year an Interphase alumnus—professor Kristala L. Jones Prather—became a tenured MIT faculty member. Thus, in celebration of both of these historical occasions, we held the Interphase 45th-anniversary gala at the Museum of Science in Boston in April, and with the assistance of Reginald Van Lee ’79, we established the Kristala L. Jones Prather (1994) Interphase Fund. Our goal is to endow this fund so that, in the very near future, it will provide additional support to Interphase scholars and enable us to increase the number of participants in the program. The Kristala L. Jones Prather (1994) Interphase Fund is a perfect way for OME and the Institute to engage alumni, particularly underrepresented minorities, in our development efforts.

Seminar XL and Seminar XL Limited Edition

Seminar XL/Seminar XL Limited Edition (LE) is an academic enrichment seminar, primarily for freshmen, that uses an innovative and effective small-group learning concept. In Seminar XL, groups of four to six students meet for 90 minutes twice per week during a semester to share their understanding of course concepts and problem-solving methods. A facilitator, typically an upperclassman or graduate student, guides each group. First-year students can receive course credit provided they attend at least 80% of the group sessions.

In AY2014, a total of 176 students formed 46 groups (regular and LE). Thirty-seven students participated in Seminar XL LE sessions. LE sessions are the same as the regular sessions; however, they begin after “Add Date,” and students can earn partial credit for LE participation in a course for which they received a fifth-week flag. The staff of 26 facilitators delivered content in 20 different subjects, and four of those subjects were sophomore pilot courses (i.e., introductory departmental courses considered by many students to have a high level of difficulty). Seminar XL LE provides an invaluable service to the Institute in that it is used frequently by all undergraduates, with 32.8% of the AY2014 participants being nonminority students.

The Seminar XL training and evaluation plan, developed in collaboration with the MIT Teaching and Learning Laboratory over the past two academic cycles, involves offering training to new and returning facilitators and administering five quantitative assessments with five data points via classroom observations. After analyzing these data, we found that:

- Participants rated the quality of teaching in Seminar XL as 4.53 and 4.35 (on a 5-point scale, with 5 the highest rating) in the fall and spring semesters, respectively.
- 83.9% and 87% of the participants who responded in the fall and spring semesters, respectively, stated that they would recommend their facilitator.
- Participants stated that they understood concepts better, with average ratings of 4.32 and 4.30 (on a 5-point scale) in the fall and spring semesters, respectively.
- Participants stated that they became better problem solvers, with average ratings of 4.08 and 4.00 in the fall and spring semesters, respectively.

In AY2013, survey data and classroom observations revealed that a key challenge for Seminar XL was consistent delivery of weekly worksheets or problem sets (problems aligned with the course content), rated at 4.20 in both the fall and spring of AY2013. To address this concern, staff worked with departments and professors teaching first-year General Institute Requirement courses to further develop a reservoir of worksheets. In AY2014, participants rated worksheet appropriateness as 4.30 and 4.09 in the fall and spring semesters, respectively. One hypothesis for the decline in spring 2014 was the offering of three new pilot courses that semester. Pilot courses often require multiple semesters for the development of relationships with the academic departments to completely align worksheets with course content. OME staff will continue to work with departments and professors who teach sophomore pilot courses to ensure that the worksheets meet the needs of our students and align closely with course syllabi.

Tutorial Services Room

The Tutorial Services Room (TSR) offers one-on-one tutoring, group tutoring or “homework nights,” exam reviews, and a study lounge and provides Seminar XL LE support to undergraduate students. Historically, first-year students have used TSR tutoring services. However, some upperclassmen also use the TSR services.

This year, for one-on-one requests, students were able to submit an online form, and we are proud to report that students received timely and effective support from the TSR. We believe that this resulted in an increase in the number of students requesting standing weekly appointments, as shown in the table below. From fall 2013 to spring 2014, the number of one-on-one weekly standing visits increased by 96%.

Fall 2013 Semester

Visit Description	Number of Visits
Homework night	106
One-time one-on-one tutoring	7
Weekly/standing one-on-one tutoring	69
Exam reviews	93
Lounge	159
Semester total	434

Spring 2014 Semester

Visit Description	Number of Visits
Homework night	73
One-time one-on-one tutoring	10
Weekly/standing one-on-one tutoring	135
Exam reviews	40
Lounge	143
Semester total	401

Forty-seven tutors (upperclassmen and graduate students) provided coverage for homework nights, one-on-one tutoring, and exam reviews. Many of the tutors also worked as Seminar XL facilitators and were assigned to tutor Seminar XL LE participants who received more than one fifth-week flag.

Additionally, we implemented an online evaluation and assessment tool whereby students receiving tutoring services through the TSR could offer feedback. This online survey captured the quality of our services and allowed the TSR assessment process to be completely aligned with the evaluation plans and processes of other OME academic support programs (Interphase EDGE and Seminar XL LE). Participants were asked to rank tutors on a scale of 1 to 5, with 5 being the highest ranking. We received a total of 109 responses, and some key highlights are as follows:

- With respect to knowledge of the subject material, participants rated their tutors as 4.75 (out of 5) in the fall and 4.61 in the spring.
- Participants rated the overall quality of their tutor as 4.47 in the fall and 4.61 in the spring.
- In fall and spring, 87.5% and 98.5% of participants, respectively, reported that they would request/recommend their tutor again.
- Participants rated the efficiency of the scheduling process as 4.09 in the fall and 4.07 in the spring.

Along with our enhanced evaluation and assessment efforts, we worked with a vendor to automate the one-on-one tutoring request process. As shown above, students gave slightly lower rankings when asked about the efficiency of the scheduling process. We

have sought to improve scheduling process efficiency, and we believe that the new automated online system, which will be in place in fall 2014 for scheduling of one-on-one tutoring, will mitigate if not eliminate this concern. With this new system, students will be able to schedule one-on-one tutoring sessions at their convenience. Students looking for tutoring will be able to log on to the OME website to see subjects tutored, determine tutor availabilities, and schedule an appointment with one simple click. We believe that this will minimize wait times, streamline the process, and give students greater flexibility and autonomy to schedule timely one-on-one tutoring appointments as needed.

Another major change for the TSR has been the move from Room 12-124 to Room 16-159. This change in location is a great opportunity for the TSR to continue, as it has for more than 30 years, to provide excellent tutoring resources to MIT students.

Laureates and Leaders

Laureates and Leaders, OME's signature graduate school initiative, continues to offer relevant and high-quality programming to students, including faculty research talks and speakers, faculty panels, roundtable dinners, and workshops. The Sixth Annual Laureates and Leaders Induction Ceremony was held on February 21. Twenty new students were inducted into the program. In June, 11 senior laureates graduated from MIT; three will go on to PhD programs, one will pursue an MD/PhD, three will enter master's programs, and four will work in industry. There are currently 46 students enrolled in the program.

In order to provide information about the graduate school application process to students who were not in the Laureates and Leaders program, OME's Pathway to Graduate School program collaborated with the Global Education and Career Development office to offer a graduate student panel on October 8. Twenty-three students attended.

Momentum

Thirty-seven students participated in the January 2014 session of Momentum, an interdisciplinary project-based class held during the Independent Activities Period. Momentum is fully funded by OME's Industrial Advisory Council for Minority Education (IACME). IACME comprises 20 corporate, government, and nonprofit organizations that support OME and the students we serve. In addition, four IACME partners provided individual sponsorship to eight teams (two teams per sponsor). This year's Momentum theme was "designing flying robots with increased range, endurance, and sensors." The eight student teams worked to enhance or remodel a Phantom quadcopter to successfully complete tasks at the final competition. The tasks included flying the quadcopter through hoops, popping balloons, sensing the chemicals in the balloons, avoiding obstacles, and taking pictures of specified targets. Students learned how to pilot the quadcopters, program the Arduinos, and design chemical sensors; it was a truly interdisciplinary course. In addition, this year marked the first time that the program culminated with a two-day competition; a series of challenges were held on the first day, and on day two the students gave technical talks and presented their final designs to the IACME judges. Four IACME partners interviewed 27 Momentum students for summer internship opportunities. Eight students received offers, and six accepted their offers.

New Initiatives

Native American Initiative at MIT

In fall 2013, OME received funding from the Office of the Dean for Undergraduate Education (DUE) to hire a diversity fellow to coordinate programs and activities focusing on MIT's Native American student population. The fellow/program coordinator was charged with community development, with a primary emphasis on serving as a resource to our Native students by helping them obtain support to enhance their academic, social, and personal success at MIT. Also, the program coordinator was asked, to the extent possible, to assist with MIT undergraduate (and graduate) admissions efforts by helping to recruit talented, high-achieving Native American students interested in science, technology, engineering, and mathematics (STEM) and by building bridges between the Native American and MIT communities.

Unfortunately, in the past, very few Native American MIT students participated in recruitment events on or off campus (e.g., hosting prospective students during Campus Preview Weekend). The past year, however, through the efforts of our program coordinator, has seen some movement in this area and a slight reversal of this trend. Specifically, there have been improvements in the participation of our undergraduates in local, regional, and national Native American events and activities, including the reestablishment of the MIT student chapter of the American Indian Science and Engineering Society (AISES). Eighteen undergraduate students are registered as members of the MIT-AISES chapter, and, for the first time in six years, MIT Native American students attended the AISES national conference (held in Denver in October 2013). In addition, MIT Native American students participated in culturally relevant activities (powwows, dances, and networking events) throughout New England. On campus, MIT Native American students hosted more than two dozen small dinners, coffee breaks, and other community events with the Harvard University Native American Program. Participation at events varied, but a core group of students are very committed to keeping these activities going.

The DUE diversity fellow position is a one-year fellowship. It will conclude in August 2014. Our MIT Native American population at the undergraduate level is quite small, at about 53 students; however, the work started here will continue. Native American students have unique communal, social, cultural, and historical backgrounds, and they need a community that binds them together. Thus, as we do this work, we must be cognizant of these nuances.

Student Group of the Semester Award

Feedback from the 2012 OME survey and from OME student leaders suggested that the office needed to do more to highlight the successes and accomplishments of students. In AY2014, the OME Student Advisory Council (OMESAC) Student Group of the Semester Award was created for that purpose. Through this award, OME recognizes the contributions of the 15 OMESAC organizations, simultaneously adding value to their membership and deepening their commitment to OME. This award is given to one student organization each semester, and it includes recognition on the OME website and in OME newsletters, a perpetual OME plaque, and a monetary contribution to

be used for programming and advancement of the organization's mission. Winning organizations are selected on the basis of their application/proposal, participation in OMESAC meetings, support of key OME events, and collaborative efforts with groups within and outside of their traditional networks. In the first application cycle (fall 2013), we received four applications for the award, and the MIT chapter of the National Society of Black Engineers was named the first recipient.

Impostor Syndrome Seminars

In AY2014, OME hosted five impostor syndrome seminars with Dr. Valerie Young. The purpose of these seminars was to address the OME strategic planning goal of developing "programs or initiatives that focus on creating a supportive environment and building self-confidence in all students," as well as increasing awareness and understanding of issues that affect the academic success of students, particularly underrepresented students. Three of the five sessions were delivered to the 70 scholars from the 2013 Interphase EDGE cohort. Two seminars (on October 3 and February 11) were offered to the greater MIT community. OME collaborated with 21 MIT departments, labs, and centers to sponsor and advertise the events, including the Office of the Vice President, the Institute Community and Equity Office, the Committee on Race and Diversity, and the Council on Staff Diversity and Inclusion. Overall, 430 participants attended the seminars, with approximately 398 of the attendees (faculty, staff, and students) taking part in the MIT community sessions. A survey evaluating the community seminars yielded ratings of 4 or 5 (on a scale of 5) from 90% of the participants who responded. As a result of this initiative, more faculty, staff, and students are familiar with the impostor syndrome, its impact, and how to combat the phenomenon.

Functional Enhancements

OME Student Survey

In the 2014 OME survey (the survey is administered every two years), students expressed interest in establishing mentorship relationships with upperclassmen, graduate students, and alumni. Respondents also suggested that we needed to do more to reach students who are not currently involved with OME programs. Additionally, students indicated a desire to have more opportunities (after their first year) to connect with the OME staff. Based on this feedback, the OME team is committed to enhancing its efforts in three key areas: mentorship, reaching a broader OME student population, and creating intimate opportunities for students to connect with OME staff.

Mentor Advocate Partnership Program

The Mentor Advocate Partnership (MAP) is a successful volunteer mentoring program for MIT freshmen and sophomores, and AY2014 marked its seventh year. MAP included a total of 153 participants with 86 protégés (42 freshmen and 44 sophomores) and 67 mentors (five faculty, one graduate student, two PhD candidates, six lecturers, and 53 staff members). MAP focused on giving both mentors and protégés adequate support in helping them build strong relationships. During the Nexus Kick-off, Dr. Stacy Blake-Beard, renowned in mentoring, facilitated a workshop on developing relationships in which both mentors and protégés participated. She focused on the opportunities

encountered in mentoring relationships and how to overcome challenges. MAP also offered programs for protégés and mentors to supplement their one-on-one interactions (e.g., Meet Your Match, Ice Cream Social, Mentor Appreciation Luncheon, and our annual End of Year Celebration). Eighty-eight percent of freshman participants chose to remain in the program as sophomores.

In AY2015, MAP will be a one-year program, and its purpose will be to help first-year students acclimate to life at MIT. Sophomore students will be given the option of joining the MAP E-Mentoring Initiative, which is an extension of the traditional program. The goal of the initiative is to help students transition from academia into the work environment. Protégés communicate with corporate and alumni mentors via phone, Skype, and email. The program began in September 2013 with 25 mentors and 25 MIT juniors and seniors (protégés). The AY2015 program will include sophomores as well as juniors and seniors. The fall 2014 E-Mentoring cohort (as of August 2014) consists of 55 protégés and 52 mentors from BP, Cisco, Draper, Intel, MIT Lincoln Laboratory, NASA, Raytheon, and Wells Fargo.

Master Your Future

Master Your Future (MYF) is funded and delivered in collaboration with IACME and the Global Education and Career Development office. The program's events and workshops are designed to help sophomores, juniors, and seniors navigate the work environment successfully. There are four MYF professional development modules: Career Paths, Job-Finding Skills, Business Etiquette, and Employability. This year, OME offered the following sessions for students: "Resume Critique," "Managing Media," "Taboo: Classic Things Not to Do," and "Panel Discussion—What You Can Do with a PhD." In total, 156 students participated in these sessions, with the Resume Critique event garnering the highest number of attendees (87).

Fund Development

The Center for Sensorimotor and Neural Engineering (CSNE) proposal was funded by the National Science Foundation in June 2011. CSNE is a partnership involving the University of Washington (lead institution), MIT, San Diego State University, the University of British Columbia, the University of Tokyo, and several historically black colleges and universities, community colleges, K–12 schools, and industry partners. OME and the MIT Office of Engineering Outreach Programs received approximately \$40,000 to offer workshops, seminars, and courses that expose students to careers in neural engineering as well as opportunities to do undergraduate research in CSNE-related fields. Through Interphase EDGE and Laureates and Leaders, OME hosted three seminars exposing 147 students to CSNE's research. In addition, two OME students (one male and one female) were provided with undergraduate research opportunities at the center. Over summer 2014, they will be hosted by the University of Washington. Also, OME collaborated with the Office of Engineering Outreach Programs in assisting MIT's efforts in this area, with assistance provided to CSNE in securing continued funding from the National Science Foundation.

We continue to receive financial support from the IACME group, which now comprises 20 corporate, government, and nonprofit partners (including Latino Alumni of MIT and Black Alumni of MIT). Over the past year, IACME provided approximately \$80,000 to help underwrite costs associated with current OME programs and initiatives such as Momentum, Master Your Future, MAP E-Mentoring, and several networking and informational events. Finally, as noted earlier, the Kristala L. Jones Prather (1994) Interphase Fund was created this year to commemorate the 45th anniversary of Interphase and Professor Prather's notable accomplishments. We hope to endow this fund to support future Interphase programming and participation.

Staffing Changes

The OME organizational structure includes the associate dean/director, three deans, one staff associate II, one program coordinator, one program assistant, and two administrative assistants. To date, this infrastructure has worked relatively well; however, we now need more logistical and administrative support to coordinate the growth and multifaceted aspects of our professional development initiatives, namely Laureates and Leaders, MAP, Master Your Future, and Momentum. We have hired a temporary worker to fill this role but hope to convert the position into a regular one during AY2015. With this additional staff support, OME will continue to provide excellent service and much-needed programs to MIT students.

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Director

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