

Office of the Vice Chancellor

The mission of the [Office of the Vice Chancellor \(OVC\)](#), led by Vice Chancellor for Undergraduate and Graduate Education Ian A. Waitz, is to advance academic innovation and foster the growth of every MIT student, empowering them to make a positive impact at MIT and beyond.

Organizational Changes

The Office of the Vice Chancellor was created in 2017 through the integration of the former Office of the Dean for Undergraduate Education and the Office of the Dean for Graduate Education. Most organizational changes were implemented in AY2018 and AY2019 with the exception of one additional change this year: after an Institute-wide strategic planning effort, all programs in the Global Education Office (part of the Office of Experiential Learning) were transferred to the MIT International Science and Technology Initiatives (MISTI) office.

Priorities and Progress

The vice chancellor and his staff continue to make progress toward meeting OVC's [strategic priorities](#). However, due to the disruption caused by the coronavirus pandemic from March 2020 onward, much of our staff's time, effort, and resources have been devoted to helping the Institute manage its response and reconfigure day-to-day operations to meet the needs of students, faculty, and staff (both remotely and in person) while keeping in mind safety, health, and well-being. For the purpose of this report, we focus primarily on the progress that has been made on the vice chancellor's three top priorities (rather than focusing on the pandemic).

Transforming the First-Year Undergraduate Experience

The vice chancellor's efforts to transform the first-year undergraduate experience continued in AY2020 with the implementation of the [phase 2](#) educational experiment in the fall of 2019 with the incoming Class of 2023.

The primary goal of the phase 2 experiment is to promote greater exploration and discovery of fields, majors, minors, and Humanities, Arts, and Social Sciences (HASS) concentrations in the first year.

Phase 2 continues the experimental pass/no record grading experiment begun in phase 1, eliminates early sophomore standing, and modifies the first-year credit limit. One such modification creates a secondary nine-unit credit limit for "discovery-focused subjects and related approved exceptions." These one- to three-credit first-year discovery subjects (FYDs) aim to introduce first-year students to majors, minors, and HASS concentrations without contributing significantly to their workload. Generally, they fall into three categories: department focused, interdisciplinary, and co-curricular.

In fall 2019, there were 528 enrollments in 14 FYDs. Based on student and faculty surveys, the fall FYDs were a mixed success. Many students enjoyed the FYDs and

reported that the classes helped them explore majors or careers; others found that even the small time commitment needed to take the classes was cumbersome.

Data collected and analyzed by OVC was shared with the MIT community and informed faculty-approved changes to grading options for incoming undergraduates that are intended to allow more flexibility for exploration and stress reduction across academic years. Additionally, this data is informing continued faculty governance discussions on other potential changes to undergraduate academic policies.

An advising pilot and two first-year learning community pilots were initiated in AY2020 as well. The advising pilot explores a “network advising” approach, where students are assigned a staff advisor in the Office of the First Year, a faculty mentor, and a student Associate Advisor.

Two first-year learning communities, Concourse and the Experimental Study Group (ESG), launched pilots to embed more inspiring learning experiences within the first year. Concourse implemented a new requirement to enable students to explore and reflect upon intellectual events on campus or in the broader community. ESG added in-class projects and replaced final exams with team projects in ESG physics (8.01 and 8.012) and chemistry (5.111). The results are still being explored.

Enhancing the Graduate Student Experience

The [Graduate Student Roadmap](#), developed by OVC in 2018, continues to inform and guide our efforts to improve the graduate student experience. A fundamental premise of this holistic framework is that academic success is closely intertwined with other aspects of graduate student life, including financial security, advising, mental health and well-being, and diversity, equity, and inclusion.

While the roadmap provides a visual conceptualization of our approach, we recognize that OVC does not operate in a vacuum and that graduate students are supported by a distributed network of many departments, labs, and centers (DLCs) across MIT. Consequently, we are working to build stronger campus partnerships and leverage existing programming, such as through the MindHandHeart Department Support Project; the Gordon Engineering Leadership (GEL) program; GradSAGE, an advisory group led by graduate students; MIT Residential Life staff; and many others.

Becoming a best-in-class leader in graduate research advising and graduate professional development is one of our most urgent priorities. We are focusing on a strategic effort in advising and mentoring that broadly works to shift the MIT culture to be more inclusive and welcoming, to encourage greater transparency across departments—including sharing and implementing best practices—to develop or expand educational programs in mentoring and experiential learning subjects, and to develop frameworks to assess advising and mentoring, including feedback from students.

The financial security of graduate students continues to be a significant issue that we are striving to address. In addition to the AY2020 commitment from each school to help reduce financial insecurity among specific populations of graduate students (namely

those on nine-month appointments or with non-resident status), two new funding resources have been created. The [Graduate Student Short-Term Emergency Fund](#) is designed to assist graduate students by providing support when they need help with unexpected and unavoidable emergency expenses, and [doctoral student financial hardship funding](#) assists PhD students who face financial hardships arising from special circumstances, including COVID-19, that may impact their long-term academic progress.

OVC has made notable strides in understanding and addressing the unique challenges that graduate students with children face. We have the administration's commitment and school deans' support to implement three of the major recommendations of the final report of the Graduate Family Support Working Group, namely:

- Hiring a designated staff person who will focus on and coordinate communication, outreach, and programs that assist graduate students with children.
- Offering a need-blind grant for PhD and master's students in eligible programs. An AY2020 pilot, the [MIT Grant for Graduate Students with Children](#), awards \$2,000 to \$4,000, depending on the number of children students have, for expenses such as child care, health care, and housing.
- Capturing data on graduate students with children administratively and centrally rather than relying on survey data.

Finally, other efforts to improve the graduate experience include:

- Offering new and improved orientation programming in summer 2019, as well as expanding orientation programming into the fall semester to engage a larger group of students
- Investing in diversity, equity, and inclusion through several efforts, including a new training module for incoming students; greater transparency in department-level data on recruitment, admissions, and yield; adoption of new policies and practices for fellowships; and regularly meetings with the Graduate Student of Color Advisory Council and the Graduate Student Council Committee on Diversity, Equity, and Inclusion
- Providing greater access to professional development and experiential learning opportunities through internships

Leading and Managing to Optimize Services and Programs

Now that OVC is in its third year, all of our functional organizational changes have been implemented and we have begun to hit our stride.

In a continuing effort to optimize our programs and services, the OVC leadership team agreed in 2019 to conduct ongoing, office-based comprehensive work prioritization evaluations. These efforts aim to make room for innovation while ensuring that critical work functions are still performed at a high level. The coronavirus pandemic has also led us to reexamine how we perform our work and has already introduced greater efficiencies and new ways to work in a remote environment.

Other notable accomplishments this year led by the vice chancellor include continued all hands meetings (now virtual), more frequent meetings of the OVC leadership team, the creation of the 8 am COVID-19 response call (attended by 200 staff, faculty, and students across the Institute), and support of staff-led efforts such as the Wellness Committee.

Response to the Coronavirus Pandemic

Staff from across OVC have significant roles in the Institute's response to the pandemic, from engaging in overall strategic planning for the summer and fall to working tirelessly to adapt our operations to a remote environment. A few examples include:

The Academic Continuity Working Group, led by Vice Chancellor Waitz

Teaching + Learning Lab: developing the Teach Remote website and ongoing curricular support for faculty in addition to developing a Learn Remote site for students

Admissions Office: virtual Campus Preview Weekend for admitted undergraduates

OVC and the Division of Student Life: Student Success Coaching Program

Office of Graduate Education and the Graduate Student Council: virtual graduate orientation

Office of the First Year (and others): optimizing the first-year student experience

Office of Experiential Learning: creating and supporting summer and fall remote experiential learning opportunities

The COVID-19 Testing and Compliance Team, led by Vice Chancellor Waitz

Team 2020, led by Interim Deputy Executive Vice President Anthony Sharon and Vice Chancellor Waitz, which examined options and made recommendations for AY2021

Daily 8 am COVID-19 calls led by Vice Chancellor Waitz and involving over 150 faculty, senior leadership, and staff

OVC will continue to work diligently to provide the best possible remote programs and services for students, faculty, and staff until we can all safely return to campus.

Headquarters

Office of the Vice Chancellor headquarters provides foundational support to OVC staff, enabling them to fulfill the organization's mission. Headquarters delivers administrative and operational support across the organization in the following areas:

- Human resources
- Finance
- Communications
- Desktop support (shared with the Division of Student Life)
- Project management
- Cross-functional team oversight

During AY2020, Samantha DuBrown joined the OVC staff in the role of human resources business partner, working particularly closely with Student Financial Services. In addition, OVC prepared for two major retirements: Jeanne Hillery, director of finance and administration, and Mary Callahan, registrar and senior associate dean.

Cross-Functional Teams

Several cross-functional teams, working groups, and initiatives monitored by headquarters continued to advance the vice chancellor's charge in AY2020. They include the following:

- Curricular Practical Training Working Group
- Data survey administration
- Wellness Committee
- Solutions for doctoral students in financial distress
- First Generation Low Income Working Group
- Interactive mental health training for graduate students
- Graduate advising
- Undergraduate advising
- Interphase EDGE online (led by the Office of Minority Education)
- Visiting Student Enrollment Management Group

A number of cross-functional teams concluded their work and submitted final reports, including teams focusing on career exploration, graduate professional development, learning management, international students of color, and data/surveys.

Key Accomplishments

In addition to helping advance the vice chancellor's key priorities, the OVC headquarters team ran and refined leadership team meetings, all-staff meetings, retreats, and other programmatic events to build staff community; supported staff members during the work-from-home transition resulting from COVID-19; and continued to enhance internal communications and wellness.

Affirmative Action Goals and Successes

The OVC staff—composed of 65.7% women and 32.1% members of minority groups—is one of the most diverse organizational units at MIT, with an ongoing commitment to developing a workforce that reflects the diversity of the communities we serve. The OVC leadership team is expected to show leadership in the area of diversity, equity, and inclusion. Every OVC employee shares responsibility for fostering an inclusive work environment in which all employees can do their best work.

As a result of the efforts of the leadership team and hiring managers throughout the organization, OVC succeeded this year in attracting and hiring members of underrepresented minorities and women to fill open positions across the division. This

year OVC met all of its placement goals for women and minorities across every job category. At present, MIT has no effective way to accurately capture the representation of individuals with disabilities or qualified veterans in our population, making it difficult to measure whether we are meeting or making adequate progress toward our affirmative action goals in these areas.

During the period July 1, 2019, through June 30, 2020, 73% of all new OVC hires were women and 42.3% were underrepresented minorities. Over the same period, OVC promoted 19 staff members: 52.6% were women and 42.1% were minorities.

Awards and Recognition

Several members of the OVC community received Infinite Mile Awards.

Looking Ahead

In the coming months, we will focus on:

- Implementation of our key priorities
- Impact and action tracking
- Efficiency/alignment with our revised goals
- Integration of the Institute-wide diversity, equity, and inclusion effort
- The transition to a higher density campus in 2021

Office of Admissions

The Massachusetts Institute of Technology upholds a commitment to meritocracy and fair access to the admissions process for students from all backgrounds. With that in mind, the [Office of Admissions](#) enrolls a diverse and talented undergraduate student body composed of some of the world's most intelligent and creative individuals interested in an education centered on science and technology.

Current Events

The 2020 academic year was unprecedented, not only for MIT but also for higher education as a whole. COVID-19 reached the United States near the end of the admissions cycle. Our last day in the office was March 13, the day before we released our regular action decisions.

We admitted a slightly higher number of students in anticipation of a decreased yield due to the uncertain impact of an online Campus Preview Weekend (CPW). We transitioned all on-campus yield events—CPW, Ebony Affair, and Sin LiMiTe—to virtual events. CPW became a monthlong experience, and we saw overwhelming support and participation from our students and campus partners. As a result, on May 1, yield was better than expected with 1,162 students out of 1,457 choosing to attend MIT.

We kept the wait list active later than normal, releasing it in late July after extending the deadline for students to request a gap year. Because 91 students took a gap year, fewer than expected, we did not admit anyone off the wait list.

All on-campus recruitment programs transitioned to a virtual model; we canceled all staff travel and hosted several virtual events.

We implemented changes to our testing requirements for the AY2021 cycle. SAT subject tests will no longer be considered, and we expanded the number of English-language proficiency exams we will accept. We made a temporary change to the AY2021 testing policy by suspending our requirement for SAT/ACT scores because of COVID-19. We are also thinking through how we will assess students' readiness for MIT without subject tests and, in many cases, SAT/ACT scores or spring junior year grades.

In collaboration with the Committee on Undergraduate Admissions and Financial Aid, we finalized a report on the benefits of student body diversity and the need for us to consider race as one of many factors in order to achieve diversity.

Key Accomplishments

- We received 20,075 applications for the first-year class entering in the fall of 2020 (down 5.8% from last year).
- Admitted students totaled 1,457, representing 7.3% of the applicant pool.
- Women make up 49% of the first-year class, tying the Class of 2022 for the largest percentage of women.
- There are 1,071 students in the enrolling class, for a yield of 73.5%. An unprecedented 91 students deferred enrollment until 2021 given the ongoing pandemic. We were not able to admit any students off the wait list.
- A total of 740 students applied for transfer admission. Of those, 23 were admitted. Of the 23 admitted, 19 are expected to enroll and two are taking a gap year. There is one Wellesley 3:2 student who will also take a gap semester until spring of 2021.
- We have almost completed our implementation of Slate (a comprehensive customer relationship management database and application review portal). The entire admissions process will be tracked through the system, from prospect identification and outreach, inbound inquiries, application submissions, and alumni interviewing to application review and decision notification.
- We have developed a new virtual visit program that includes a presentation with admissions officers, student-led "tours," and a choose-your-own-adventure component.
- With less than a month to prepare, we transitioned Campus Preview Weekend to a fully online, virtual experience and expanded our activities to run for the entire month of April.

Class Profile and Commitment to Diversity

- The composition of the Class of 2024 reflects MIT's ongoing commitment to the diversity and excellence of our student body. Of the first-year students entering in 2020, 49% are women, 18% are the first generation in their family to enroll in college, and 10% are international.
- Students come from all 50 US states and 50 countries. Of the incoming class, 90% have been leaders of an organization (e.g., president, captain) and 38% have founded an organization or business.
- The mean evidence-based reading and writing SAT score for first-year students is 750, and the mean math score is 789. The mean reading score is the highest ever for an incoming class.
- Twenty percent of the members of the class are Pell Grant recipients (versus 19% the previous year).
- MIT continues to partner with QuestBridge, a nonprofit organization that recruits high-achieving students from low-income backgrounds. Eighty-eight QuestBridge finalists will attend in the fall (down from 96 for the previous class).
- Enrolling students who are US citizens or permanent residents are asked to self-identify their race/ethnicity within categories established by the US Department of Education. The composition of the Class of 2024 is as follows: American Indian/Alaskan Native, 2%; Asian American, 42%; Black/African American, 11%; Hispanic/Latinx, 14%; Native Hawaiian/Pacific Islander, 1%; and white/Caucasian, 39%. Twenty-six percent of students self-reported as a member of an underrepresented minority group. (Students may identify with more than one racial or ethnic group. International students do not report race or ethnicity; however, they are included when percentages of the class as a whole are calculated.)

Recruitment Travel and Outreach

- Prior to the pandemic, we conducted over 70 US information sessions, traveling to 33 states along with Washington, DC, and Puerto Rico. Of those sessions, 55 were MIT only, 15 were held with our partners (Pomona College, the California Institute of Technology, and Yale University), and four were virtual recruitment events in the southwest region.
- International recruitment travel included visits to Barbados, Jamaica, St. Lucia, Guyana, the United Kingdom, Senegal, Rwanda, Kenya, Tanzania, Zimbabwe, Swaziland, and South Africa.

Visit Programs

- Over 27,000 visitors (11,633 prospective students) participated in information sessions. Due to the pandemic, there was no programming in March, April, or May. Virtual sessions began in June.
- We provided 1,552 tours to prospective families, including one month of virtual tours.
- Campus Preview Weekend was transformed into a month of virtual events. The community planned 409 Zoom events, 1,215 students logged into the virtual event platform, 1,095 were paired with an MIT pen pal, and an additional 526 logged into the CPW Discord server.

Educational Council

- The Educational Council increased the number of alumni interviewers to 6,042.
- A total of 14,366 interviews were conducted.
- We began the transition of the Educational Council interview portal into Slate.
- Our educational counselors included members from the classes of 1941 to 2019, with 31% of the volunteers hailing from the last 10 graduating classes.

Awards, Recognitions, and Staffing

- During the 2020 academic year, the Admissions Office was composed of 26 administrative staff positions, including several shared positions with Student Financial Services, and nine support staff positions. Sixty-three percent of the staff members were women, 37% were men, and 43% were members of underrepresented minority groups (Hispanic, Asian, and African American).
- DJ Rock and Chris Peterson were awarded Infinite Mile Awards, DJ for diversity and inclusion work and Chris for innovation and creativity.

Looking Ahead

- The Admissions Office is actively preparing to move to the new Kendall Square office space.
- We are planning our visit and information session transition to the new visitor center in Kendall Square once we are past the pandemic and can welcome visitors to the campus again.
- We will conduct a search for director of selection as current director, Emily Sheldon, will be leaving MIT after 14 years with the office.
- We are preparing for a fully virtual fall with regard to recruitment and applicant interviews for the Class of 2025.

Career Advising and Professional Development

The mission of [Career Advising and Professional Development \(CAPD\)](#) is to empower students, postdocs, and alumni to explore their life and career goals by helping them develop core competencies and build professional networks. We engage students and alumni in self-discovery to craft lives that are intellectually challenging, personally enriching, and of service to the world.

Key Accomplishments

- Handshake: Implemented MIT's Handshake career management platform and increased the diversity and number of opportunities in all majors and disciplines. Nearly 70% of undergraduates activated their Handshake profile.
- Enhanced student communication and CAPD branding: Conducted a large-scale branding and messaging campaign to increase brand awareness.
- Professional development and graduate student programming: Collaborated across the campus to host workshops and programming. Submitted a graduate student professional development report and piloted a program for graduate students of color.
- Diversity of opportunities and career portal development: Completed a career exploration committee report led by Professor Dave Darmofal and enhanced career exploration at MIT by developing a career portal that centralizes opportunities, events, and programs.
- Continued pilots of Designing Your Life, Infinite Careers, and MIT Future (Me in the Future) and creation of the SP.252 Careers in Medicine first-year discovery course.
- Integrated MIT student voices in our work: Launched a peer career advisor program, created a first-year student advisory board, and piloted a student voice newsletter.

Notable Statistics

- Conducted 11,386 (non-unique) student, alumni, and postdoctoral engagements through 5,616 career, distinguished fellowship, prehealth advising, and online sessions. We had 3,956 attendees at 208 workshops, presentations, employer events, and information sessions; in addition, 1,706 recruitment interviews were conducted and 108 students attended site visits. CAPD submitted 72 Prehealth Committee letters and 50 Distinguished Fellowship endorsement letters.
- Expanded outreach and programming for first-year undergraduate students:
 - First-year attendance at events grew by more than 9%.
 - A total of 388 students stayed connected through our newsletter, an increase of 25% from AY2019.
 - Twenty first-year students participated in the Prehealth Pre-Orientation Program.

- Among members of the Class of 2019 who were seeking employment, 91% of bachelor's, 84% of master's, and 86% of PhD graduates reported obtaining a job within three months of graduation. Reported median salaries were \$90,000 for SB graduates, \$97,500 for SM graduates, \$115,000 for MEng graduates, and \$140,000 for MBA graduates. Reported doctoral median salaries were \$58,000 for postdoctoral positions and \$125,000 for other positions.

Prehealth Advising

- In the 2019 cycle, 88 students and alumni (33 undergraduates, four graduate students, and 51 alumni) applied to medical school with an 84% acceptance rate.
- The MIT-Harvard Medical School MD-PhD Mentoring Program had 10 participants.
- Of the 80 students who applied to the shadowing program, 17 participated due to the pandemic.

Career Services

- We completed 467 quick queries in fall 2019.
- Career exploration pilots continued for the third year:
 - Two Designing Your Life mini-courses and three workshops were offered with 51 attendees.
 - The Infinite Careers Series had 119 attendees at eight alumni speaker events and a student alumni mixer; 99% of students were satisfied with the program content.
 - CAPD and the Fall Career Fair Committee coordinated MIT Future events to kick-start career exploration for first-year undergraduates; the events attracted 1,145 attendees.
- Hosted 103 employers conducting 1,706 on-campus interviews. A total of 5,298 employers in Handshake posted 28,054 jobs; of these employers, 4,500 advertised opportunities to MIT students for the first time this year.
- The Employer Connection Program included 19 employers.

Distinguished Fellowships

- Distinguished Fellowships supported 274 non-unique applications. There were 29 winners from MIT, including:
 - Ali Daher, Claire Halloran, Billy Anderson Woltz, Francisca Vasconcelos, and Megan Yamoah (Rhodes)
 - Francisca Vasconcelos, Steven Truong, and Talya Klinger (Marshall)
 - Mariam Dogar, Jessica Quaye, Adedoyin Olateru-Olagbegi, Jessica Wang, Sarah McMillian, Megan Yamoah, and Loewen Cavill (Schwarzman)

- Mehtaab Sawhney (Churchill)
- Sandra Walter, Srimayi Tenali, William Pinney, Talia Khan, Anshula Gandhi, Booker Schelhaas, Christien Williams, Ivy Li, Kendi Hu, and Max Kessler (Fulbright)
- Charlotte Minsky and Lyndie Mitchell Zollinger (Gates)
- Ten MIT students and alumni were among the 30 recipients of Soros Fellowships for New Americans.

Awards and Recognition

- Seven staff members served in leadership roles for professional associations and/or presented at regional and national conferences.
- Thirteen staff members participated in OVC/Institute-wide committees.
- Tamara Menghi and Eric Pavesic were recipients of OVC Infinite Mile Awards.
- Deborah Liverman received the MIT Excellence Award.
- Kim Benard won the Billard Award.

Looking Ahead

- CAPD website: Revamp the CAPD website to increase target audience visits and engagement
- Pay equity: Continue to lead efforts to close the pay gap and develop pay equity resources
- Virtual office: Develop new programming and resources by virtualizing our services and enhance collaborations to engage graduate programs and employers virtually
- Downturn in the economy: Pilot support groups and develop resources to assist in transitions and maximize summer experiences
- Career exploration report recommendations: Implement changes to the Fall Career Fair, including diversity in employment opportunities, and broaden MIT's Handshake system to include other academic and administrative centers
- Improve the advising experience for select student populations: Adapt programs and services to better support the needs of first-generation and low-income students and undergraduate and graduate students of color as they explore careers, fellowships, and graduate and medical school and reduce barriers to these pathways
- Strengthen internal partnerships: Provide greater access to diverse career, education, and professional development opportunities for students through the creation of an MIT career advisors network

Office of Experiential Learning

The [Office of Experiential Learning \(OEL\)](#) works to organize, amplify, and accelerate the practice and impact of experiential learning for MIT students, bringing the spirit of *mens et manus* to life. OEL is home to four experiential learning centers and programs—D-Lab, the Edgerton Center, the Priscilla King Gray Public Service Center (PKG Center), and the Undergraduate Research Opportunities Program (UROP)—but collaborates and coordinates with experiential learning programs across the Institute, including MISTI, the Innovation Initiative, CAPD, GEL, the New Engineering Education Transformation Program (NEET), Terrascope, and many more.

OEL had much to celebrate in AY2020, including the September 2019 hiring of Jill Bassett, the new director and associate dean of the PKG Center; the 50th anniversary of UROP's founding; and the launch of a new course on experiential ethics in the summer of 2020.

The Expanding the Global Classroom planning process (co-chaired by Kate Trimble, OEL director and senior associate dean, and MISTI's April Julich-Perez) concluded in summer 2019. This Institute-wide strategic planning effort resulted in the transfer of programs from the Global Education Office to MISTI in order to improve student outcomes, enhance MIT's global portfolio, and realize operational efficiencies.

Finally, as the pandemic forced students off campus and staff and faculty to remote work arrangements, OEL worked to convert experiential learning opportunities to a virtual or remote format and to ensure that students could access meaningful and funded opportunities in the spring and summer of 2020.

MIT D-Lab

Founded in 2002 by senior lecturer in mechanical engineering Amy Smith, [MIT D-Lab](#) works with people around the world to develop and advance collaborative approaches and practical solutions to global poverty challenges. The lab's mission is pursued through an academic program of more than 20 MIT subjects, student research, and fieldwork opportunities; research groups; and fieldwork, community engagement, and training and professional education programs.

D-Lab works with collaborating organizations in communities in two dozen countries. International collaborators—such as local nongovernmental organizations and social enterprises—define student projects, participate in research, collaborate on the design of technologies, host design summits and training, and more.

Over 18 years, D-Lab has developed 25 MIT classes, enrolled more than 2,900 students, trained more than 5,000 people worldwide in design or business skills, and reached more than 2.25 million people with goods and services.

Academics

In efforts led by Professor Maria Yang, faculty director for academics, and Libby Hsu, associate director for academics, D-Lab offered 16 MIT subjects in AY2020. This year saw 274 students enroll in D-Lab classes (an increase of 19% over AY2019).

Subjects Offered

Subjects offered in AY2020 were 2.652/EC.712/EC.782 Applications of Energy in Global Development; EC.746J/2.00C/1.016J Design for Complex Environmental Issues (Terrascope); EC.729/2.729/EC.797 Design for Scale; MAS.665/15.375/EC.731J Development Ventures; 2.722J/EC.720 D-Lab: Design; 11.025/11.472 D-Lab: Development; EC.717/EC.787 D-Lab: Education and Learning; EC.718/EC.798 Gender and Development; EC.740 Inclusive Economies; 2.651/EC.711/EC.791 Introduction to Energy in Global Development; 4.411/EC.713J D-Lab: Schools; 15.772/EC.733/2.771/2.871 D-Lab: Supply Chains; 11.474/EC.715 Water, Sanitation, and Hygiene; EC.719/EC.789 Water, Climate Change, & Health; and EC.750/EC.785 Humanitarian Innovation. A special one-time subject was offered in the fall.

Students and Projects

D-Lab students worked in teams on 53 projects with community partners in 19 countries including Botswana, Brazil, Colombia, East Timor, Egypt, Ghana, Greece, India, Indonesia, Jordan, Kenya, Malaysia, Mexico, Nepal, Nigeria, Rwanda, Thailand, Uganda, and the United States. Over the Independent Activities Period (IAP), D-Lab students traveled to Botswana, Brazil, Colombia, Greece, India, Kenya, Mexico, Peru, and Uganda.

COVID-19: Move to Online Education in Spring 2020

In March, MIT transitioned all classes to online. A survey of students and instructors showed that 74% of D-Lab students rated their satisfaction with the transition to virtual learning at a 7 or above on a 10-point scale. D-Lab students also reported that instructors' accessibility and ongoing support were key resources during this unprecedented semester.

Research

D-Lab's research team, led by Dan Frey, faculty director for research, and Kendra Leith, associate director for research, received funding from sources including the United States Agency for International Development, the National Science Foundation, the Santander Foundation, the Abdul Latif Jameel Water and Food Systems Lab (J-WAFS), and individual donors. The primary areas of D-Lab research during AY2020 are well represented in this partial list of publications:

- *Assessment of Potential Opportunities for Use of Digital Payments for Smallholder Farmers in Guatemala's Western Highlands* (Cauam Cardoso and Jonars Spielberg, May 2020)
- *Characterization of Aggregate Behaviors of Torrefied Biomass as a Function of Reaction Severity* (Meredith Barrel, Kevin S. Kunga, Sonal K. Thenganea, Vidyut Mohan, Daniel Sweeney, and Ahmed F. Ghoniem, February 2020)
- *Evaluation of Low-Cost Evaporative Cooling Technologies for Improved Vegetable Storage in Mali* (Takemore Chagomoka, Ousmane Sanogo, and Eric Verploegen, October 2019)

- *Exploring Fairness in Machine Learning for International Development* (Yazeed Awwad, Richard Fletcher, Daniel Frey, Amit Gandhi, Maryam Najafian, and Mike Teodorescu, March 2020)
- *Seeds of Silicon: Internet of Things for Smallholder Agriculture* (Anish Paul Antony, Jennifer Lu, and Daniel Sweeney, August 2019)

While travel was suspended, D-Lab researchers' close ties to the communities where they work eased the transition to online communication and transference of some research activities to on-site collaborators.

Innovation Practice

The third pillar of D-Lab, Innovation Practice, is headed by Laura Budzyna, associate director for innovation practice. The program was formed in spring 2017 to develop, advance, and apply participatory innovation as a methodology for tackling poverty challenges. Highlights include the following:

- The D-Lab Scale-Ups Fellowship worked with East African local founders, and in April the program established a bridge fund to help past and present fellows meet the challenges created by the COVID-19 crisis.
- The Humanitarian Innovation Program continued its multiyear collaboration with refugee nongovernmental organization Faros in Athens, Greece; made an exploratory visit to the Kutupalong Refugee Camp in Bangladesh; and continued work on a co-creation toolkit. In response to COVID-19, the team pivoted to online and app-based programs.
- The Inclusive Regional Economies Program team ran multiple design workshops with small-scale Colombian miners. In response to COVID-19, the team developed "TeleCCB," workshops delivered via cellphones. In June, the program launched a new initiative to address gender-based violence in mining communities.
- The Practical Impact Alliance (PIA) organized a co-design summit in Uganda for PIA members, D-Lab, and the local community to address barriers to scale for entrepreneurs in East Africa. This year PIA wound down its activities in favor of professional education as a strategy to reach professionals with D-Lab methodologies.

Edgerton Center

The [Edgerton Center](#) upholds the legacy of Harold "Doc" Edgerton—inventor, entrepreneur, explorer, and MIT professor—by promoting hands-on and project-based learning, offering subjects in engineering and imaging, supporting student clubs and teams, managing student machine shops, upholding MIT's expertise in high-speed and scientific imaging, and offering a year-round K–12 program.

In March 2020, the COVID-19 pandemic forced the MIT community to evacuate. Courses moved online, all competitions were canceled, and our K–12 programs ground to a halt.

Key Accomplishments

Clubs and Teams

The Edgerton Center provides the infrastructure on which approximately 350 students rely when undertaking engineering projects of significant scope.

- With the forced COVID-19 delay, the MIT Rocket team chose to focus on engineering processes and team building. The team, however, still has plans to travel to the Mojave Desert in January 2021 to launch a two-stage rocket that can cross the Kármán Line, the recognized boundary of space.
- Members of the MIT Motorsports team achieved success in March with their battery-powered Formula-style race car when they were able to test drive the vehicle.

Student Machine Shops

In the 10,000-square-foot, staff-supervised shop space facilities, MIT students have the opportunity to learn how to design, build, and manufacture.

- After 21 years in Building 44, the Edgerton Student Shop moved to Building 6C. The celebration was covered in an *MIT News* story ([Edgerton Center celebrates reopening of its student shop in Building 6C](#)).
- Graduate student Jack Montgomery, who studies pathogen transmission in Associate Professor Lydia Bourouiba's lab, used the Edgerton Student Shop to fabricate components for experiments to study how sneezes spread disease. Montgomery called the Edgerton Student Shop "the most valuable makerspace on campus" and acknowledged the expertise of shop manager Mark Belanger.

Subjects

The Edgerton Center is the administrative home for subjects offered by the Edgerton Center and D-Lab.

- During AY2020, 462 students participated in 53 for-credit subjects, ranging from Edgerton's iconic 6.163 Strobe Project Lab and D-Lab offerings to student-initiated UROP activities and independent projects.
- Edgerton Center associate director Jim Bales improvised to keep his students engaged in the remote 6.070 Electronics Project Lab by shipping equipment to students. "It is almost like having a piece of the lab at home," said master's student Kevin Yu in *MIT Technology Review*.

K-12 Programs

With little or no fee required to participate, the Edgerton Center's K-12 programs embody the Institute's larger goals of creating educational opportunities for students from all backgrounds and removing barriers to participation. Highlights include the following:

- Now in its 23rd year, the Edgerton Center offers daily no-cost, three-hour, project-based lessons in science and engineering for fourth- through eighth-grade students. In our Covid-shortened year, we served 1,747 students from public, private, and home schools in greater Boston and nearby New England states.

- The Greater Lawrence Technical School (GLTS) STEAM (science, technology, engineering, art, and mathematics) innovation program collaboration with the Edgerton Center completed its third year.
- For a third year, GLTS and Advanced Functional Fabrics of America collaborated with the Edgerton Center to continue curriculum development to promote workforce learning in advanced functional fibers, introducing a knitting curriculum.
- The summer Engineering Design Workshop for high school students moved online with two topic-based sessions and one two-week session in team-led design challenges. Over 60 students in the United States and Europe participated. About half received tuition abatements.
- A total of 147 K–12 educators from across New England participated in 28 professional development workshops integrating maker activities into K–12 curricula.
- Instructors traveled to the Mustakis Foundation in Recoleta, Chile, for workshops funded by a grant from the Abdul Latif Jameel World Education Lab (J-WEL). Edgerton Center instructor Ed Moriarty traveled to Ferrara, Italy, and Barcelona, Spain, with MIT's Global Teaching Lab.
- Edgerton Center instructors facilitated remote workshops with our patented DNA and protein modeling sets in the LEAH-Knox Scholars Program, a science program for disadvantaged and underrepresented high school students. Accompanying teacher training materials for the sets were also completed.

Fundraising

Over 200 gifts were received during the 24-Hour Challenge in March. Students and parents were intentionally not solicited given the timing.

Looking Ahead

The COVID-19 pandemic has had a dramatic effect on the Edgerton Center's core business, experiential learning. For years, we have provided our student teams with authentic, project-based experiences that prepare students for leadership positions when they graduate. During the upcoming year, we must find new ways to accomplish the same goals with much less face-to-face contact. We must also look for ways to redress imbalances across race and class for MIT students and the K–12 communities that we engage with.

Priscilla King Gray Public Service Center

The [Priscilla King Gray Public Service Center](#) taps and expands MIT students' unique skills and interests to prepare them to explore and address complex social and environmental challenges. In the 2020 academic year, many of these challenges took on new weight in the face of the public health and civil rights crises taking place across the United States and around the world. Although the PKG Center's spring programming was deeply impacted by the COVID-19 pandemic, staff members rose to the challenge, rapidly expanding or modifying existing programs and developing new summer opportunities for students to invest in social change and innovation at a time when contributing to the social good is especially important.

Key Accomplishments

In fall 2019, the PKG Center brought on a new associate dean and director, Jill Bassett, who brings with her a wealth of executive, policy, and community engagement experience in higher education, government, and health and human services.

Throughout the COVID-19 crisis, PKG sustained strong student enrollment across regular programs as well as adapted much of our programming to take place online during the pandemic. Some notable points include:

- In fall 2019, the PKG Center offered its first for-credit course, SP.250 Transforming Good Intentions into Good Outcomes, which ranked first in its category in MIT Discover Course evaluations.
- A total of 49 PKG Fellows worked in over 28 countries on public service projects around the world during summer 2019 and over IAP 2020.
- IDEAS, MIT's annual social innovation competition, virtualized its Innovation Showcase and Awards, conducting the final round of judging via Zoom and celebrating 2020 grantees through a Facebook live stream.
- In spring 2020, PKG rapidly expanded and implemented new social impact internship opportunities to connect MIT students with paid, remote work on challenges such as COVID-19 relief and diversity, equity, and inclusion. The center also welcomed Julie Uva as program administrator of social impact employment to oversee our federal work-study and social impact internship programs.
- Scaling up our social impact internship program was urgently prioritized when the COVID-19 pandemic brought two crises to the forefront: community and government agencies were (and continue to be) quickly strained, and many MIT students discovered their scheduled internships had been canceled. In response, the PKG Center rapidly sourced approximately 100 remote undergraduate internships to provide vital support to community organizations.

Thanks in part to rapid program virtualization and adaptation, over 2,000 MIT undergraduate and graduate students engaged with the PKG Center in the 2020 academic year. The center relied on an established network of government and community partnerships to create new opportunities and to meet the swiftly evolving needs of these partners by pairing them with MIT students eager to provide support in unprecedented times.

Awards and Recognition

The PKG Center was awarded a number of significant grants, including continued support from the Bose Corporation, and the center established a new partnership with Acumen and the Rockefeller Foundation supporting the IDEAS program. The center also received a number of individual gifts from alumni and supporters of public service. PKG staff member Sarah Bouchard, assistant dean of community-based programs, was presented the MIT Excellence Award.

Additionally, this spring the center recognized two students for excellence in public service with the Priscilla King Gray Award for Public Service: sophomore Kiara Wahnschafft and graduate student Seamus Lombardo. The center also recognized Elsa Olivetti of the Department of Materials Science and Engineering as the winner of its third Paul Gray Faculty Award for Public Service.

Looking Ahead

In the 2021 academic year, the PKG Center will continue building on remote internship and fellowship opportunities for undergraduate and graduate students at MIT to engage in meaningful public service. We hope to maintain a strong virtual presence through ongoing workshops and events held via Zoom. Our cross-Institute workshop series, [Get Good Stuff Done](#), will continue into the fall and spring semesters as a way of pooling and amplifying public service resources available within MIT circles.

We are also implementing new programming for the experiential learning opportunities guarantee around civic engagement and remote immersion as well as introducing the incoming MIT Class of 2024 to the center's resources and programming.

Having had to cancel the 2020 PKG Spring Break due to COVID-19 and campus closures, we hope to modify this program for 2021 to connect students with a variety of nonprofit, government, and community partners working on the front lines to advance issues in climate change and health.

Undergraduate Research Opportunities Program

The [Undergraduate Research Opportunities Program](#) remains MIT's chief exponent of experiential learning, promoting faculty-undergraduate collaborations at the forefront of research in all disciplines. Each year, nearly 60% of undergraduates participate, with approximately 60% of the faculty active as supervisors and mentors.

The UROP Office directs all program operations, resources, and policies. Staff oversee final approval of approximately 6,000 projects yearly, allocate funds (approximately \$5 million annually), and manage statistical reporting via a comprehensive participation system. Throughout the year, the UROP Office offers expansive programming, advocacy, and support for students, faculty, and DLCs and supports Institute fundraising efforts.

Notable Data and Statistics

- A total of 92% of 2020 first undergraduate degree recipients participated in UROP at least once.
- During summer 2019 and spring 2020, 57% of undergraduates took part in UROP, with 62% of undergraduate women and 52% of undergraduate men participating. During this period, 60% of MIT faculty mentored at least one UROP student.
- In all, 69% of first-year students (Class of 2023) participated during AY2020 and the summer, as compared with 64% of Class of 2022 students in AY2019 and summer 2019.

- A total of 78% of UROP projects were conducted for pay, with the remainder conducted for academic credit (19%) or as volunteer projects (3%).
- The Institute committed \$11,007,853 to undergraduates engaged in UROP, with \$5,850,613 (53%) allocated directly from the UROP Office.

Key Accomplishments

- We marked UROP's 50th anniversary by releasing a video documentary and a print "impact" report featuring student profiles and highlighting UROP's influence on academic and career trajectories. Programming included panels and a poster session offered during Family Weekend.
- Addressed longstanding challenges in securing signed MIT Inventions and Proprietary Information Agreements (IPIAs) from undergraduates. UROP system functionality now ensures that all undergraduates sign IPIA forms before initiating a UROP project (beginning in IAP 2020).
- Partnered with the Graduate Student Council on mentoring skills programs, expanding offerings to include condensed one-hour sessions for reaching larger cohorts of graduate student UROP mentors.
- Offered customized workshops to increase engagement among specific student populations, including first-year, underrepresented minority, first-generation, and returning students.
- With the March campus departure of students due to COVID-19, developed and implemented processes to secure faculty approval for approximately 1,800 on-campus UROP students to continue work virtually. Overall, more than 90% of spring projects received faculty approval to continue remotely.

Awards and Recognition

Professor Yufei Zhao (Mathematics), Alexander Amini (graduate student, Electrical Engineering and Computer Science), and Carmelo Ignaccolo (graduate student, Urban Studies and Planning) won 2020 Outstanding UROP Mentor Awards.

Looking Ahead

We plan to:

- Launch a fall 2020 initiative providing funded UROP opportunities for first-year students, with a suite of virtual exploration programming on making remote connections, honing professional skills, and maximizing research experiences
- Further extend mentorship skill development programming for graduate students
- Partner with the Office of Experiential Learning on efforts promoting UROP as a means for leveraging the new experiential learning guarantee
- Expand programs and resources for students interested in research, particularly underrepresented minority and first-generation students

Office of the First Year

The mission of the [Office of the First Year \(OFY\)](#) is to provide excellent services and programs that catalyze student exploration and promote the academic success and personal development of undergraduates. These programs enrich and support undergraduate education at the Institute, including:

- First-year programming (e.g., orientation, pre-orientation programs [FPOPs], faculty engagement)
- First-year advising (e.g., choice of major, transfers)
- Committee on Academic Performance
- First-generation programming

Notable Data and Statistics

- A total of 85% of members of the Class of 2023 were advised by faculty during their first year at MIT, and 15% were mentored by faculty.
- In the fall 2019 semester, 7% of students in the Class of 2023 were flagged; 83% of flagged students recovered and passed their flagged subjects. Due to the timing of the COVID-19 pandemic, no fifth-week flags were issued in the spring 2020 semester.
- In all, 616 first-year students participated in an FPOP.

Key Accomplishments

- The elimination of sophomore standing allowed for consistency of year-long advising for the Class of 2023 cohort.
- FLIPOP was established, an FPOP for first-generation low-income students.
- New social media platforms were established and successful in promoting events and building community.
- Despite COVID-19, all members of the Class of 2024 completed the process of declaring a major or being undesignated.

Awards and Recognition

2020 First-Year Student Award Recipients

- Paige Forester (Athletics/Women's)
- Kenneth Wei (Athletics/Men's)
- Stuti Khandwala (Research)
- Jake Sonandres (Service)

2020 Outstanding Associate Advisor Award Recipients

- Karna Morey '21 (Seminar Advising)
- Pooja Reddy '20 (Traditional Advising)

Concourse

Concourse is a first-year learning community of students and instructors dedicated to exploring foundational questions at the heart of humanistic inquiry and the relationship of these questions to the remainder of an MIT education. The curriculum covers the science core (mathematics, physics, and chemistry), offers a foundational humanities course, and integrates both the sciences and humanities into a larger context in the program's weekly first-year advising seminar.

Key Accomplishments

- Received renewal for our annual T.W. Smith Award, which helps fund upper-level seminars and educational experiences outside of the classroom, such as our joint venture with the History Section to send students abroad to study ancient Rome and Greece as well as our annual curriculum-planning retreat
- Awarded Alumni Class Funds for Elizabeth Vogel Taylor's project Increasing the Exposure of Organic Chemistry Students to the Work of Female and Minority Researchers
- Continued to use the CC.011: Thinking Across the Disciplines spring seminar to expose first-year students to a diverse range of faculty at MIT
- Continued to work with the Office of the Vice Chancellor on improving the first-year experience and developed an exploration-themed pilot that was incorporated into our fall seminar, with plans to expand in spring 2021

Notable Statistics and Data

- Fall first-year enrollment at the fifth week: 49
- Spring first-year enrollment at the fifth week: 46
- Thirty-one upper-level Concourse alumni employed as tutors, teaching assistants (TAs), office workers, and graders

Experimental Study Group

The **Experimental Study Group** builds a learning community through small-group, discussion-based, experiential instruction in biology, chemistry, math, physics, and humanities. ESG also holds weekly lunches, group study sessions, outings, and other opportunities to gather as a community.

First-Year Experimentation Pilot Project

With financial support from OVC, ESG experimented with innovations in the physics and chemistry General Institute Requirement (GIR) curricula. Collaborative hands-on projects replaced selected exams in physics and chemistry. Students engaged in “real-world” learning, often associated with UROP activities, and applied their learning to project-based activities. Physics final exams were replaced with projects, allowing students to demonstrate command of the discipline to their classmates. Chemistry students engaged in poster sessions, gaining experience in the research and presentation of their ideas in meaningful ways. Students overwhelmingly expressed enthusiasm for the pilot. Below is a sampling of student comments.

“I learned a lot from the final projects. Thanks to the 8.01 project, I got a summer UROP.”

“I really liked the project-based approach in chemistry and physics. I was able to apply knowledge amassed from the entire semester and synthesize it into a project that I would remember far longer than a final exam.”

“The pilot gave us a greater balance between theory and practical experience that many introductory classes at MIT lack. It’s one thing to learn the equations and theory behind the physics we learn. Once you have to apply knowledge to make something actually work, you gain a deeper understanding of the material.”

ESG Seminars

- Fifteen seminars were offered by staff, students, alumni, and guest lecturers.
- There were six new seminars: ES.S70: Spaces of the Imagination (Bettina McGimsey, Graham Ramsay); ES.S10: The Future of Food Security (Azzo Séguin ’20); ES.S30: Airplanes and Airlines (Dongjoon Lee ’21); ES.S70: WHERE IS EVERYBODY? Arguments For and Against the Existence of Extraterrestrial Civilizations (Wade Roush PhD ’94, Paola Rebusco); ES.S91: Building the Beloved Community (Thea Keith-Lucas, Shannon Schmidt); and ES.92: Authenticity (Lee Perlman).

COVID-19 Response

- ESG reached out to all its students to offer support as they made the transition to off-campus learning
- Sent first-year students and seniors a care package (50th anniversary T-shirt, pen, and booklet)
- Coached first-year and upper-level ESG students throughout the spring

ESG 50th Anniversary Celebration

The ESG 50th anniversary celebration was intended to showcase the success of ESG in creating a learning community. The Day of Learning celebration plans included the premiere of an ESG documentary and experiential learning sessions to be held in student-designed spaces at the Samberg Conference Center. However, all events, including an anniversary party, were postponed/canceled.

Educational Justice Initiative

- With the Massachusetts Prison Education Consortium, ESG developed a statewide educational pipeline for incarcerated individuals.
- Engaged system-involved teenagers through a summer program of college-level discourse, exposing them to academic pathways beyond high school.
- At the suggestion of MIT president L. Rafael Reif, provided hardware donated by MIT to 19 state prison education departments and two incubator sites.
- With the Maine Department of Corrections, studied how access to tablet-based learning systems affects disciplinary and educational outcomes.
- Offered inside-out classes allowing MIT students to study with incarcerated individuals. The initiative was documented by WGBH in *Redemption: MIT's Prison Education Program*, which won a New England Emmy Award in June 2020.

Awards

- Raquel Garcia '22: Peter and Sharon Fiekowsky (PSF) Community Service Award
- Samuel Solomon '20: PSF Excellence in Teaching Award
- Luke Bordonaro, Talya Klinger, Seeta Patel, Azzo Seguin, and Chase Vogeli: PSF Distinguished Teaching Awards
- Patti Christie and Nick Boekelheide: Alumni Class Funds grant to develop videotaped guided learning demonstrations for first-year chemistry courses

Students

- There are 56 students in the Class of 2023.
- Of those, 68% are female, 28% are underrepresented minorities, and 13% are international students (from the Dominican Republic, Japan, Kenya, Ukraine, the United Arab Emirates, the United Kingdom, and Vietnam).
- There were 61 undergraduate TAs in the fall and 50 in the spring; these teaching assistants provided academic support while learning teaching and leadership skills.

Looking Ahead

- Expansion of the pilot project will continue through spring 2022, with biology exams to be replaced with projects.
- Chemistry GIR guided learning demonstrations will be developed.
- To enhance remote learning, we will offer more sections resulting in smaller classes, increase instructional hours, further incorporate project-based learning, develop ways to assess collaborative group work, send remote experiment kits, and use available technology to strengthen our remote community.

Terrascope

Terrascope is based on the idea that first-year MIT students are ready to take control of their own education to tackle big, important problems. Every year, in hands-on, project-based classes, students take charge to develop solutions to sustainability-related problems, drawing on diverse perspectives, interdisciplinary research, and a supportive community. Terrascopers also bond as a community in a shared common space on campus and over meals, advising, and a field experience.

Key Accomplishments

- In the fall course 12.000 Solving Complex Problems, students developed plans to make recovery from storms in Puerto Rico faster, more equitable, and more resilient. They presented to a panel of local and national experts. In addition, Elmer Roman, secretary of the Puerto Rican Department of Public Safety, and Ottmar Chávez, head of recovery, proposed in-person discussions during the Terrascope field experience (which was canceled due to the pandemic).
- In the IAP course SP.361 Majors and Careers through a Terrascope Lens, nine alumni worked with students and made themselves available for continued mentoring. Students reported feeling less pressure to choose the “right” major or career and empowered to be guided by their experiences and enthusiasms.
- The major accomplishment of the spring was successfully transitioning two team-oriented, project-based classes to remote learning. Students reported significant satisfaction. For example: “This was the one class that made me feel like a part of the MIT community again. There was an incredibly strong sense of community.”
- In 2.00C/1.016/EC.746 Design for Complex Environmental Issues, students worked with partners in Puerto Rico. Products included a rapid-deployment emergency shelter, a compact water-decontamination system, and systems for connecting deaf citizens with emergency workers. Two projects will continue beyond the semester, including collaboration with community partners. This year also marked the beginning of a new partnership with Beaver Works, with an emphasis on hands-on design and fabrication.
- In SP.360 Terrascope Radio, students developed programs related to their experiences in the pandemic: a radio drama/science fiction story about friendship in a time of distancing and vignettes on expressions of love and kindness during crisis.
- Terrascope built on its strengths with increased participation in co-curricular events, intramural sports, and Terrascope physical education classes. We maintained an active, participatory community during the remote spring and throughout the summer, holding virtual lunches and staff- and student-led activities and establishing new modes of communication.
- Terrascope continues to raise funds in partnership with the Alumni Association (e.g., 24-Hour Challenge, email solicitations), and average numbers of donors and gift totals remain at the increased levels seen in the past two years. To explore alternative sources of funding beyond alumni support, Terrascope is actively engaging with Resource Development. Terrascope also continues to pursue funding opportunities jointly with the PKG Center as a part of the larger partnership.

- This marked the second implementation year of a long-term partnership between Terrascope and the PKG Public Service Center. This year, joint research by Terrascope and PKG staff led to the development of highly relevant partnerships and the continued deep involvement of Terrascope students in projects in both Puerto Rico and the Navajo Nation.
- Terrascope staff contributed to Institute efforts to adapt to pandemic-related circumstances. Staff facilitated planning sessions for the 2021 academic year and served on working groups to create summer and fall employment opportunities for MIT students, increase students' engagement with experiential learning, and prepare for remote learning. Terrascope students tested dozens of whiteboarding and classroom simulation platforms and created documentation for distribution across the Institute.

Notable Statistics and Data

Fall enrollment remains high: this year had the second-highest enrollment since the transition to a new director. Spring enrollment has been more consistent over the last three years, in part due to the partnerships with Course 2, D-Lab, and Beaver Works.

Awards and Recognition

Terrascope is recognized across campus for work beyond student-centered learning experiences and sustainability education for first-year students. In particular, Terrascope has played important roles in assisting other units of MIT as they develop responses to the current Covid crisis, and Terrascope's director co-chaired MIT's Sustainability Leadership Committee

Looking Ahead

Terrascope continues to build strong partnerships on campus, in particular with the MIT Environmental Solutions Initiative, the PKG Center, the Office of Minority Education, the Department of Mechanical Engineering, D-Lab, Beaver Works, and the Office of Sustainability, in addition to remaining involved in broader efforts to improve the first-year experience.

Terrascope will continue to develop a robust fundraising and alumni engagement strategy to ensure the sustainability of its spring break field experience and to build community among its alumni.

Office of Graduate Education

The [Office of Graduate Education \(OGE\)](#) supports, consults, and collaborates with graduate students, faculty, and other community members on the stewardship of policies and procedures, the promotion of student financial well-being, the enhancement of the graduate personal support network, and the cultivation of an inclusive and diverse community.

Supporting Educational Innovation and Excellence

The Committed to Caring program held its biennial selection round and announced a new slate of 12 faculty honorees. In fall 2019, OGE and Associate Provost Tim Jamison launched a pilot faculty peer mentorship program that aimed for pairs to connect regularly throughout the year to support mentoring relationships with graduate students and postdocs. Ten entering untenured faculty members were matched with previous Committed to Caring honorees. Central support included a kickoff gathering and email outreach throughout the year.

The fall 2019 Path of Professorship workshop saw strong participation by 47 graduate student and 22 postdoctoral women across 17 departments in the School of Engineering, the School of Science, the Sloan School of Management, and the School of Architecture and Planning. Twenty-six faculty members from MIT and other institutions shared a wealth of knowledge on diverse topics.

Graduate Funding

During FY2020, OGE administered fellowships for roughly 1,000 graduate students, both external opportunities and internal fellowships including Presidential Fellowships, OGE Competitive Fellowships, and opportunities supporting diversity and special cases. OGE ran a successful graduate student survey to collect data on its fellowship efforts (1,157 responses; 15% response rate). A fellowship program assistant was hired to work on fellowship administration and related programming. Surmounting challenges caused by COVID-19, a team from across OVC reviewed over 200 nominations and successfully made selections for the 46 OGE Competitive Fellowships. MIT continued to have the second highest number of National Science Foundation Graduate Research Fellowship recipients in the country (554) and makes up the largest university cohort of National Defense Science and Engineering Graduate Fellows (39), Department of Energy Computation Graduate Fellows (24), and Hertz Foundation Fellows (17).

OGE offered a series of eight workshops on topics such as budgeting, investing, and retirement. The online financial literacy platform iGrad (co-sponsored by OGE and the MIT Federal Credit Union) saw an increase in active users from 1,738 to 2,012. A website section on transitioning out of graduate school was added, and the financial literacy section was expanded and updated. The director of graduate fellowships conducted workshops and outreach on applying for graduate fellowships for both general student audiences and specific groups/departments, reaching over 800 students.

OGE continued to provide emergency financial assistance during the past year to individual graduate students experiencing one-time non-recurring financial emergencies, including unexpected and unavoidable expenses, once other resources had been exhausted. This assistance was formalized as the Graduate Student Short-Term Emergency Fund, with applications reviewed by an OGE team. This year saw a large increase in funds awarded due to the financial impacts of COVID-19 on students. Over 200 students were assisted, in addition to approximately 100 students who were provided financial assistance related to campus de-densification.

In early summer, a new pilot process was launched in collaboration with the OVC headquarters staff, Student Financial Services, and school dean's offices to assess the financial stability of students who apply for nonresident status (149 students in AY2020).

The MIT Grant for Graduate Students with Children was established as a need-blind grant pilot program for PhD and eligible master's students whose children live with them. The grant can be used to cover expenses such as child care, health care, and housing. While it does not cover the bulk of child care expenses, it is intended to help alleviate some of the financial hardship student parents face while allowing them flexibility. The first funds will be distributed in October 2020.

Administration and Policy

The second year of the parental leave policy saw a total of six applications from birth and non-birth parents, down by 11 from last year. The drop may be due in part to the COVID-19 campus de-densification in mid-March.

Of the 30,681 applications for graduate study in 2020, 4,413 (14%) offers of admission were made, and 2,290 (52%) students matriculated into advanced-degree programs. The steady climb in applications likely relates to the continued strength of MIT's graduate programs.

In April 2020, the MIT undergraduate special student program was suspended for the upcoming academic year due to the ongoing COVID-19 pandemic.

In spring 2019, OGE engaged external partner Campus Labs as a consultant to advise on improving assessment of OGE programs, particularly GradDiversity and GradSupport. Campus Labs conducted a deep dive into these two areas in the summer of 2019 and offered its report in early fall. This year OGE worked to implement the recommendations, including defining goals more clearly, streamlining data collection, and refining our assessment plan and practice to have greater integrity and relevance. Campus Labs staff returned in January 2020 to conduct training for OGE team members. In a related effort, OGE worked with Information Systems and Technology to implement kiosk check-in stands at three office locations (3-138, 35-332, and 35-338). A Qualtrics check-in form will document the nature of foot traffic.

Building and Sustaining Diversity

In June 2020, Director of Diversity Initiatives Gloria Anglón stepped down; a search will commence for her successor.

Increasing Diversity through Outreach and Recruitment

MIT GradCatalyst, a graduate preparation workshop, hosted five sessions this year for approximately 131 prospective graduate students currently enrolled at MIT, Tufts University, Harvard University, the University of Miami, Florida International University, Brown University, and Morehouse College, among others. The attendance represents a 162% boost in students reached in comparison with last year. Additionally, nine graduate diversity ambassadors were trained and facilitated the workshops amidst COVID-19.

The Graduate Application Assistance Program matched 15 current MIT graduate students (mentors) with 21 MIT Summer Research Program (MSRP) alumni to review statement of objectives essays and resumes in preparation for MIT graduate program submission. MSRP alumni attested that the program helped improve their application and increase their interest in applying to graduate school at MIT.

Recruitment travel consisted of eight national and regional diversity STEM (science, technology, engineering, and mathematics) conferences and two meetings in collaboration with the Ivy+ graduate deans and the Massachusetts Consortium of STEM Programs. In total, OGE collected 569 prospective graduate students' contact information and shared it with MIT departments for recruitment. A list of 6,253 underrepresented minority and underserved prospective graduate students was curated from the Educational Testing Service and four national partners, and digital outreach was conducted.

Graduate admissions staff reviewed 790 graduate application fee waiver requests and granted waivers to 615 prospective applicants applying to 33 different departments across the Institute. Applicant waiver requests originated from over 300 undergraduate institutions across the country; 84% of applicants were US citizens and permanent residents, and 16% were international students. The reasons reported were financial hardship (49%; 302 students); other diversity programs (31%; 188 students); MIT-sponsored diversity programs, events, or conferences (12%; 73 students), and US Armed Forces membership (8%; 51 students).

MIT Summer Research Program

In response to the many challenges posed by COVID-19, the traditional nine-week residential MSRP was adapted to a five-week virtual program coined MSRPx. MSRPx interns engaged in a modified co-curriculum designed to increase competence in the areas of research comprehension and communication, research ethics, research identity, and professional and career development. Unlike the traditional MSRP program, remote research was an optional requirement and allowed MSRPx interns to seek research experiences within and outside MIT. Of the 32 interns, 91% engaged in a remote research experience (81% internal and 10% external to MIT). MSRPx interns showcased their research, scholarship, and creative projects to the MIT community via five-minute lightning talks hosted on the MIT GradDiversity YouTube Channel.

The admitted intern pool totaled 32 students (10% of the applicant pool) who were placed in 17 departments in four schools across the Institute. Of the 2020 MSRPx cohort, 66% self-identified as US underrepresented minorities, 47% were women, 38% were Pell Grant recipients, and 13% were the first generation in their families to graduate from college. In all, 76% earned a cumulative 3.5 grade point average (GPA) or higher, 82% had prior research experience, 84% were advanced undergraduates (rising seniors), and 35% attended minority-serving institutions.

According to the 2020 exit survey, the interns expressed a considerable 43% increase in their level of interest in pursuing a doctoral degree after participating in MSRP. With regard to an MIT degree specifically, strong interest remained at 93%.

Cultivating a Vibrant and Empowering Community

The Ignite community series hosted several events, including two in collaboration with the Office of Multicultural Programs, the Office of Minority Education, the Institute Community and Equity Office (ICEO), and the Black Graduate Student Association. Events included Graduate Students of Color Welcome, Ignite Your Gratitude with Janhavi Madabushi, Cultivate QTPOC Healing Practice, two virtual community events, the MIT Multicultural Awards Banquet, and MOSIAC, formerly known as the Graduating Minorities Luncheon.

This year, OGE GradDiversity also introduced a new series of informal community gatherings, Spill the Tea. With the assistance of Graduate Community Fellow Darien Williams, GradDiversity hosted three in-person and three virtual tea times providing graduate students space to check in with one another as well as connect with OGE GradDiversity staff.

Graduate Diversity Ambassadors saw an increase in participation, with 32 students from all five schools receiving training and conducting outreach and recruitment programs.

University Center of Exemplary Mentoring

In July 2019, Ashley Carpenter became the first academic program coordinator for the University Center for Exemplary Mentoring (UCEM) program at MIT. The program has completed the second year of a phase 2 grant (fifth year overall) from the Alfred P. Sloan Foundation. UCEM brings together four departments (Biological Engineering, Chemical Engineering, Electrical Engineering and Computer Science, and Mech Engineering), creating a collaborative partnership and a collegial, supportive environment for all participants. Health Sciences and Technology (HST) will be added to the program in AY2021. With the School of Engineering's support, HST is dedicated to fully funding about three scholars per year so as to be identical to all other UCEM departments. This furthers the goal of institutionalizing the program.

During the 2020 graduate admission cycle, the UCEM program extended 19 Sloan Scholarship Awards. Twelve of these students will enroll in AY2021, with one deferring until AY2022. Cohort 6 will thus have 11 Sloan Scholarship awardees. COVID-19 may have impacted the admission decisions of some of the UCEM awardees. The six remaining scholarships will be used for the upcoming 2021 admission season as a recruiting tool.

To support the UCEM scholars, the UCEM leadership team implements holistic and rigorous programming for every aspect of the lives of our graduate students. UCEM scholars participated in a robust five-part professional and personal development series that addressed their varying academic needs and learned how to navigate their academic milestones successfully. Feedback from program alumni and current students through post-event surveys helped the UCEM leadership team develop 23 activities that supported the recruitment, retention, and professional and academic development of our UCEM scholars.

Climate and Community

Under a special call for proposals, eight new Graduate Student Life Grants were awarded to projects that focused on enhancing advising relationships between faculty and students. Projects included an anti-racist workshop for students and faculty in the Department of Urban Studies and Planning; a faculty-student Friday evening maker series; a student-faculty lunch series in the Department of Earth, Atmospheric and Planetary Sciences; and a creative contest in the Department of Architecture that solicited designs for a scarf that was then produced and available at a reduced cost for the department community.

OGE provided financial support for a wide range of graduate student-centered activities through an ongoing request-for-funds process. Examples included a mindset lecture series at Ashdown, kick-start funds for the new LatinX Graduate Student Association, support for Graduate Women at MIT programming, and a continuation of long-standing funding to support List Visual Arts Center graduate student-focused events.

The Graduate Community Fellows program has grown to 30 fellows working in OVC and offices across the Institute. A new position was approved for a fellow to work with the Graduate Student Council's Diversity, Equity, and Inclusion Committee, in partnership with Institutional Research, on surveys of the graduate student population.

Holistic Support of Graduate Students

Staffing changes occurred in the OGE GradSupport team: Assistant Dean Jason McKnight stepped down, Suraiya Baluch was promoted to associate dean, and Assistant Dean Cathleen Collins joined the team, reporting to Dean Baluch.

In partnership with the Title IX office, OGE administered the mandatory online Sexual Assault Prevention for Graduate Students module to 2,192 students. In June 2020, OGE assumed administrative supervision of the Resources for Easing Friction and Stress (REFS) graduate peer advisor student groups.

OGE, often in collaboration with the CARE (Coordination, Assistance, Response, and Education) team, Student Support Services, and the Title IX office, presented to faculty, students, and staff in numerous departments, the School of Engineering Junior Faculty Advising Pilot Program, REFS, and the Black Graduate Student Association. Also, with colleagues across the Institute, staff presented to department heads and the Writing and Communication Center in addition to participating in the Graduate Student Council Resource Fair and the Division of Student Life Wellness Fair.

GradSupport staff members were recognized with an OVC Infinite Mile Award for Collaboration and Communication.

International Students Office

The [International Students Office \(ISO\)](#) serves all incoming and currently enrolled international students (graduate, undergraduate, non-degree, and alumni) at the Institute and assists students in maintaining their legal status in the United States,

provides support for their dependents, and promotes interaction with and integration into the MIT community. ISO staff members educate the Institute community on immigration-related regulatory and legislative actions that impact international students' ability to pursue their program of study and training opportunities during and after completion of their degree.

Key Accomplishments

ISO Transition to Fully Remote Service Offerings

MIT transitioned to fully remote operations as of March 13, 2020, due to COVID-19. ISO continued to offer in-person services until March 19 in order to assist our international students during this hectic transition in securing necessary travel validation signatures on their visa documents for travel outside of the United States, picking up documents on file for employment authorizations, reviewing employment applications prior to their being mailed to US Citizenship and Immigration Services, and processing support letters for government services.

All of the work by the ISO staff over the past two years to expand service operations through our ISO student portal, iMIT (powered by Sunapsis), paid immeasurable dividends with the ability to access all student records, and offer all of our services, online. The increased demand for services—including advising requests by phone/Zoom and by email—was challenging and impacted our normal processing timelines early on after the closure, but the situation improved over the course of the spring and summer.

ISO continued programming outreach to newly admitted students through online platforms, with support from our orientation coordinators, and continued social programming to maintain connections online through the spring and summer. These efforts included ISO Zoom Noon Breaks, meet and greets, and Language Conversation Exchange programs, just to name a few. We transitioned our employment information sessions to an online format and participated in many academic program town hall events for both new and continuing students.

Communication Enhancements

Throughout spring and early summer 2020, the office published an [ISO Updates webpage](#) hosting all email communications so that students, as well as faculty and staff, could easily access vital content that was subject to regular changes based on US government policies and announcements. The office also hosted a series of [ISO Virtual Forums](#) for both new and continuing students to provide interactive updates on government policies concerning international student immigration and enrollment.

ISO is launching a newly designed website to provide greater ease of navigation and access to crucial resources and guidance. A special feature of the new website is the Knowledge Base, which allows for categorization and search capacity for a central frequently asked questions section.

Continued Expansion of Internship/Experiential Learning Subjects

We continue to see an increase in student demand for off-campus experiential learning/internship opportunities, with growing support by faculty. ISO, in coordination with OVC, established a cross-functional team on internships/experiential learning to work with academic programs to advocate for the creation of experiential learning opportunities as elective subjects or degree requirements as a means of expanding professional development experiences.

Outreach on Visa Processing Delays

The most significant challenges faced by our international student community this year have been issues with visa processing abroad and travel restrictions imposed by the US Department of State and through executive orders. Even prior to COVID-19, visa processing delays had been attributed to extended administrative processing through the Department of State and other government security agencies that must be completed before a visa can be issued. ISO staff continue to support both new and continuing students through direct advocacy to individual embassies/consulates, the Department of State's Visa Office, and congressional contacts on long-pending visa applications for students and their family members.

Visa services were suspended at most US embassies and consulates due to COVID-19 from February 2020 until July 15, 2020, and many consular posts have not resumed visa processing (including all posts in China). Visa processing and travel were also impacted by a number of presidential proclamations and executive orders issued by the Trump administration. Examples include:

- [Suspension of Entry of Certain Students and Researchers in F and J status from China](#) (effective June 1, 2020)
- [USDHS Announces Extension of "Non-Essential" Travel Restriction Between Canada-US-Mexico](#) (issued April 20, 2020)
- [United Kingdom and Republic of Ireland added to Europe Travel Restriction to US](#) (issued March 14, 2020)
- [Entry to US from Most European Countries Suspended for 30 Days](#) (issued March 11, 2020)
- [Presidential Proclamation Expands Travel Ban to 6 New Countries, Previous 7 Countries Remain Subject to Restrictions](#) (issued January 31, 2020)

Contributions to Institute Committees and Their Recommendations to the MIT Administration

ISO staff have served on OVC and Institute committees, working groups, and cross-functional teams, including the Institute Committee on Discipline, the OVC leadership team, the OVC Values Working Group, the OVC Council on Diversity and Inclusion, the International Students of Color Orientation and Onboarding Team, the MIT OME Mentor Advocate Program, the Housing Extension Committee, and working groups on MIT academic and program planning. ISO staff also supported Institute advising initiatives, remote online coursework, and pursuit of teaching/research appointments from abroad.

Notable Statistics and Data

International Student Enrollment (Fall 2019)

- International student community: students from 125 countries, including the United States
- 458 undergraduate students (approximately 10% of the total MIT undergraduate enrollment)
- 2,874 graduate students (nearly 42% of the total MIT graduate enrollment)
- 56 non-degree students (special undergraduate and graduate)
- 1,029 non-degree visiting students (full year total)

Post-Degree Employment (MIT Student Visa Sponsorship, Fall 2019)

- F-1 Optional Practical Training: 744
- F-1 STEM Optional Practical Training: 599
- J-1 Academic Training: 43

Walk-In/Appointment Service Usage, FY2016–FY2020

Fiscal year	Date range	Partial year (to March 19)	Full year total	Notes
2020	July 1, 2019– March 19, 2020	9,444	N/A	ISO closed due to COVID-19 on March 19, 2020.
2019	July 1, 2018– June 30, 2019	9,187	13,489	Implementation of expanded ISO website and iMIT service options to reduce in-person submission requirements.
2018	July 1, 2017– June 30, 2018	9,741	15,116	Executive orders/presidential proclamations, updated travel ban, new US visa application procedures, increase in STEM Optional Practical Training use.
2017	July 1, 2016– June 30, 2017	8,174	13,660	Presidential executive orders, changes in Department of Homeland Security and Department of State policies, ISO move to E18-219 on November 1, 2016.
2016	July 1, 2015– June 30, 2016	7,742	11,454	Increased ISO website resources and Curricular Practical Training/Optional Practical Training/STEM Optional Practical Training use. New director David Elwell joined ISO on August 31, 2015.

Awards and Recognition

Cedrick Boursiquot was promoted from SEVIS administrator and data analyst to SEVIS manager and data analyst. Cedrick coordinates all data and database functions through Sunapsis (iMIT) and integration with Information Systems and Technology student data systems.

- Ashlee Andrews was hired as the ISO visiting student program manager and advisor. Ashlee began at ISO on February 15, 2020.
- David Elwell, ISO associate dean and director, was presented the MIT OVC Infinite Mile Award for Collaboration and Communication in May 2020.

Looking Ahead

- New search for assistant director of operations and advising to be completed in fall 2020
- Implementation of Sunapsis mobile application for increased student service access and timely data reporting
- Continued enhancement of service and support options through current and new ISO remote/online resources
- Implementation of new visiting student program policies after resumption of program following COVID-19 limitations
- Review and re-allocation of advising cohorts to manage the ever-growing workload of ISO advisors

Advocacy on Visa Processing for International Students

ISO will continue its strong partnership with MIT Government Relations and the MIT Washington Office in advocacy for legislation, policy changes, and agency accountability in support of our international students in areas including duration of status for F and J visa holders, H-1B status, and curricular-based internships or post-degree training in students' field of study. These components are crucial for the recruitment, enrollment retention, and professional development of our international students.

Office of Minority Education

The [Office of Minority Education](#) promotes academic excellence, builds strong communities, and develops professional mindsets among students from underrepresented minority (URM) groups, with the ultimate goal of developing leaders in the academy, industry, and society. OME supports MIT's academic mission while also serving the nation's need to increase the number of URM students pursuing careers in STEM disciplines.

Key Accomplishments

- OME's newest signature program, The Standard, focuses on enhancing the overall success of undergraduate men of color. We now have 55 first- and second-year students in the program. In October 2020, approximately 20 young men will be inducted.

- OME and the Office of Digital Learning entered the third phase of the Interphase EDGEx pilot. However, due to COVID-19, Interphase transitioned to a completely online program for 88 scholars. We offered four academic classes for elective credit. We also provided virtual opportunities for scholars to build strong connections with their peers. Given that MIT is hybrid this fall, the summer experience helped the scholars prepare for the MIT experience even more than we anticipated. The hybrid online/on-campus Interphase EDGEx program officially launches next summer.
- In AY2020, there were 1,326 visits to the Talented Scholars Resource Room (TSR²); 65% of the visits were made by URM students. Over the same period, 44 students participated in Seminar XL (68% URM students). Both TSR² and Seminar XL pivoted to offering virtual academic services due to COVID-19.
- Momentum collaborated with General Motors and Capital One this year to explore the user experience of people with disabilities in terms of autonomous vehicles and financial security, respectively. A total of 35 first- and second-year students enrolled in the IAP course. Companies affiliated with our Industrial Advisory Council for Minority Education made six internship offers to students who participated in the class. Ninety-six percent (77% response rate) of participants reported that they gained valuable teamwork skills from their Momentum experience.
- Thirty-three protégés (first-year students) and 33 mentors (MIT faculty, staff, postdocs, and graduate students) participated in OME's Mentor Advocate Partnership program.
- Our Industrial Advisory Council recently voted to increase its giving to OME. During the pandemic, industry support remained steady; only two partners took a hiatus due to budget constraints.

Notable Statistics and Data

- From The Standard's end-of-year survey (47% response rate), we learned that 96% of the 26 young men who responded felt a strong sense of community within this newly established program. Ninety-six percent of the same group of young men reported that they would recommend The Standard to other students.
- Laureates and Leaders served 79 students this year. Twenty-four students graduated from the program in June 2020. Of those, 71% planned to enter STEM graduate programs directly following graduation (59% will pursue PhDs in STEM, 18% will pursue MD-combined programs, and 23% will pursue a master's/MEng degree). All of the seniors shared that they were satisfied with the help and support the program offered.
- The Interphase EDGE program generally supports 140 students each year (70 first-year and 70 second-year students) by offering advising and other academic and professional development resources. One indicator of the academic success of Interphase students is fifth-week flags. In the fall, 11.6% of the 2019 Interphase cohort (70 students) received a fifth-week flag with a solid 75% recovery rate. The flag rate was similar in fall 2018 (11.6%), but the recovery rate was lower (63%). The fall 2019 overall flag rate for MIT was 7%, with an 83% recovery rate. Due to

the pandemic, flag rates were not reported for spring 2020. Of course, many MIT and external environmental factors influence academic outcomes. Interphase is just one factor.

- In AY2020, 44 students participated in Seminar XL. All of the students passed the course for which they took a Seminar XL class. The recovery rate for students who took a Seminar XL/LE class in a flagged subject was 100% in the fall (for MIT overall, the rate was 83%); no flags were issued in the spring (due to COVID-19).
- In AY2020, 93% of students who used TSR² academic resources passed the class in which they sought assistance.

Awards and Recognition

- The OME team received the MIT Excellence Award for Serving the Client this spring.
- Two Laureates and Leaders students received Schwarzman Scholarships.
- Three Laureates and Leaders students were featured in *MIT News*: Swarna Jeewajee '20, Noopur Ranganathan '21, and Adedoyin Olateru-Olagbegi '20.

Registrar's Office

The [Registrar's Office](#) fosters curricular innovation and educational community building, ensures the integrity of academic information, and develops and maintains a robust infrastructure that is responsive to the evolving needs of students, faculty, staff, and alumni.

Key Accomplishments

- Mobilized quickly to react to the unprecedented COVID-19 disruption and its implications for the Institute. In addition to successfully transitioning to remote work, the office communicated Covid-related changes efficiently, supplied student academic data that informed Institute decisions, set new guidelines for degree completion as well as for assessment of end-of-term student outcomes, helped to shape the new fall 2020 academic calendar given the limitations imposed by the pandemic, and implemented technical changes required by the Emergency Academic Regulations Team related to grading, subject evaluation surveys, and graduation.
- Developed and implemented the new, condensed spring academic calendar using a yearlong communications strategy.
- Worked closely with the Committee on the Undergraduate Program (CUP), the Committee on Academic Performance, and the Committee on Curricula (CoC) to determine the path for a new undergraduate grading option (flexible pass/no record). This grading option will be implemented starting with first-year students entering in fall 2020 and will eventually phase out the sophomore exploratory and junior/senior P/D/F options.

- Continued to support phase 1 and began to provide support for phase 2 of the Experimental Grading Policy to Increase Flexibility for Exploration and Discovery in the First Year. This included offering additional system updates to accommodate the experiment, working closely with and providing data to the assessment team, and collaborating with the Office of the First Year.
- Beyond efforts related to experimental grading, implemented a series of complex mandates including new credit-limit messaging, changes associated with condensing the academic calendar, and transcript changes required by the Accreditation Board for Engineering and Technology (ABET).
- Developed and deployed a new prerequisite report in WebSIS for instructors and administrators.
- Participated in a discovery process to assess information technology solutions for a new degree audit program.
- Supported the nominations for and awarding of four new MacVicar Fellowships and partnered with the vice chancellor to develop the MacVicar Day symposium Learning through Experience: Education for a Fulfilling and Engaged Life, which was canceled due to the pandemic.
- Facilitated the following curricular changes:
 - Course 3 SB: substantial revisions to increase flexibility and revisions to the minor in archeology and materials.
 - Course 5 SB: revisions to the minor in polymers and soft matter.
 - Course 10 SB: substantial changes to provide greater flexibility, minor changes to 10-B and 10-C, and substantial changes to 10-ENG, including a change in name, to bring the program into ABET compliance.
 - Course 21-H SB: reduction in the number of required subjects from 14 to 11.
 - Course STS SB: reduction in the number of elective subjects required from five to four.
 - Substantial changes to the minor in entrepreneurship and innovation.
 - Slight changes to the minor in energy studies.
 - Substantial changes to the minor in environment and sustainability.
- Completed the renovation of classrooms 24-112, 24-115, and 24-121 for the start of fall 2019 and began initial renovation efforts for lecture hall 54-100 and classrooms 14N-325 and 24-307.
- Began work on a new 300-seat lecture hall and 60-seat active learning classroom for the MIT Stephen A. Schwarzman College of Computing.
- Adjusted our website in response to accessibility audits.
- Completed an office-wide prioritization exercise that resulted in a set of recommendations that will inform our decision making moving forward.

Notable Statistics and Data

- In the past year, we issued 3,453 digital diplomas; over 90% of May graduates opted in.
- The dynamic nature of MIT's curriculum was illustrated by the addition of 52 subjects and revisions to 506 existing subjects. In addition, 25 subjects were removed from the catalog and four were reinstated.
- The CoC, which our office supports, reviewed 227 applications for double majors, eight REST (Restricted Electives in Science and Technology) Requirement petitions, and one Institute Laboratory petition.
- The d'Arbeloff Fund and the Alumni Class Funds financed 19 projects from across the Institute totaling over \$674,000.
- Subject evaluations were administered as normal for six evaluation windows. This spring, we administered a new subject-specific survey using the online subject evaluation system. In total, 2,131 subjects were evaluated in AY2020, and 2,308 instructors were evaluated in the fall term.

Awards and Recognition

Rosanne Santucci received a 2020 Infinite Mile Award for Collaboration and Communication.

Looking Ahead

- The COVID-19 disruption will continue to require nimble and responsive work from our office as the Institute's core principles are reexamined, curricular innovation is needed, and educational initiatives are approved. We will implement the system changes needed to accommodate the special fall term grading arrangements resulting from the COVID-19 disruption, support both anticipated and unanticipated curricular changes with flexibility and efficiency while maintaining the integrity of our position as a steward of academic policies and records, and adjust subject evaluation questions, policies, and procedures due to the prevalence of remote teaching.
- We will continue to work with OVC and CUP to support recent changes in grading policies. This will entail collaborating with the assessment teams, updating systems, and communicating clearly to advisors and undergraduates.
- We will make changes in our system hierarchies to accommodate the MIT Schwarzman College of Computing.

Air Force Reserve Officer Training Corps

[Air Force ROTC Detachment 365](#) seeks to develop leaders of character for tomorrow's Air Force and Space Force. Our staff of five (three active-duty officers, one non-commissioned officer, and one MIT administrative assistant) trains a growing number

of cadets from MIT as well as Harvard, Tufts, and Wellesley. Each semester our cadets enroll in an Air Force ROTC–focused academic course (taught by our officer cadre), participate in physical fitness training, and organize and execute a weekly leadership laboratory as well as several special events throughout the year. In recognition of our growing enrollment and achievements, MIT continues to provide generous funding that facilitates high-quality, formative opportunities for cadets.

Key Accomplishments

- We continued our integration and presence in the MIT community. Cadre members led or assisted in leadership training for one of the Sloan IAP courses as well as for undergraduate advisors.
- We leveraged MIT relationships and resources to provide unique opportunities for cadets, including visits from Major General (Ret.) William Rapp, who teaches at Harvard Kennedy School; Lieutenant General (Ret.) Bruce Wright, president of the Air Force Association; Brigadier General (Ret.) Dana Born, a professor at Harvard Kennedy School; and Colonel Christopher Bennett, headquarters Air Force ROTC commander.
- We proudly commissioned 11 new second lieutenants this year. Two were Air Force distinguished graduates, an honor reserved for the top 15% of all Air Force ROTC graduates. Three others were selected for prestigious scholarships that will allow them to stay at MIT for their first active-duty assignment to complete their graduate degrees. One will enter the Space Force and be our first lieutenant to do so.
- Our program’s enrollment is consistently driven by the awarding of full-tuition scholarships. With a strong recruiting effort, we continue to grow and look forward to our largest class this fall made up of students with both full and partial scholarships.

Notable Statistics and Data

- Spring 2019 total enrollment was 51; spring 2020 was 72. We are expecting 40 or more incoming first-year students this fall, to bring our total enrollment to 99.
- Air Force ROTC scholarships now contribute \$3 million in undergraduate tuition to our four schools annually.
- In addition to our undergraduates, Detachment 365 also serves as the military focal point and provides administrative oversight/support to approximately 50 active-duty officers pursuing advanced academic degrees at our schools.

Awards and Recognition

Cadets were recognized with multiple national-level awards, including awards from the Sons of the American Revolution and the Military Order of the Purple Heart.

Looking Ahead

- Major Jason Heller joined our team this summer and will teach our first- and second-year classes as well as serve as our recruiting officer.
- In light of our rapid expansion, we are advocating for a second non-commissioned officer from ROTC.
- We are excited for a classroom renovation that should take place this year.
- We seek to foster better and more consistent contact with our alumni network.
- We advocate for our cadets to partner with academic faculty on Department of Defense–sanctioned research projects.
- We partner with the Space Force as it matures and brings officers to the campus for research and degrees.

Army Reserve Officer Training Corps

The mission of the [Army Reserve Officers Training Corps](#) is to select, retain, train, and commission cadets from MIT, Harvard, Tufts, Wellesley, Salem State, Gordon, Endicott, and the New England Conservatory in a two-, three-, or four-year program to prepare them for future leadership roles in the US Army, the nation, and the world. Our vision is to develop agile and adaptive leaders of character who use critical and creative thinking skills to solve complex, ambiguous problems.

Accomplishments

Six of the 15 commissioned cadets this spring earned the honor of Distinguished Military Graduate, placing them in the top 20% of all cadets nationwide. One of the top cadets from this cohort was awarded a fellowship by MIT Lincoln Laboratory. He will be completing his research and graduate degree through the CSA (Chief of Staff of the Army) Warrior Scholar Program. Another high-performing cadet in the 2021 cohort has been nominated by MIT for the Rhodes Scholarship. As of May 1, 2020, 81 students were enrolled in the Army ROTC program with \$26 million in scholarships, a notable increase from last year. The Class of 2021 is expected to commission 20 officers, which means we will exceed the Army-directed commission mission for the first time in four years.

Year-End Enrollment for Army ROTC as of May 1, 2020

	First-Year students	Sophomores	Juniors	Seniors	Total
MIT	5	6	7	7	25
Harvard	6	5	8	2	21
Wellesley	1	3	1	1	6
Tufts	4	6	0	3	13
Other affiliates	3	6	5	2	16
Total	19	26	21	15	81

Our cadets exceeded local, regional, and national averages in nearly all measurable areas at Fort Knox, KY, with 57% placing in the top half of their peer group. Several cadets participated in the National Conference on Ethics at West Point and the Army 10-miler in Washington, DC. Over winter break, four cadets completed Air Assault School at Fort Campbell, KY, and four others were selected to participate in internships with the US Special Operations Command. Still another cadet was selected for an internship with the Lawrence Livermore National Laboratory. While many summer opportunities were canceled due to the COVID-19 outbreak, we also had one cadet shadow an infantry unit at Fort Bragg and another shadow an aviation unit at Fort Belvoir.

During the fall semester, Army ROTC taught a first-year advising seminar made up entirely of non-cadet MIT students. During IAP, our cadre participated in its 17th consecutive year facilitating a capstone exercise for 90 students in the Sloan School of Management's Leadership Lessons Learned from the Military IAP course. We partnered with the MIT football and volleyball teams to host a team leadership workshop in the fall and spring.

Challenges and Plans for the Future

MIT Army ROTC's continued challenge is to sustain our viability by increasing the number of cadets in the program, especially from MIT. Acceptance rates into MIT for ROTC scholarship applicants have increased in the last three years, resulting in much larger incoming and outgoing first-year classes. This bodes extremely well for the continued viability of the MIT Army ROTC program. The program plans to continue giving back to the MIT community by providing more leadership training opportunities.

Naval Reserve Officer Training Corps

The mission of the [Naval Reserve Officer Training Corps \(NROTC\)](#) is to develop our midshipmen into well-rounded leaders who serve with honor, courage, and commitment. The past year was a period of tremendous growth for the Naval ROTC program, and we are preparing for next year's class of 20 incoming students.

Key Accomplishments

This year we sent 14 Class of 2020 graduates on to their next journey. We are proud to recognize their outstanding accomplishments and commitment to our program. The graduates and their post-graduation plans are noted below:

- Humberto Caldelas II (MIT): naval reactors engineer
- Kevin Carlson (MIT): explosive ordnance disposal
- Devon Goetz (MIT): explosive ordnance disposal
- Colt Hermes (MIT): submarine warfare
- Jonathan Ledet (MIT): naval aviation
- Warner McGhee (MIT): submarine warfare
- Thomas Strei III (MIT): submarine warfare

- Andrew Cummings (MIT): Marine Corps
- Elizabeth Herington (Harvard): surface warfare/intelligence officer
- Cassia Larson (Harvard): naval aviation
- Patrick Ramirez (Harvard): naval aviation
- Brendan Rodriquez (Harvard): naval aviation
- Nathaniel Twining (Harvard): surface warfare
- Aidan Schertz (Tufts): naval aviation

Statistics and Data

Our enrollment for fall 2020 showed a continued growth trend, although the numbers as of now are somewhat depressed by gap year requests due to the COVID-19 pandemic.

Fall 2020 Naval ROTC Enrollment

	Class of 2024	Class of 2023	Class of 2022	Class of 2021
MIT	8	9	4	5
Harvard	10	7	1	2
Tufts	2	1	1	2

Personnel

We are excited to welcome two new staff members to our department: administrative assistant II Lisa Breen and human relations assistant Elaine Tavares.

Student Financial Services

[Student Financial Services \(SFS\)](#) makes the dream of attending MIT a reality by providing students and families the resources necessary to meet their financial obligations.

Transitions

Over the past year, SFS was restructured to provide better customer service, increase capacity among teams, and work more efficiently. Reporting lines changed, new positions were created, and internal staff members were promoted to meet business needs. Leslie Bridson, director of financial aid, was promoted to a new position, director of student financial services, and now oversees a large portfolio in the office including financial aid counseling and delivery, customer service, and operations.

Two new director positions were created, director of student financial operations and director of student financial counseling. The director of operations position was filled in April. We promoted an internal staff member to associate director on June 1 and waived the posting requirement to meet critical business needs for a unique position that manages federal aid funds and oversight of all loan processing.

A new associate director for customer service was hired in November 2019 and a new counselor for customer service in April 2020.

Edmund Jones was promoted to director of finance and administration for SFS and Admissions, maintaining his role in Admissions while overseeing the accounting team in SFS.

Administrative Initiatives

Financial Aid, Loans, and Affordability

- In the 2020 academic year, SFS implemented the following policy changes for incoming students from households with incomes of \$65,000 or less (and typical assets). provision of first-year grants of \$2,000 (\$1,000 awarded each semester) that assist with the one-time cost of transitioning from home to college and coverage of health insurance costs for domestic students who do not waive MIT's extended-plan coverage. The latter policy change extends to each incoming class over the next three years.
- We automated our disbursement process for private-lender loans, shortening the time it takes for loan funds to appear on a student's account.
- We piloted offering a \$500 advance refund to 204 qualifying first-year students to enable necessary purchases before the start of the semester; 106 students took advantage of this opportunity.
- We developed a need-based graduate assistance application, review, and appeals process for doctoral students experiencing financial hardship.

Customer Service, Operations, and Communications

- In February 2020, we transitioned our customer service email process to a new software system, HelpScout, and added financial aid counselors to the system to improve case tracking, customer service, and collaboration between teams.
- We streamlined the stipend repayment process by allowing students the option of repaying funds via payroll deduction.

Response to COVID-19

- In response to the need for students to vacate the campus in March, SFS provided a Covid grant to undergraduate students as a substitute for the remaining (half-semester) work-study portion of their financial aid package.
- SFS processed over \$13.7 million in prorated mid-semester refunds to students for more than 3,000 housing charges, 2,200 meal plans, and 11,000 instances of student life fees. We did not readjust students' financial aid awards to reflect the decreased expenses; students were able to see the full amount of the refund regardless of the amount of their financial aid award.

- We offered up to six months' forbearance to loan borrowers and no interest on student loans for up to six months.
- We created an exit counseling video to allow students to complete this federal requirement online instead of in person. While our 90% completion rate was slightly lower than in FY2019, students reported appreciating the on-demand option. We can now offer both in-person counseling and the video option when we return to campus.
- We partnered with OGE, UROP, and PKG to provide consolidated employment resources on the SFS website, linking students to available jobs during the pandemic and remote work opportunities as well as jobs when they return to campus.
- We worked with alternative loan and state grant agencies to shift disbursements from paper checks to electronic transfers for greater efficiency.
- We shifted the MIT education loan process from paper to electronic submission to provide flexibility while still allowing borrowers to take advantage of this program.

Notable Statistics

Financial Aid

- In AY2020, MIT awarded \$137.5 million in need-based institutional grants to 2,724 undergraduates with an average family income of \$112,027. The median grant was \$56,974, or 81% of the cost of tuition, fees, and room and board.
- Thirty-three percent of MIT undergraduates received an institutional grant sufficient to allow them to attend the Institute tuition free. The average total family contribution (not including student term-time work) for those receiving an institutional grant was \$17,460.
- Sixty percent of the 4,516 undergraduates received need-based financial aid from the Institute. Nineteen percent received Federal Pell Grants, which are typically awarded to US students with family incomes below \$60,000.
- Sixty-nine percent of undergraduates (3,108 students) earned wages totaling over \$10 million from on-campus employment and on- and off-campus employment under the Federal Work Study Program.
- The percentage of undergraduates taking out loans decreased slightly from 11% in AY2019 to 10% in AY2020. Among seniors graduating in 2020, 78% graduated with no debt. Among those with education debt, median indebtedness at graduation was \$15,614.

Customer Service and Operations

- In FY2020, we answered more than 9,450 calls; between February and July 2020, customer service counselors answered over 8,000 emails.

- We processed 267 MIT education loan applications, averaging \$9,462 per application, and disbursed over \$2.5 million in funds to MIT-wide staff and faculty.
- Tuition and fees for the Institute totaled \$762 million in AY2020. Graduate tuition and fees were \$455 million, or 60% of total tuition. Undergraduate tuition and fees were \$239 million, or 31%, and non-degree tuition and fees were \$68 million, just under 9%.

Teaching + Learning Lab

The [Teaching + Learning Lab \(TLL\)](#) partners with MIT educators, staff, and student leaders to create engaging and supportive learning environments. Over the past year, TLL has supported and enhanced the foundational undergraduate experience (especially the first-year experience); collaboratively developed, supported, and assessed academic advising (both graduate and undergraduate), as well as graduate student professional development opportunities around teaching and learning; supported diversity, inclusion, and academic well-being across educational experiences at MIT; and informed policy decisions that impact the educational experiences of undergraduate and graduate students at MIT.

Since the COVID-19 disruption, TLL has also actively supported OVC offices, academic departments, faculty members, instructors, and TAs in the transition to remote teaching. The office continues to assist the ongoing Institute-wide planning and preparation for an altered teaching and learning environment in fall 2020 (and possibly beyond).

Key Accomplishments

Online Presence

- Launched a redesigned website showcasing new teaching, research, and evaluation resources as well as TLL's programs and services

Remote Teaching Support

- Led the development of the [Teach Remote](#) website, which provides guidance for MIT educators preparing to teach remotely. The office also created 2-week remote teaching check-in guidelines (and forms), a subject-specific student survey, and an Institute-wide remote learning survey.
- Developed and offered a series of Get Ready to Teach Remote workshops spanning educational technology tools and general best practices. The office also provided one-on-one consultations with faculty, instructors, TAs, and staff.

Support for MIT Educators

- MITeaches Fostering Inclusion: Launched this series of workshops and activities in August 2020 in partnership with ICEO to support MIT faculty, instructors, and TAs in teaching for equity and academic belonging. An annual report was submitted to the program's anonymous donor in March 2020.

- New/Junior Faculty Teaching Cohort (School of Science [SoS]): Designed and launched a faculty-focused version of the Kaufman Teaching Certificate Program, serving School of Science faculty during fall 2019.
- Faculty Mentoring Initiative (SoS): Partnered with Tim Jamison, Paula Hammond, and Bruce Birren to design, develop, and deliver a series of workshops for faculty in SoS focused on best practices in graduate student mentoring.
- Alternatives for the evaluation of faculty contributions to teaching: Produced an overview of practices at other institutions and compiled a range of alternative options for the evaluation of faculty.
- Developed summer programming for graduate students, including the Subject Design Certificate Program and the Teaching Practice Certificate Program.
- Teaching Development Fellows Network: Supported graduate student professional development in teaching and leadership skills. In AY2020, the 11 Teaching Development Fellows of addressed the teaching needs of their peers in 10 different departments and one OVC office.
- Kaufman Teaching Certificate Program (KTCP): Surveyed all KTCP alumni and redesigned the program. Also, we revised workshop topics and assignments to better prepare graduates to develop their own courses, with a sharper focus on the development of a working syllabus and the creation and use of aligned assignments and assessments.

OVC-Wide Initiatives

- First-year undergraduate advising: Assisted with the design and launch of a pilot alternative first-year advising model for students of the Class of 2023. In addition, we analyzed survey results and conducted student and advisor interviews to better understand the impact of the model and inform planning of first-year advising.
- Graduate advising: Partnered with the Department of Chemical Engineering to develop a set of faculty workshops on effective graduate advising and mentoring. TLL and OVC staff worked together to identify effective practices at peer institutions and to document past and current practices at MIT. They continue to work with staff from across the Institute and with national experts in graduate student mentoring. It is anticipated that the advising program will launch in AY2021 and will eventually be expanded to the entire School of Engineering.
- Flipping Failure: Continued this campus-wide digital storytelling project designed to help students build resilience in the face of academic challenges. We launched a website in February 2020 with a collection of nine undergraduate and six graduate student video stories.

Studies

- A study of how COVID-19 affects the learning and social experiences of undergraduates. Data collected via student responses to the Institute-wide remote learning survey were analyzed to inform the planning and structure of future remote subjects.
- Interview study of the academic well-being of lab-based STEM doctoral students at the midpoint of their training. The study explores how the COVID-19 pandemic and inability to work in laboratories have affected doctoral students' views of themselves, their research, and the future, as well as their relationships with their research advisor, faculty members, lab colleagues, and others within the MIT community.
- Qualitative assessment of the CUP 2019–2020 first-year experiment, including an examination of the impact of the fall 2019 changes to P/NR policies and credit limits on students in the Class of 2023.

Notable Statistics and Data

- A total of 326 students applied for, and 100 students enrolled in, the spring 2020 offering of KTCP. The program continued through the COVID-19 disruption, moving to Zoom after spring break.
- In all, 325 students enrolled for TA Days (workshops for new teaching assistants) in AY2020, including 189 students in August 2019 and 136 in January 2020.
- A total of 319 MIT community members registered for the AY2020 TLL Speaker Series, the theme of which was the holistic student experience.
- Data Talks, a workshop series focused on topics related to data acquisition and use, drew 384 attendees from the MIT community.

Awards, Recognition, and Staffing

In June 2020, TLL hired two MIT graduate students for the summer position of teaching and learning content writer and two MIT undergraduate students for the summer position of communications assistant. They will contribute to the office's resource development and communications work.

Looking Ahead

The transition to remote teaching in the spring and planning and support for teaching in the fall (and beyond) have significantly altered TLL's goals for next year. Supporting faculty, instructors, and TAs in their creation of engaging and meaningful remote learning experiences is our top priority for the next six months to one year.

TLL's goals for AY2021 and beyond include the following:

- Continued expansion of the Teaching Development Fellows Network to include more departments across the campus.
- Continued development of additional programming to support the professional development of future faculty.
- Continued development of train-the-trainers programs within departments (leveraging the Teaching Development Fellows Network) in order to better leverage TLL's expertise and increase the scope of our TA training and workshops.
- Continued development of web-based resources on best practices in assessment and evaluation and teaching and learning for members of the MIT community.
- Continued organization and delivery of the Data Talks seminars and workshops in a virtual environment to educate and support members of the MIT community in the collection and analysis of administrative data.
- Supported a variety of faculty cohorts.
- With additional funding from the anonymous donor, continued work on the Flipping Failure project and development of additional videos.
- Continued dissemination of alternatives for the evaluation of faculty contributions to teaching/education. We plan to support departments as they select and collect additional forms of evidence and implement alternative forms of evaluation.

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