

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.

Priorities and Progress

Although academic year 2021 (AY2021) required ongoing adaptation to the disruption caused by the coronavirus pandemic, the vice chancellor and his staff continued to make progress towards meeting OVC's [strategic priorities](#) related to the undergraduate and graduate student experience, and in organizational management. A few highlights of the year are outlined below.

Improving the Undergraduate Experience

Experiential Learning

Many students who had planned experiential learning opportunities for the summer of 2020 had to change gears—either adapting to remote experiences or making other plans. In anticipation of AY2021, the Office of Experiential Learning (OEL) worked diligently to provide ways for students to pursue meaningful learning opportunities. With financial support from the Provost, the OEL guaranteed that all undergraduates could have a paid experiential learning opportunity (ELO) during the year. Students who were on campus or at home could earn up to \$1,900 while working in a wide variety of remote or on-campus ELOs. In addition, OEL launched a [new website](#) and created an online portal, the Experiential Learning Exchange (ELx) to offer an easy, centralized way for students to identify opportunities.

First Generation and Low Income Students

First generation students—those who are the first in their family to attend college—and low income students have distinct needs and issues compared to their peers who come from more privileged backgrounds. Vice Chancellor Waitz—along with DiOnetta Crayton, associate dean and director of the Office of Minority Education (OME), and Elizabeth Cogliano Young, associate dean and director of the Office of the First Year (OFY)—created a task force to study this issue.

The First Generation/Low Income (FGLI) Working Group analyzed current resources and practices at MIT and conducted benchmarking, focus groups, and data collection to inform their assessment. The group issued its final report in March 2021, recommending that MIT: institutionalize a definition to help students understand their identity and utilize available resources offered; dedicate a space and office of increased full-time staff support for FGLI students; offer a first-year seminar, taught by an FGLI-identified faculty member, to teach students about MIT; and provide training for faculty and other teaching staff on using inclusive language.

Undergraduate Advising

In May 2020, President L. Rafael Reif charged [Task Force 2021 and Beyond](#) with exploring “how MIT might invent a thriving new future.” In phase one, the task force identified and recommended 16 workstreams for further analysis, each by a Refinement and Implementation Committee (RIC).

RIC 5, which focused on undergraduate advising, mentoring, and development, concluded that the quality of MIT’s undergraduate advising is “far from what it should be.” Institute surveys indicated that a significant percentage of undergraduate students could not identify a single MIT faculty member who they felt had taken a personal interest in their success. This trend was even more pronounced among first generation and/or low income students and underrepresented minority students. In addition, the committee determined that current advising practices have not kept pace with changes in undergraduate advising needs over the past few decades, and that some students are not aware of, or are not sure how to navigate, the advising network available to them.

To address these deficiencies, RIC 5 recommended hiring a group of professional advisors, called “Institute Advisors,” to provide support for undergraduate students and help strengthen the advising structure. These advisors will work with students from admission to graduation, in conjunction with departmental faculty advisors, to help them identify and achieve their personal and academic goals. A new director of Academic Advising will lead this new centralized advising resource.

Enhancing the Graduate Student Experience

Financial Security

The financial security of graduate students is an ongoing priority, and several new funds were created in AY2021 to address specific areas of need. The Graduate Student Short-Term Emergency Fund helps students handle one-time, non-recurring financial emergency situations. Doctoral students who face financial hardships that may impact their long-term academic progress due to special circumstances, such as the Covid-19 pandemic, can apply for Doctoral Student Financial Hardship Funding.

In addition, a working group of graduate students, senior leaders, faculty, and staff developed a new Transitional Support Program for graduate students who wish to change research advisors or groups. The program will be rolled out in two phases: one for unhealthy advising situations, and one for other reasons, such as evolution in research interest, changing research approaches, or a mismatch in early group choice. Beyond transitional funding, the program establishes department-based transitional support coordinators who can guide students through the process.

Graduate Student Families Support

OVC has worked to implement several of the major recommendations made by the Graduate Family Support Working Group. One recommendation was to create a new staff position focusing on supporting graduate student families. In early 2021, we hired a program administrator for graduate families (a new position) to serve as the primary point of contact and act as a central resource for information and support services to graduate students in their role as parents.

We also launched the MIT Grant for Graduate Students with Children, which awards \$2,000–\$4,000 depending on the number of children students have, for expenses such as child care, health care, and housing. The grants were increased in AY2022 with awards of \$5,000–\$7,000.

Professional Development

Discussions among OVC, the Deans Group, the Committee on Graduate Programs (CGP), and Graduate Officers suggest there is growing interest in establishing an Institute-wide professional development requirement for graduate students. This effort dovetails closely with recommendations of the Committee on Student Career Exploration and Services and the Graduate Student Professional Development Working Group.

Efforts are underway to advance experiential learning as well. The CGP has expressed interest in expanding curricular experiential opportunities for graduate students, and OVC has encouraged departments to include experiential education requirements within programs, similar to the Professional Perspective model that the Department of Electrical Engineering and Computer Science has implemented.

As a measure of OVC's overall commitment to professional development, we created a new staff position within Career Advising and Professional Development (CAPD) focused on graduate students. Our associate director of graduate student professional development joined the staff in the spring. CAPD also partnered with new graduate student professional development initiatives in the Departments of Civil and Environmental Engineering and Physics that could provide an Institute framework for how to create curricular options for this professional development training.

Advising and Mentoring

As with professional development, efforts to improve graduate advising and mentoring are an urgent priority for OVC. Currently, there are many programs and initiatives across MIT in this area. However, they are generally decentralized and uneven; some exist at the local level, and some at the Institutional level.

Consequently, OVC has proposed hosting and coordinating Institute-wide graduate mentoring and advising functions as part of the Teaching + Learning Lab (TLL). In this way, OVC can combine parallel efforts among students, faculty, and staff, such as the [graduate advising survey work](#) conducted by the Graduate Student Council and the Graduate Advising and Mentoring Refinement and Implementation Committee (part of Task Force 2021 and Beyond). We look forward to making progress in this area in the next year.

Diversity, Equity, and Inclusion

MIT rolled out a five-year [Diversity, Equity, and Inclusion \(DEI\) Strategic Plan](#) in fall 2020. Although we currently employ over 28 specialized high-impact practices and programs that support DEI priorities, this is insufficient to meet MIT's strategic goals. In particular, we have identified three priorities: improving graduate student advising and mentoring; providing comprehensive undergraduate advising support (beyond the first year); and addressing deferred maintenance for Student Information Systems (SIS). In

addition, focused work is needed in other areas, such as expanding bridge and pipeline/pathway programs; identifying gaps within graduate programs in achievement and belonging; and providing support for specific student cohorts, such as first generation, low income, veterans, and underrepresented minorities.

Leading and Managing During a Pandemic

The pandemic has presented significant functional challenges for everyone at MIT. Fortunately, the office-based work prioritization evaluations we completed in AY2020 positioned us well to adapt and embrace change this year.

The vice chancellor continued to run monthly virtual All Hands meetings, with an emphasis on transparency during an uncertain time. OVC held frequent leadership team meetings to provide continuity, and Vice Chancellor Waitz led daily or weekly Covid-19 Response Calls (attended by 150 staff, faculty, and students across the Institute) throughout much of the year. Online staff-led events, such as cooking classes and parent support groups, provided a much-needed sense of community since most staff were working remotely.

Among our key organizational priorities going forward are providing staffing to match workload (especially in graduate education) and implementing flexible work options for employees.

In addition to managing day-to-day operations, staff from across OVC continued to actively engage in the Institute's broader response to the pandemic throughout AY2021. Examples include the following:

- **International Student Support:** provided crucial support for international students, including navigating complex and fluid federal policies, and establishing guidelines to enable roughly 1,300 remote international appointments for graduate students during AY2021
- **Teaching and Learning Lab:** ongoing curricular support, developing best practices for remote learning, and evaluating lessons learned during the pandemic to inform future pedagogical practice
- **Admissions Office:** offering a virtual Campus Preview Weekend (CPW) for admitted undergraduates in April 2021 for the second consecutive year
- **Office of Graduate Education and the Graduate Student Council:** offering a virtual graduate orientation in August 2020
- **Office of the First Year:** optimizing the first-year student experience for the Class of 2024
- **Office of Experiential Learning:** offering paid Experiential Learning Opportunities for all undergraduates and developing the Experiential Learning Exchange, a new repository for opportunities

Visiting Committee 2021

In May, the vice chancellor and staff presented to the Undergraduate and Graduate Education Visiting Committee (VC) and outlined progress made since the last VC meeting in 2019; meetings are on a two-year cycle, but last year's meeting was postponed because of the pandemic. The VC concluded that OVC is functioning quite well. They were impressed by the innovative work and success of the First Year Experiment and the excellent response to the pandemic. The Visiting Committee recommended that OVC focus on several key areas, including improving undergraduate advising; improving graduate student advising, mentoring, and professional development; and embracing cultural and systemic change to advance diversity, equity, and inclusion efforts.

Office of the Vice Chancellor Headquarters

The Office of the Vice Chancellor Headquarters (OVC HQ) provides foundational support to OVC staff, enabling them to fulfill the organization's mission. The OVC HQ 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 AY2021, Brian Tavares joined the OVC staff as director of finance and administration, and Brian Canavan began a new role as registrar.

Key Accomplishments

In addition to helping advance the vice chancellor's key priorities, the OVC HQ team:

- Ran and refined Zoom leadership team meetings, all-staff meetings, retreats, and other programmatic events to build staff community, despite our remote work environment
- Supported staff working remotely because of the Covid-19 pandemic
- Continued to enhance internal communications and wellness

Affirmative Action Goals and Successes

The OVC staff, which is 66.9% women and 32.7% minorities, is one of the most diverse organizational units at MIT, with an ongoing commitment to developing a workforce that reflects the rich 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 may 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 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. MIT does not presently have a good 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 towards our affirmative action goals in these areas.

For the period July 1, 2020 through June 30, 2021, 81.3% of all new OVC hires were women and 46.9% were minorities. During the same period, OVC promoted 20 staff members: 65% were women and 45% were minorities.

Looking Ahead

- Focus on implementation of the key priorities, including those related efforts outlined by the MIT Task Force 2021
- Respond to Visiting Committee recommendations
- Impact and action tracking
- Efficiency and alignment with revised goals
- Integration of Institute-wide DEI efforts
- Evaluating flex-work (both for staff and key stakeholders)

Office of Admissions

MIT 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 AY2021 admissions cycle was transformed by the ongoing Covid-19 pandemic, which impacted all aspects of recruitment, selection, and yield, as well as staff training and operations. We also transitioned to a new applicant portal and database—Technolutions Slate—which replaced the longstanding Stargate system.

We experienced an unprecedented 66% increase in applications. While applications to many schools increased, ours exceeded that of our peer institutions, including the Ivy+ schools. We attribute the increase to our temporary suspension of the SAT/ACT requirement and the permanent decision to eliminate the use of SAT subject tests (which subsequently were discontinued by the College Board).

We also had a second year of record yield, which we believe is largely due to the incredible efforts of our staff and students to produce our second virtual CPW. Based on student responses, we don't believe virtual CPW is better than being on campus, but rather that the creativity of our community allowed us to offer an experience that was engaging, informative, and highlighted the amazing MIT community. We are MIT no matter where we are. We plan to permanently adopt some elements of our virtual programming into our future, in-person CPW programming.

Another major change is that—after inhabiting offices along the Infinite Corridor for as long as we have records—the Admissions Office moved to a new space on the second floor of the recently renovated Building E38, above the soon-to-be-opened MIT Welcome Center in Kendall Square. This transition has been several years in the making, and we are very excited to be able to better support and welcome our visitors in our new home, once public health permits.

Key Accomplishments

- We received 33,240 applications for the first-year class entering in fall 2021, up 66% compared to last year. We believe the suspension of the SAT/ACT requirement and the permanent elimination of the SAT Subject Test requirement contributed to the increase in applications.
- Admitted students totaled 1,365, representing 4.1% of the application pool.
- There are 1,184 students in the enrolling class. Eighty-seven of those deferred from previous years. Only including the 1,097 who applied this year, we have an 80.4% yield.
- A total of 1,631 students applied for transfer admission, an increase of 120% over last year. Of these applicants, 23 were admitted. Of those, 20 are expected to enroll and two are taking a gap year. There are also two students from the prior year's admitted class who are enrolling this fall. There is one Wellesley 3:2 student who will also take a gap semester until fall 2022.
- We completed the first year of our Slate implementation. We successfully released decisions to more than 34,000 applicants for first-year and transfer admission, and launched an alumni interview portal, completing more than 22,000 interviews, and ran another successful CPW.
- We developed a new fall outreach program that included a new presentation with admissions officers, student led "tours," and a choose-your-own-adventure component.
- With more time to prepare, we were able to offer innovative experiences for our virtual CPW that lasted an entire month, called CP* (or CPWhat?). Every admitted student received a care package—the b*x—filled with keepsakes and activity kits for specific CPW events. This enabled us to provide a tangible connection to the remote experience and encourage MIT admitted students to collaborate with peers.
- We launched foreign language information sessions for parents and family members, offering sessions both in Spanish and Mandarin during CPW.

Class Profile and Commitment to Diversity

- The Class of 2025 reflects MIT's ongoing commitment to the diversity and excellence of our student body. The class is 49% women, 16% first generation to college, and 10% international.
- Students come from 48 US states and 66 countries—91% are leaders of an organization (president, captain, etc.) and 42% founded an organization or business.
- The mean SAT score for first-year students is 749 for evidence-based reading and writing and 789 for math.
- This year, 18% of the class are Pell Grant recipients, down from 20% in 2020. This may be in part due to the large number of returning gap year students in the class who tend to be higher-income students.
- MIT continues to partner with QuestBridge, a nonprofit organization that recruits high-achieving students from low-income backgrounds. This year, 77 QuestBridge finalists will attend in the fall, down from 84 in 2020.
- Enrolling students who are US citizens or permanent residents are asked to self-identify race and ethnicity within categories established by the US Department of Education. The Class of 2025 is composed of the following: American Indian/Alaskan Native 2%; Asian American 41%; Black/African American 13%; Hispanic/Latinx 14%; Native Hawaiian/Pacific Islander 1%; White/Caucasian 37%. Of the respondents, 28% self-reported as an underrepresented minority student. (Note: Students may identify with more than one racial or ethnic group. International students do not report race or ethnicity but are included when calculating percentages of the class as a whole.)

Recruitment Travel and Outreach

- Unable to travel in the fall, we developed virtual programming that included a new student panel, financial aid sessions, and application workshop. These programs proved exceptionally popular, and 7,740 people attended from August to November.
- Due to the disruption in testing, we saw a significant decline in prospect numbers from our traditional sources. In order to continue to reach students from the lowest income brackets, we sought new partnerships with College GreenLight and Bilingual Undergraduate Studies for Collegiate Advancement.

Visit Programs

- We offered virtual programming only, with a total of 16,935 visitors participating in online information sessions, campus tours, and student panels.
- We provided 168 virtual tours. This number is lower than last year, as we offer only one tour per info session, versus multiple tours when on campus.

- Campus Preview Weekend was once again virtual with events and activities offered throughout the month of April. The community planned 611 online events; 1,270 students logged into the virtual event platform; 998 were paired with an MIT pen pal; and 851 logged into the CPW Discord server.

Educational Council

- We implemented and rolled out a new alumni interview portal.
- Our Educational Counselors (ECs) conducted 22,046 interviews, a record number that represents more than 53% increase from 2020.
- Over 2,811 ECs submitted interview reports.
- We created a new “overflow region” to allow ECs with extra capacity to conduct interviews in other areas where needed. We had 6,259 students in overflow and 1,388 overflow ECs.

Awards, Recognitions, and Staffing

- For AY2021, the admissions office was composed of 26 administrative staff positions, including several shared positions with Student Financial Services, and 10 support staff positions. Overall, 64% are women, 36% men, and 47% underrepresented minorities (Hispanic, Asian, and Black/African American).
- Ariel Leitao Leonelli won an individual Infinite Mile Award for Collaboration, Communication and Leadership, and the Virtual Programming Team (Trinidad Carney, Tim Hickey-LeClair, Leah McDermott, Erin Murray, Ameer Phillips, Julia Potts, Lauren Rodriguez, Danielle Taitt, and Tiffany Velez) won an Infinite Mile Award for Serving the Client.

Looking Ahead

- Our SAT/ACT requirement will remain suspended for the coming application cycle.
- The Admissions Office is settling into Building E38 in Kendall Square and planning to return with a hybrid work model in September.
- We will continue to hold online sessions for those unable to visit campus.
- We will collaboratively open the new MIT Welcome Center with the Open Space Programming team in September and will offer in-person sessions and tours.
- We will conduct searches for several open positions across the office, including the director of outreach.
- We are preparing for a fully virtual interview process for the Class of 2026.

Career Advising and Professional Development

The mission of [Career Advising and Professional Development \(CAPD\)](#) is to empower students, postdoctoral researchers, and alumni to explore 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

- **Distributed Handshake Model:** Onboarded 19 departments to Handshake system, furthering our progress towards consolidating internships, job opportunities, and career events into one centralized location.
- **Career Exploration Series:** Collaborated with more than 15 academic and administrative departments to launch a series of 43 workshops and panels to help students explore careers and industries during the fall semester.
- **Virtual Career Fairs:** Hosted eight virtual career fairs, including piloting a Graduate Student and Postdoc Career Fair, and partnered with other schools on three career fairs to expand student access to opportunities during the Covid-19 pandemic.
- **Graduate Student Professional Development:** Officially launched CAPD's graduate student professional development function area, focusing on coordinating, integrating, and structuring professional development programming for all seven core competencies across the Institute. Launched Mentoring Circles, a pilot mentoring program that paired 32 graduate students of color with 10 graduate alumni.
- **CAPD Website and Messaging Campaign:** Redesigned the CAPD website to offer dynamic targeted content as well as increase target audience visits and engagement.
- **Pay Equity:** Initiated the Pay Equity Working Group, a 12-person group of administrators and students committed to promoting pay equity for MIT students and graduates from diverse backgrounds and experiences at the beginning of and throughout their career. Conducted data analysis on recent graduates; created a resource website, social media campaign, and workshops.
- **Strengthened Internal Partnerships:** Provided greater access to diverse career, education, and professional development opportunities by collaborating with co-curricular offices and departments. Standout innovations include a collaboration with the Alumni Association on the newly piloted micro-internship program and partnering with the Engineering Communication Lab for the first Institute-wide "Research Slam."

Notable Statistics

- Conducted 12,341 MIT (non-unique) student, alumni, and postdoctoral engagements through:

- 6,166 career, distinguished fellowships, and prehealth advising sessions
- 4,065 attendees at 218 career, distinguished fellowships, prehealth advising online workshops, presentations, and panels
- 2,110 attendees at 91 employer events and information sessions
- Submitted 71 prehealth committee letters and 52 distinguished fellowship endorsement letters.
- Expanded first-year student outreach by conducting 419 appointments, a 36% increase from AY2020, and maintained 1,024 subscribers to the first-year student newsletter with a 49% average open rate.
- For the Class of 2020, 89% of bachelor's, 87% of master's, and 87% of PhD graduates seeking employment reported obtaining a job within three months of graduation (among those seeking immediate employment). Reported median salaries were \$90,000 for SB, \$100,000 for MS, \$121,500 for MEng, and \$150,000 for MBA. Reported doctoral median salaries were \$56,000 for postdoctoral positions and \$130,000 for other positions.

Prehealth Advising

Seventy-four students and alumni applied to medical school in the 2020 cycle (22 undergraduates, four graduate students, and 48 alumni), with a 73% acceptance rate.

Career Services

- Infinite Careers Series yielded 123 attendees at 13 alumni speaker events. Of the students who responded to the post-event surveys, 100% reported satisfaction with the program content.
- Of the 14,450 total employers in the MIT Handshake system, 5,766 were new employers for MIT.
- A total of 2,110 student, postdoctoral scholar, and alumni attended employer events and information sessions.
- The Employer Connection Program featured 17 employers.

Distinguished Fellowships

Distinguished Fellowships supported 431 non-unique applications. There were 31 winners from MIT, including:

- Rhodes Scholarship: Danielle Grey-Stewart, Ghadah Alshalan (Saudi Arabia)
- Marshall Scholarship: Katherine Collins, Marla Odell
- Mitchell Scholarship: Meghan Davis
- Gates Scholarship: Amy Jin

- Schwarzman Scholarship: Francesca Macchiavelo Cauvi, Alice Ho, Lucio Milanese, Ava Waitz
- Knight-Hennessy Scholarship: Kofi Blake, Orisa Coombs, Jierui Fang, Max Kessler, Claire Lazar Reich, Kyle Swanson
- Fulbright Fellowship: Jenny Chan, Gretchen Eggers, Miki Hansen, Olivia Wynne Houck, Laura Huang, Teis Jorgensen, Meghana Kamineni, Andrea Shinyoung Kim, Kevin Lujan Lee, Sharon Lin, Anjali Nambrath, Abby Stein, Tony Terrasa
- Harry S. Truman Scholarship: Yu Jing Chen, Max Williamson

Nine MIT students and alumni are among the 30 recipients of the Soros Fellowships for New Americans.

Awards and Recognition

- Four staff served in leadership roles for professional associations and/or presented in regional and national conferences.
- Ten staff participated in OVC and Institute-Wide Committees.
- Akunna Rosser received an OVC Infinite Mile Award.

Looking Ahead

- Engagement of CAPD: Promote CAPD's new website to all stakeholders and increase student engagement through newsletters, tailored content, Career Interest pages, automated alerts, and expanding our social media efforts to include Instagram and LinkedIn.
- Ever-Changing World of Recruiting for Jobs, Graduate and Professional Schools, and Fellowships: Adapt our programming and services to prepare students, alumni, and postdoctoral researchers for hybrid recruiting, increased competition, video interviews, and the ongoing evolution of recruiting practices.
- Career Exploration: Continue to partner with academic and administrative departments through our Career Exploration Series. Develop career prototyping and micro-internship experiences for undergraduate and graduate students, and create experiential opportunities for students interested in health-related fields.
- Identity and Career: Support diversity, equity, inclusion, and belonging by adapting programs and services to better support first-generation/low-income students, students of color, and LGBTQ+ students as they explore careers. Develop DEI career series programming, affinity groups resources, and staff training to better support all students and postdoctoral researchers.
- Graduate Student Professional Development: Collaborate with Office of Graduate Education (OGE) and other professional development partners to create a cohesive, integrated professional development model that will unify and enhance existing work and offer a suite of opportunities tailored for graduate students.

Office of Experiential Learning

The OEL works to organize, amplify, and accelerate the practice and impact of experiential learning for MIT students. OEL is home to four experiential learning centers and programs—D-Lab, the Edgerton Center, Priscilla King Gray Public Service Center, and Undergraduate Research Opportunity Program (UROP)—but collaborates and coordinates with experiential learning programs across the Institute, including MIT International Science and Technology Initiatives (MISTI), the Innovation Initiative, CAPD, Gordon-MIT Engineering Leadership Program, MIT New Engineering Education Transformation, Terrascope, and many more.

In response to the Covid-19 pandemic, MIT guaranteed a paid Experiential Learning Opportunity in AY2021 to every undergraduate student who wanted one. OEL was tasked with distributing the funding, which was done through two request for proposals to the MIT community. MIT staff and faculty adapted existing ELOs to a virtual format and created new rigorous and hands-on research, teaching, service, and other experiences. Roughly two-thirds of undergraduates participated in a paid ELO in AY2021.

With the help of Information Systems and Technology, OEL created a student-tracking database and a new Experiential Learning Exchange (ELx), where programs can promote their offerings and students can search for and apply to ELOs across the Institute. ELx is now the primary database for ELOs of all types, and it has already generated a positive response from students and ELO programs and sponsors.

Building on a successful launch of the Experiential Ethics course in the summer of 2020, OEL is sponsoring both Experiential Ethics and Experiential Sustainability in summer 2021. These three-unit courses allow students to explore challenging topics through the lens of their summer experiences.

OEL also established an experiential learning community of practice, regularly convening experiential learning program leaders to share ideas and information. Meetings in AY2021 focused on effectively virtualizing ELOs, administering the ELO funding guarantee, the design of ELx, and other strategies and ideas for making experiential learning at MIT more effective. This group will continue to meet in AY2022.

MIT D-Lab

Founded in 2002 by Amy Smith, senior lecturer in the Department of Mechanical Engineering (MechE), [MIT D-Lab](#) works with people around the world to develop and advance collaborative approaches and practical solutions to global poverty challenges.

D-Lab collaborates with 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, host design trainings, and more.

Over 19 years, D-Lab has developed 25 MIT classes, enrolled more than 3,000 students, trained more than 5,800 people worldwide in design or business skills, and reached more than 2.25 million people with goods and services.

Academics

Led by Professor Maria Yang, D-Lab faculty director for academics, and Libby Hsu, D-Lab associate director for academics, D-Lab offered 12 subjects in AY2021 (down from 16 in the prior year due to the Covid-19 pandemic considerations). This year saw 138 students enroll, a decrease from the prior year due to fewer class offerings and student deferment of classes that would normally have significant hands-on components.

Subjects Offered

Of the 12 subjects offered in AY2021, six were hybrid online and in-person and six were purely online. The classes include:

- EC.746J/2.00C/1.016J Terrascope: Design for Complex Environmental Issues
- EC.729/2.729/EC.797/2.789 D-Lab: Design for Scale
- MAS.665/15.375/EC.731J Development Ventures
- 2.722J/EC.720 D-Lab: Design
- 11.025/11.472/EC.701/EC.781 D-Lab: Development
- EC.718/EC.798/WGS.277 D-Lab: Gender and Development
- 2.651/EC.711/EC.791 Introduction to Energy in Global Development
- 4.411/EC.713J D-Lab Schools: Building Technology Laboratory
- 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, and Health
- EC.750/EC.785 Humanitarian Innovation

Students and Projects

D-Lab students worked in more than 40 teams with international community partners in countries including Chile, Colombia, Greece, Guatemala, India, Indonesia, Kenya, Madagascar, Mali, Niger, Nigeria, Uganda, and the US, including Puerto Rico. Some projects were regionally focused in multi-country areas of Africa, Latin America, and Southeast Asia. Post-semester travel was prohibited due to the Covid-19 pandemic restrictions. However, students and community partners engaged in dynamic Zoom sessions for project collaboration and technology transfer as appropriate.

Covid-19 Impact

Like many academic programs around the Institute, D-Lab sent tools and materials to students where needed to facilitate the learning process and advancement of projects. D-Lab instructors continued to earn high marks from students for not only their instruction, but for their care of the whole student in the stressful pandemic environment.

Awards

The D-Lab Academic team was the recipient of the 2021 Office of the Vice Chancellor Infinite Mile Award for Innovation and Creativity. Additionally, Libby McDonald and Sally Haslanger, co-instructors of D-Lab: Gender and Development, won the student-nominated Teaching with Digital Technology Award.

Research

D-Lab's lean, collaborative, interdisciplinary research team is led by Dan Frey, faculty director for research, and Kendra Leith, associate director for research. D-Lab research groups receive funding from competitive sources including Abdul Latif Jameel Water and Food Systems Lab (J-WAFS), the Bill and Melinda Gates Foundation, the Islamic Development Bank, the MathWorks Grand Challenge, the National Science Foundation, Santander Foundation, United States Agency for International Development (USAID), individual donors, and others. Highlights include the following:

- Biomass Fuels and Cookstoves: With the Charcoal Project, D-Lab co-organized Harvest Fuel Initiative to support 20 small alternative cooking fuel businesses in Kenya; established collaboration with MIT Deng Energy and Nanotechnology Group (DENG), Ideation Lab, and Appropriate Energy Saving Technologies.
- MIT D-Lab | Comprehensive Initiative on Technology Evaluation (CITE): D-Lab completed studies and published reports on access to affordable bicycles; the gender gap in access to digital financial services in Burkina Faso; and Creative Capacity Building.
- Evaporative Cooling for Vegetable Preservation: Trained over 300 people on the assembly and use of clay pot coolers as part of the program in Mali; published a guide in French and English on the construction of clay pot coolers; and developed and tested a design for retrofitting a used shipping container into an evaporative cooling chamber.
- Lean Research: Continued working with Ashesi University (Ghana) and the USAID-funded Nexti2i program to train engineers and social entrepreneurs in D-Lab's Lean Research methodology.
- Local Innovation: Received an unsolicited five-year award from the Bill and Melinda Gates Foundation to serve as the foundation's external adaptive learning and evaluation partner for an agricultural systems transformation project in India; invited by USAID to present most recent papers to more than 200 staffers; grew the Local Innovation group membership from three to eight.
- In June, MIT D-Lab, MechE, the Universidad del Valle Guatemala, and Asociación de Exportadores de Guatemala (AGEXPORT) received a three-year, \$15 million award from USAID to create a center of excellence in Central America for applying university-based research, innovation, and entrepreneurship activities towards addressing local and regional development priorities.
- MIT D-Lab researchers this year published technical guides, white papers, and program reports in addition to articles in peer reviewed journals such *Nature Communications Journal*, *International Journal of Heat and Mass Transfer*, *World Development Journal*, and *Bioresource Technology Journal*.

Covid-19: MIT D-Lab Research

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

Innovation Practice

The third pillar of D-Lab, Innovation Practice, headed by Laura Budzyna, associate director for Innovation Practice, applies participatory innovation as a methodology for tackling poverty challenges. Highlights include:

- The D-Lab Scale-Ups Fellowship collaborated with Upaya Social Ventures, a non-governmental organization (NGO) in India, to jointly support a cohort of women social entrepreneurs in India, with a special focus on identifying and addressing barriers to investment and financing.
- The Humanitarian Innovation Program continued its multiyear collaboration with refugee NGO Faros in Athens, Greece, and continued work on a Co-Creation Toolkit. In response to the Covid-19 pandemic, the team pivoted to a mix of in-person (when allowed), online, and app-based programs.
- The Inclusive Economies Program continued work in Colombia with artisanal and small-scale miners, and published “Creative Capacity Building to Address Gender-Based Violence in the Artisanal and Small-Scale Gold Mining Sector in Colombia.”
- Partnership Co-Design Toolkit (P.ACT): a collaboration between MIT D-Lab and [SEED](#) that offers a disciplined, inclusive, and practical approach to co-creating better-value chain partnerships.

Looking Ahead

With the retirement of MIT D-Lab Executive Director Bob Nanes in July 2021, D-Lab hired Ana Pantelic as his successor.

Edgerton Center

The [Edgerton Center](#) continues 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.

Key Accomplishments

Engaging Admitted Students

In November, the Admissions office issued a call for fun, hands-on kits highlighting MIT’s Mind, Hand, Heart culture that it could send to every accepted student.

We responded with a modified version of our [Aurora Beaveralis kit](#), developed for our outreach activities. We manufactured and packaged 1,500 kits and delivered them to Admissions, which shipped them to the admitted students. In addition to providing instructions for their assembly, the accompanying materials encouraged students to exercise their creativity in customizing or extending the materials we provided. We followed up with virtual events that allowed students to share their work and help each other out with steps they may have found tricky.

Seven of the admitted students who took part in our virtual events expressed interest in our Engineering Design Workshop (EDW), a summer outreach program for high-school students. They worked with adult mentors in their communities and organized EDW teams at their high schools, spread across four states—California, Florida, Louisiana, and Texas. We have begun discussions with the Admissions office to find ways to extend this model of engaging admitted students.

Student Machine Shops

Edgerton’s 10,000 square feet of staff-supervised shop spaces provide MIT students with the opportunity to learn how to design, build, and manufacture. The [Edgerton Student Shop](#) in 6C reopened in September 2020, for use by students needing to fabricate parts for their research. Our other spaces (in Buildings 4, N51, and N52) reopened in January 2021, supporting students with subject work and limited extracurricular activities.

A generous donor provided the funding for a design study of a first-floor expansion in our high-bay space in building 6C. That design study led to a second donation (approximately \$1.5 million) for creating a new Edgerton Student Mechatronics Lab, which will add over 1,300 square feet of new space to the main complex. Most of it will be dedicated to a vibrant maker community, where students can integrate electronic and mechanical systems for their projects, whether for personal, academic, or research purposes. The rest will house the relocated office of the shop manager and storage.

Subjects

In AY2021, our staff rose to the challenge of remote and hybrid teaching. The only in-person teaching that took place involved laboratory sessions of 6.163 Strobe Project Laboratory. Our hands-on electronics subject, 6.070 Electronics Project Lab, and photography subject, EC.310 Creative Imaging, sent students parts kits, film, and cameras to enable them to carry out the subject assignments.

The success of 6.070 Electronics Project Lab in a remote setting led us to propose piloting the subject in MIT living groups for AY2022. Our proposal to the Alumni Class Funds was funded, and the necessary work has begun.

K–12 Programs

With the benefit of little or no fee to participate, the Edgerton Center’s K–12 programs execute the Institute’s larger goals of creating educational opportunities for students from all backgrounds and removing barriers to participation. While we could not conduct in-person, on-campus instruction, our staff found many ways to continue to advance our mission:

- Our program of in-person, project-based lessons in science and engineering for 4th through 8th grade students typically serve over 2,000 students annually. For the pandemic, we shifted to remote learning, with staff packaging materials in kits and delivering them to area school teachers. When the teachers offered the lessons, our staff were online, supporting them.
- The Greater Lawrence Technical School's (GLTS) STEAM Innovation Program completed a fourth year of collaboration with the Edgerton Center. With funding from Advanced Functional Fabrics of America (AFFOA), we developed curricula to promote workforce learning in Advanced Functional Fibers.
- Our Engineering Design Workshop is a summer program for high-school students that allows them to propose their own hands-on engineering projects. We help them form teams and mentor them in designing, testing, and building their creations. This summer we worked with teams in four states, as well as Italy and Spain.

Fundraising

Over 250 gifts were received during the 24-Hour Challenge in March. We also received a \$1.5 million donation to create the Edgerton Student Mechatronics Lab in Building 6C (construction to begin in the fall of 2021).

Looking Ahead

The pandemic has had a dramatic effect on the Edgerton Center's core business: experiential learning. We have found new ways to accomplish many of our goals with much less face-to-face contact and continue to seek ways to redress imbalances across race and class for MIT students and for the K–12 communities with which we engage.

Priscilla King Gray Public Service Center

The [Priscilla King Gray Public Service Center \(PKG Center\)](#) taps and expands MIT students' unique skills and interests to prepare them to explore and address complex social and environmental challenges. In AY2021, the PKG Center responded to the challenges posed by the public health and civil rights crises by expanding experiential learning opportunities for students to apply their skills towards pandemic response efforts and anti-racism work. We also expanded our programming in our core themes of climate, health, and technology for social good. As the world faced myriad uncertainties one thing remained constant: students wanted to use their talents to help communities in mutually beneficial ways around the globe, and the PKG Center facilitated these opportunities.

Key Accomplishments

Throughout the Covid-19 pandemic, the PKG Center expanded and adapted our programs in response to increased interest about public service stemming from the pandemic, racial injustice, attacks on democracy, and climate change. The PKG Center offered numerous opportunities for students to participate in rigorous, hands-on learning experiences with an Institute-funded special stipend. Some notable achievements include:

- We significantly expanded our [Social Impact Internship program](#), which pairs highly-skilled MIT undergraduates with nonprofit and government agencies to build capacity and bolster their technical capabilities while engaging students in challenging social impact issues in real-world settings.
 - Student demand was high; we were only able to accommodate one in every four applications.
 - 100% of Social Impact Interns indicated that they gained professional knowledge and skills that will be beneficial in their future careers, and 100% of community partners are interested in hosting more MIT interns.
 - 227 students partnered with community organizations on technology for good, climate, health, and racial justice projects.
- We expanded our academic course catalogue to include three Discovery Courses:
 - SP.256 Informed Philanthropy in Theory and Action—offered with funding from the Learning by Giving Foundation
 - SP.251 How to Change the World: Experiences from Social Entrepreneurs—offered in partnership with SOLVE
 - SP.250 Transforming Good Intentions into Good Outcomes—offered now in its third year
- IDEAS, MIT’s annual social innovation competition, celebrated its 20th anniversary. Over 200 awarded teams have implemented innovative service projects in 44 countries, impacting hundreds of thousands of lives. Approximately half of the projects are still active today.
- Our Diné community partners in Navajo Nation requested help from the PKG Center to address Covid-19. This request during a crisis was a testament to the strength of our relationship and the benefits of a sustained, mutually beneficial, place-based collaborative partnership.
- PKG Fellows worked closely with partners in 16 countries and across the United States during Independent Activities Period (IAP) 2021, summer 2021, and spring 2021.
- PKG Spring Break engaged students in public service conversations about climate change, health, and technology for good via small online cohorts. The PKG Center partnered with public service centers at peer institutions to create a virtual alternative spring break program.
- Until this year, Course 6 majors had been underrepresented in PKG Center programming. Through targeted outreach, we reversed this trend: Course 6 majors engaged with us more than any other undergraduate major.

- The PKG Center developed a partnership with the Schwarzman College of Computing's Social and Ethical Responsibilities of Computing and strengthened collaboration across many departments, labs, and centers (DLCs).
- The PKG Center created a living document that maps public service at MIT.
- President Reif tapped the PKG Center to lead MIT's participation in the [ALL IN Campus Democracy Challenge](#). The ALL IN committee is working to embed voter registration and non-partisan civic preparedness throughout MIT, regardless of the type of election year.

Awards and Recognitions

The PKG Center was awarded grants from organizations such as the Public Interest Technology University Network and the Learning by Giving Foundation. The PKG Center also received a number of individual gifts from alumni and supporters of public service including new donors. The PKG Center was featured during Family Weekend and the Alumni Leadership Conference.

Additionally, the PKG Center recognized two students for excellence in public service with the Priscilla King Gray Award for Public Service this spring: Danielle Grey-Stewart '21, and graduate student Marisa Gaetz. The PKG Center also recognized Professor Kristin Bergmann of the Department of Earth, Atmospheric and Planetary Sciences as the winner of its fourth Paul Gray Faculty Award for Public Service.

Looking Ahead

This year, the PKG Center will transition its programming to a hybrid model that combines remote and in-person opportunities for undergraduate and graduate students at MIT to engage in meaningful public service, iterating to best serve students, colleagues, and community partners. We look forward to:

- Strategically expanding internships and associated resources, working towards our goal of providing 25% of undergraduate students with an immersive public service experiential learning opportunity.
- Integrating our work with recommendations from Task Force 2021 and Beyond.
- Continuing to partner with the Diné community as Navajo Nation emerges from the Covid-19 pandemic.
- Launching a new data portal that will allow us to make evidence-based assessments about our programs.
- Continuing to position the PKG Center as the rigorous, academically-aligned epicenter of public service at MIT by strengthening our partnerships with DLCs and faculty.
- With the departure of Communications and Development Manager Halley Kamerkar, changing the primary focus of the position to fundraising, to help us serve more students and build sustainability.

Undergraduate Research Opportunities Program

Established in 1969, the [Undergraduate Research Opportunities Program](#) is MIT's premier experiential learning program, promoting faculty-undergraduate collaboration at the forefront of research in all disciplines.

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

Notable Data and Statistics

- Of the 2021 first-undergraduate degree recipients, 93% participated in UROP at least once.
- Of the first-year students (Class of 2024), 64% participated in UROP during AY2021 and summer 2021.
- Of the MIT undergraduates, 62% engaged in UROP summer 2020 through to spring 2021, with 70% of undergraduate women and 55% of undergraduate men participating. During this period, 60% of MIT faculty mentored at least one UROP student.
- The Institute committed \$13,215,852 to undergraduates engaged in UROP, with \$6,376,058 (48%) allocated directly from the UROP office.
- Of the UROP projects, 77% were paid, 18% were undertaken for academic credit, and 5% were volunteer.

Key Accomplishments

- Partnered with the Office of Experiential Learning to promote UROP as a key way to leverage the Experiential Learning Guarantee, including a first-year, student-focused initiative to provide UROP funding, complemented by a suite of virtual programming covering several topics, including professional skills development and maximizing research experiences.
- Extended mentorship skill-development programming for graduate students by introducing one-hour virtual workshops on specific mentoring topics, facilitated by UROP's graduate fellow. A guide for research mentors was also created and will be launched on our redesigned website debuting this fall.
- Expanded funding and programming resources for students interested in research, including offering additional UROP direct-funding application rounds and hosting a variety of new virtual workshops and networking events. Programs were offered in collaboration with Office of the First Year, Office of Minority Education, CAPD, Comm Labs and DLCs, and were very well attended.

Awards and Recognitions

2021 Outstanding UROP Mentor Awards Recipients

- Susan Solomon, Lee and Geraldine Martin Professor of Environmental Studies
- Michael Short, Class of '42 Associate Professor of Nuclear Science and Engineering
- Crystal Lee, PhD student in the Visualization Group, Computer Science and Artificial Intelligence Laboratory (CSAIL)
- Ferran Alet, PhD student in the Machine Learning and Robotics Group, CSAIL

2021 Outstanding UROP Student Award Recipients

- Vaishnavi Addala '24, MechE UROP
- Zoë Marschner '23, CSAIL UROP
- Osvy Rodriguez '21, Media Lab UROP
- Alison Fang '23, Comparative Media Studies UROP
- Agata Bikovtseva '21, Chemistry UROP

Looking Ahead

- In fall 2021, UROP will launch a redesigned website with rebranded content, providing streamlined access to deadlines, advertisements, and more—including advice on finding UROPs and maintaining effective research advising relationships.
- We plan to develop diversity reports detailing UROP engagement among first-generation, underrepresented minority students, and women. This will allow us to compare DLC-specific data with overall engagement at the Institute level to aid both UROP and DLCs in ensuring diversity, equity, and inclusion when recruiting UROPs and engaging students in the research enterprise.

Office of 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, FPOPs, Faculty Engagement)
- First-Year Advising (e.g., Choice of Major, Transfers)
- Committee on Academic Performance (CAP)
- First Generation Programming

Notable Data and Statistics

- For the Class of 2024, 75% was advised by faculty and 25% was mentored (primary advisor was staff) by faculty during their first year at MIT.
- In the fall 2020 semester, 2.7% of the Class of 2024 was flagged; 45% of flagged students recovered and passed their flagged subjects. In the spring 2021 semester, 7.5% of the Class of 2024 was flagged; 60% of flagged students recovered and passed their flagged subjects.

Key Accomplishments

- New social media platforms were established, successfully promoting events and building community.
- Despite the Covid-19 pandemic, all members of the Class of 2024 completed the process of declaring a major.
- The First Generation Program: first generation/low income program expanded to include a new student board and structure.
- Two versions of a virtual orientation were offered.
- In-person spring programming was offered, despite Covid-19 pandemic restrictions.

Awards and Recognitions

2021 First-Year Student Award Recipients

- Diversity: Paige Dote
- Fine Arts: Audrey Cui
- Leadership: Megan Lim and Joyce Yuan
- Research: Malhaar Agrawal and Franklin Schulte
- Service: Zoe Gotthold

2021 Outstanding Associate Advisor Awards

- Seminar Advising: Ashar Farooq, '23
- Traditional Advising: Terryn Brunelle, '22

2021 Outstanding Advisor Awards

- Alan J. Lazarus (1953) Excellence in Advising: Haynes Miller, Department of Mathematics
- Creative Advising Activity: Thomas W. Malone, Sloan School of Management
- Innovative Seminar: Daniel Frey, MechE
- Outstanding Veteran Advisor: Joseph Formaggio, Department of Physics

Looking Ahead

- OFY will launch a fully redesigned website that provides easy access to important dates, orientation information, advising and academic details, registration forms, and more.
- A new Learning Community—DesignPlus—will begin with the Class of 2025.
- Recommendations in response to the Working Group for First Generation and continued First-Year Advising initiatives will be developed.

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 their MIT education. Our 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

- Restructured our program activities and fall Friday seminar to align with the special circumstances of 2020 when the first-year class was not on campus.
- Continued to use our spring seminar, CC.011 Thinking Across the Disciplines, to expose our first-year students to a diverse range of faculty at MIT.
- Continued to work with OVC on improving the first-year experience, in particular developing new programming to meet the remote learning needs of our students.
- Supported the work of Elizabeth Vogel Taylor's project "Increasing the Exposure of Organic Chemistry Students to the Work of Female and Minority Researchers," for which she was also recognized with an MIT Infinite Mile Award for Diversity and Inclusion.

Notable Statistics and Data

- Fall first-year enrollment at fifth week: 49
- Spring first-year enrollment at fifth week: 41
- We employed 47 upper-level Concourse students as UROPs, tutors, teaching assistants (TAs), office workers, and graders.

Experimental Study Group

The [Experimental Study Group \(ESG\)](#) builds a learning community through small-group, discussion-based, experiential instruction in biology, chemistry, math, physics, and humanities; weekly lunches; group study sessions; outings; and other opportunities to gather as a community.

AY2021 Initiatives

Building a Learning Community Virtually during the Pandemic

With hard work, creativity, and planning, the ESG community of learners continued and prospered in a virtual environment, as follows:

- Instead of our normal double lottery in the summer and at orientation, we accepted the entire ESG Class of 2024 in June 2020, allowing our community-building to begin over the summer. Staff held online “get-to-know-you” activities, while upper-level ESGers started a discord channel, held game nights, and hosted virtual food events. We sent all incoming first years care packages, including usable ESG swag.
- Throughout AY2021, ESG staff added class sections and held more office hours and advising sessions than usual, to enable close interaction with students.
- We increased the number of TAs by approximately 30%. ESG’s TAs are integral to weaving the ESG community together and even more so this past year, since few, if any, of our first-year students met each other, the staff, or their TAs in person.
- We held virtual Friday lunches, game nights, and other events throughout the year to foster community.

First-Year Experimentation Pilot Project

With financial support from OVC, ESG continued its pilot project, moving project-based learning into the physics, chemistry, biology, and math curricula. Hands-on projects replaced final exams, allowing student teams to apply their theoretical learning to real-world projects of their own design and interest.

Experimental Study Group Seminars

ESG continued its tradition of offering 3–6 unit seminars. Staff, alumni, and guest lecturers offered seven virtual seminars, four of them new: ES.S30 From Transistors to TikTok (Christian Cardozo); ES.S70 The Varieties of Human Experience with Apologies

to William James (Charles “Chuck” Kaufmann); ES.S90 Designing Adaptive Prison Solutions (Kyle Keene, Anna Musser); and ES.S91 Opening the Windows: Emotional Intelligence and the Self in the World (Jane Abbot).

- Working with our new Alumni Chair Christian Cardozo '17, MNG '18, we reinvigorated the ESG Alumni Steering Committee and revamped the alumni website.
- We prescreened *Experimental*, the ESG Documentary, for alumni in December 2020 and June 2021. We hope to make final edits and officially premiere the film in the coming year.
- We held a virtual reunion during Commencement Weekend 2021, with over 80 alumni attending, more than twice the usual number.

The Educational Justice Institute

- Piloted online learning models to allow the continuous delivery of education to incarcerated students in the humanities, computer science, and other disciplines, representing some of the first real-time, coeducational learning opportunities in correctional facilities in Massachusetts, Maine, and New Hampshire.
- Created the Computer Education Committee, a group of MIT and Harvard students committed to improving and expanding computer education programs in correctional facilities, including courses in computer programming, self-efficacy, and career readiness.
- Continued coordination of the Massachusetts Prison Education Consortium, which includes 61 colleges and universities and 300 individual members (20% increase over AY2020 for both).

Awards

- Peter and Sharon Fiekowsky (PSF) Community Service Awards: Michelle Hsu '24, Nicole Shigiltchoff '24, Mariia Smyk '23, and Nicolas Suter '23
- PSF Excellence in Teaching Award: Natalya Ter-Saakov '21
- PSF Distinguished Teaching Awards: Luis Gallegos '21, Sophie Herscovici '21, Ryan Mansilla '21, Joshua Talbot '21, and Jiaheng Zhang '21
- 2021 ESG-PKG Center Fellowship: Mercy Oladipo '23
- 2021 Teaching with Digital Technology Awards: Jerry Orloff, lecturer in Mathematics, and Mohamed Abdelhafez, lecturer in Physics

Notable Student Statistics and Data

- There are 54 in Class of 2024
- Of those, 36 are female, 16 are male, and two are nonbinary

- Of the class, 14 are underrepresented minorities
- There were 2 international students admitted from the UK and Burkina Faso
- There were 64 undergraduate TAs in the fall and 55 in the spring; these TAs provided academic support while learning teaching and leadership skills.

Looking Forward

- OVC First-Year Experimentation Pilot Project continues through spring of AY2022.
- Pilot project with Schwarzmann School of Computing: In fall 2021, one section of ES.801 Physics/Mechanics (equivalent to 8.01 Physics I) will be paired with one section of 6.0001 Introduction to Computer Science Programming in Python; similarly, ES.802 Physics/Electromechanics (equivalent to 8.02 Physics II) will be paired with 6.0002 Introduction to Computational Thinking and Data Science in the spring. Depending on the outcome of the first-year experiment, this approach may extend to include chemistry and biology general institute requirements (GIRs).
- Pilot project with Technology Enabled Active Learning (TEAL): In fall 2021, ESG will offer an ES.802 Physics II class with a project-based learning component based on the design of a micro-electric grid that can provide affordable electricity to a community without reliable access to a large-scale electric grid. The curriculum developed will be used in one 8.02 TEAL section in the spring semester.
- Community building: We will continue intensive efforts to build community with our incoming Class of 2025, as well as the ESG Class of 2024.

Terrascope

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

Key Accomplishments

- Terrascope contributed to Institute efforts to adapt to the pandemic. Students tested dozens of whiteboarding and classroom-simulation platforms and created documentation for distribution across the Institute, including a [collaboration tools field guide](#) and manuals for two specific tools—Mural and Discord. Staff (via TLL) presented techniques for enhancing online engagement to the MIT community as a whole; facilitated planning sessions for AY2021; and served on working groups to create employment opportunities, increase students' engagement with experiential learning, and prepare for remote learning.
- Terrascope supported a team of 10 incoming first-year students in proposing a project to be conducted using the ELO funding provided by the Provost and

OEL. The students examined multi-dimensional environmental impacts of 10 important agricultural products, working with Terrascope and MIT alumna Emily Moberg—a director at the World Wildlife Fund (WWF)—they presented their findings to WWF staff during IAP.

- A major accomplishment of the year was building a robust, participatory community remotely. During the summer, Terrascope hosted activities for all students, including incoming first-years. Building on that work, staff supported virtual community events year-round, as well as special programs, such as Terrascope sections of remotely offered physical education classes.
- During 12.000 Solving Complex Problems, students developed plans to mitigate local biodiversity loss and presented to a panel of local and national experts. The curriculum was adjusted to emphasize community-building throughout the semester. Although the students connected only virtually, they formed powerful bonds:

“This class has enabled me to do what I thought was impossible: make friends and find joy in a virtual semester.... I have seen that community can transcend place and that friendships can form across oceans.... For my class, the Terrascope Room is not anchored in Cambridge. In fact, it is so abstract that it is not a place at all. The Terrascope Room is the Terrascope Room only because of the people who are in it.”
– 12.000 student

- In the IAP course SP.361 Majors and Careers through a Terrascope Lens, 11 alumni worked with students and made themselves available for continued mentoring. Students reported feeling less pressure to choose the “right” major or career:

“...this class shattered my expectations. I have a new outlook on life that I am bringing to the spring semester. ... The peace of mind this class has given me is priceless.” – SP.361 student

- 2.00C/1.016/EC.746 Design for Complex Environmental Issues was successfully conducted as a hands-on, team-oriented, project-based class, even though it was taught fully remotely. Student teams partnered with local NGOs Mystic River Watershed Association and Green Cambridge, and with units within MIT, developing projects related to urban biodiversity and climate resilience. Several teams and their partners have expressed interest in continuing to work on these projects over the next year.
- SP.360 Terrascope Radio was also taught fully remotely but, nevertheless, it continued to provide intensive team-based work and rich class discussion and analysis, and the students built on these experiences to develop high-level skills as audio storytellers. The students’ final project was adopted by the Pacifica Radio Network and distributed to roughly 100 college, community, and public radio stations nationwide.

Notable Statistics and Data

- Fall enrollment remains high and spring enrollment has been more consistent over the last four years, in part due to the partnerships with Course 2, D-Lab, and Beaverworks.

Awards and Recognition

- Terrascope is recognized across campus for work beyond student-centered learning experiences. Terrascope's director is a part of the Faculty Leadership Committee for the new MIT Climate and Sustainability Consortium.

Looking Ahead

- Terrascope continues to build strong partnerships on campus, in particular with the Environmental Solutions Initiative, the PKG Public Service Center, OME, MechE, D-Lab, Beaverworks, MISTI, and the Office of Sustainability. Terrascope remains involved in broader efforts to improve the first-year experience.
- Terrascope will continue to develop a robust fundraising and alumni engagement strategy.

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 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 serves to 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 (up to three years after completion of degree).

Key Accomplishments

ISO Operations Fully Remote Since March 20, 2020

The ISO transitioned to fully remote operations, due to the Covid-19 pandemic, on March 20, 2021, approximately one week after MIT moved to remote operations. The ISO was fortunate that over the past few years we have increasingly handled a majority of our service capacity through requests in our online student portal (iMIT); the enhancement of our online advising resources (including advisor appointments via Zoom); continued ISO programming and events in online formats; enhancement of the ISO e-newsletter; and implementation of our new ISO website redesign (on July 17, 2020) to provide a more user-friendly interface and provide expanded content throughout the year.

The ISO also implemented [ISO Virtual Forums](#) throughout the pandemic to provide updates on immigration, travel policies, visa interview procedures, and employment authorization protocols. In particular, the ISO is offering seven forums over the summer, one every two weeks, to provide continual communication on developments as students will prepare for return to the MIT campus this fall.

Collaboration with Academic Departments on Curriculum

A major challenge over the past year was evaluating and implementing policy statements concerning US Department of Homeland Security (USDHS) guidance on international student enrollment. USDHS guidance had different minimum in-person course enrollment requirements for students who were enrolled and physically in the US prior to March 9, 2020, from those new students arriving after that date. This required MIT academic programs to offer in-person instruction to levels that enabled new students to pursue at least 24 units of coursework physically in-person on campus (while students enrolled prior to March 9, 2020 could be enrolled fully online even inside the US). A number of graduate programs were unable to meet minimum in-person offerings, so this required their students to pursue fall 2020 and spring 2021 courses fully remote from abroad or defer the start of their program. For the fall 2021 semester, with MIT planning to return to full in-person instruction, our attention turns to issues with visa processing at US Embassies and US Consulates abroad to enable our students to arrive to MIT in time for the start of the fall term.

Coordination, Communications, and Proclamations

The ISO has worked very closely with many Institute partners on the publication of MIT guidance on USDHS and US Department of State (USDOS) policies impacting international student enrollment, travel policies, and related immigration matters. Of particular note include:

- MIT joined Harvard University in July 2020 in joint litigation on what would have been harmful USDHS enrollment guidance, where the ISO worked closely with the Office of General Counsel, Office of the Vice Chancellor, and MIT Government Relations on supporting documentation. As a result of the lawsuit, USDHS withdrew its poor guidance, enabling current students to continue to pursue higher levels of online coursework while in the US.
- Communication on impact of multiple presidential proclamations and travel restrictions impacting entry to the US by students from Brazil, China, Europe/Schengen Area, India, Iran, Republic of Ireland, South Africa, and United Kingdom.
- Outreach to government agencies on visa processing and administrative processing delays and consulate closures.
- Outreach to congressional offices to support student enrollment and visa processing delays.
- Work with OVC and OGC on Remote Graduate Appointments impact.

- Coordinated with OGC for Office of Foreign Assets Control (OFAC) license applications for international students from Iran and Syria to pursue coursework remotely from abroad during the academic year.
- Advocacy to US Citizenship and Immigration Services processing delays on F-1 Optional Practical Training/STEM Optional Practical Training Extensions and Change of Status applications.

Continued Expansion of Internship and Experiential Learning

We continue to see an increase in student demand for off-campus experiential learning and internship opportunities with growing support by faculty. During the pandemic, the MBA program in the Sloan School created a program-wide mandatory summer internship in the curriculum beginning Summer 2021. Additional academic programs have proposals in development for potential implementation in AY2022.

Notable Statistics and Data

International Student Enrollment (Fall 2020)

- The international student community comes from 125 countries, including the US
- Undergraduate international students represent 10.31% (450) of the total undergraduate enrollment
- Graduate international students represent 41.23% (2,796) of the total graduate enrollment
- There were 33 non-degree students (special undergraduate and graduate)
- There were 301 non-degree exchange and visiting students (new student participation was suspended in March 2020)

Post-Degree Employment (MIT Student Visa Sponsorship, Fall 2020)

- F-1 Optional Practical Training: 573
- F-1 STEM Optional Practical Training: 650
- J-1 Academic Training: 52

Awards and Recognition

- Effective February 22, 2021, Alison Day was hired as the new ISO assistant director for operations and advising, to serve as the primary ISO advisor to international students in the MIT Sloan School of Management and oversee our front desk services and outreach.

- David Elwell, ISO associate dean and director, was awarded the MIT James N. Murphy award “for inspired and dedicated service, especially with regard to students” in May 2021.

Looking Ahead

- Continued engagement and collaboration with Institute administrators regarding growth and complexity of regulatory compliance issues, and developing coordinated advocacy plans for more timely visa processing at US Embassies and US Consulates abroad and efficient benefit processing by US Citizenship and Immigration Services.
- Implementation of Sunopsis Mobile Application for increased student service access and timely data reporting.
- Continued enhancement of service and support options through current and new ISO online resources to improve communications to our community.
- Implementation of new Visiting Student Program policies after resumption of the program.

Office of Minority Education

The [Office of Minority Education \(OME\)](#) promotes academic excellence, builds strong communities, and develops professional mindsets among students of underrepresented minority (URM) groups, with the ultimate goal of developing leaders in the academy, industry, and society. The 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. Over the last 18 months, the OME has pivoted to online offerings. We were able to provide continued academic and professional support to students by offering most of our programs and services virtually. All the programs and services provided below were offered remotely.

Key Accomplishments

- The OME’s newest signature program, The Standard, focuses on enhancing the overall success of undergraduate Men of Color. In October 2020, 16 new members joined the program as Cohort 4. Fourteen members of the inaugural cohort graduated in June 2021.
- Momentum collaborated with Lockheed Martin and Capital One this year to explore algorithm development for autonomous drones and enabling financial resiliency in small businesses, respectively. Forty-four (first- and second-year) students enrolled in the IAP course. Thirty-six participants (83%) of participants reported that they gained valuable communication, technical, and/or teamwork skills.

- Sixty-one protégés (first-year students) and 55 mentors (MIT faculty, staff, postdoctoral researchers, and graduate students) participated in the OME's Mentor Advocate Partnership (MAP) program. This was the largest cohort in program history.
- The Black Alumni(ae) of MIT (BAMIT) Community Advancement Program Fund (BCAP), which provides financial support for students pursuing public service projects over IAP or summer, launched during IAP 2020. BCAP funded 11 student projects as of summer 2021.
- The OME launched the pilot extension of the Interphase EDGE (IP) program this summer, Interphase EDGE_x (IP_x). In addition to the 63 scholars we have on campus, we have 20 scholars participating virtually from all over the country. IP_x scholars are participating in hands-on, project-based curriculum that is designed to help prepare them for the academic rigors of the Institute. Our goal is to foster community, introduce key concepts, and introduce scholars to the various resources and opportunities at MIT.
- In AY2021, Talented Scholars Resource Room (TSR²) virtual group and one-on-one academic support services were used 1,081 times. The TSR² offered Facilitated Study Groups this year to help fill the gap left by Seminar XL.

Notable Statistics and Data

- From The Standard's end-of-year survey where 26 participants responded (36% response rate), we learned that 92% felt a strong sense of community within the program. Ninety-six percent reported that they would recommend The Standard to other students.
- Laureates and Leaders served 82 students this year. Twenty-one students graduated from the program in June 2021. Of those, 71% planned to enter STEM graduate programs directly following graduation—62% will pursue doctoral studies and 9% will pursue a masters or MEng degree. One-hundred percent of graduating students reported the program met their needs in assisting with the graduate school application process.
- The Interphase EDGE Program (IP) generally supports approximately 140 students each year (approximately 70 first-year and 70 second-year students) by offering advising and other academic and professional development resources. Due to the Covid-19 pandemic, and the transition of the 2020 summer program to a fully virtual format, we were able to admit 88 scholars into our IP20 cohort.

Awards and Recognitions

- Interphase EDGE_x was the recipient of a \$80,000 2020 Abdul Latif Jameel World Education Lab Grant in Higher Education Innovation.
- Students profiled by MIT News:

- Laureates and Leaders: Malik George '22, Miles George '22, Kofi Blake '21, Zaina Moussa '21, Andrea Orji '21, Alana Sanchez '21, Jose Aceves Salvador '21, and Danielle Grey-Stewart '21
- E-Mentor Advocate Partnership Program: Awele Uwagwu '21
- Students receiving fellowships or awards (MIT News):
 - Meghan Davis '21 named a George J. Mitchell Scholar
 - Kofi Blake '21 named a Stanford Knight-Hennessy Scholar
 - Danielle Grey-Stewart '21 named a Rhodes Scholar
 - Maggie Chen '22, Ryan Conti '23, Amelia Dogan '23, Malik George '22, Miles George '22, Stacy Godfreyy-Igwe '22, David Spicer '23, and Kathryn Tso '22 named Burchard Scholars

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

- The Registrar's Office continued to successfully serve students, faculty, and staff across the Institute, embracing the challenges posed by the unprecedented Covid-19 pandemic disruption and remote work environment. Notable examples include:
 - Reviewed and approved hundreds of Covid-19-related subject changes, including revisions to unit hours and distributions, enrollment limitations, and descriptions as the Institute prepared for remote learning.
 - Implemented technology adjustments to support the revised grading policies, subject evaluations, and term calendars that resulted from the Emergency Academic Regulations and the work of the Academic Policy and Regulations Team (APART).
 - Created academic calendar scenarios on behalf of the vice chancellor for consideration by the Institute's Covid-19 teams and senior leaders.
 - Published and communicated academic calendar amendments for AY2021.
 - Collaborated with APART to develop new question groups and procedures for Institute-wide subject evaluations.

- Created an online tool that allowed students and their advisors to quickly identify which subjects had in-person components, and published links to departments' subject modality lists on our website.
- Revised the Covid-19 section of our website with up-to-date service information, academic continuity resources, subject evaluation procedures by term, and at-a-glance grading policies organized by year.
- Worked with the Committee on the Undergraduate Program (CUP) on the next phase of the undergraduate grading options by implementing Flexible Pass/No Record through technology enhancements and communication strategies.
- Served as a primary data and knowledge resource to the Canvas implementation team.
- Partnered with the Sloan School of Management and Student Financial Services (SFS) to streamline the accounting processes for tuition revenue.
- Worked with the CUP and the CAP to analyze and develop a proposal to revise the first-year spring credit limit, end Early Sophomore Standing (ESS), and continue an experiment of "discovery-focused" units for an additional two years.
- Supported the nomination process and naming of four new MacVicar Faculty Fellows, and partnered with the vice chancellor to produce a virtual celebration for both the 2020 and 2021 Fellows.
- Integrated the Schwarzman College of Computing into Institute reports such as the Y Report and the Commencement book.
- Revised the grant processes and timeline for the d'Arbeloff Fund for Excellence in Education and the Alumni Class Funds.
- Facilitated the approval of seven undergraduate subjects as part of the new Common Ground Initiative, which blends computing with other disciplines.
- Assisted with several high-profile curricular changes, including the addition of African and African Diaspora Studies as an official concentration within the Course 21 Humanities, Course 21E Humanities and Engineering, and Course 21S Humanities and Science majors, and moved English Language Studies subjects from Global Languages to Comparative Media Studies/Writing.
- Completed the renovation of Rooms 14N-325 and 24-307. Each received new wall, ceiling, and floor treatments; improved climate control and acoustics; and laser projector A/V systems with HDMI inputs. New movable student tables and chairs were also installed in Room 24-307.
- Led the effort to develop the design scope for the construction of a 250-seat lecture hall and a 60-seat active learning classroom in the Schwarzman College of Computing, with construction scheduled for June 2021 through June 2023.

Notable Statistics and Data

- We issued 3,398 paper diplomas and 3,177 digital diplomas.
- In addition to the hundreds of Covid-19 subject changes noted above, we facilitated the approval of 77 new subjects and 391 revisions to existing subjects.
- The d'Arbeloff Fund for Excellence in Education and the Alumni Class Funds awarded grants to 21 curricular projects from across the Institute, totaling more than \$800,000.

Awards, Recognitions, and Staffing

- Administrative Assistant for Curriculum Management Martha Janus received a 2021 Infinite Mile Award for Collaboration and Communication.
- Mary Callahan retired after serving 21 years as registrar and 39 years at MIT.
- Four staff members were promoted to new positions and we made two external hires including a new associate registrar for Operations and Technology.

Looking Ahead

- The implementation of the FlexWork pilot will continue to require nimble thinking and execution from our office as the Institute's workplace is reimaged.
- As on-campus activities increase, we will:
 - Continue to respond to any pandemic-related adjustments to classroom capacities, emergency academic regulations, and service delivery modes.
 - Provide important updates to faculty governance and MIT decision-makers.
 - Partner with the Institute's Space Contingency Working Group to assess building densities and ensure healthy environments for the community.
- We will work alongside the CUP and other faculty committees to support recent changes in grading policies and credit limits, and develop needed system updates.
- We plan to respond to any mandates from Task Force 2021 and the Reconciliation and Implementation Committees (RIC) related to classroom technology infrastructure.
- We will serve as a primary resource of expertise if the Institute decides to pursue a new Student Information System.
- We will provide guidance on the renovation of the lecture hall in Room 54-100 which will include new fixed seating with power at each seat; new wall, ceiling, and floor finishes; improved acoustics; LED lighting; and a multi-projector A/V system with lecture capture technology.

- We will provide data, institutional knowledge, and support to faculty governance as they discuss the integration of digital content into curriculum.

Reserve Officer Training Corps—Air Force

[Air Force Reserve Officer Training Corps \(AFROTC\)](#) 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 University, Tufts University, and Wellesley College. Each semester, our cadets enroll in an AFROTC-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 which facilitates high-quality, formative opportunities to cadets.

Key Accomplishments

- Despite the coronavirus pandemic and all the limitations placed on campus, we maintained a cohesive unit identity, investing in multiple platforms and manners of engagement.
- Helped re-shape Headquarters Air Force's accessions decision review—500 quality cadets reinstated; MIT cadets returned to 100% continuation rate.
- We continued our integration and (virtual) presence in the MIT community. Cadre members led or assisted in leadership training for one of the Sloan IAP courses as well as the Undergraduate Advisors.
- We leveraged MIT relationships and resources to provide unique opportunities for cadets, to include visits from Colonel Pam Melroy, Retired, former NASA astronaut and mission commander; Major General William Rapp, Retired, who teaches at Harvard Kennedy School; Lieutenant General Bruce Wright, Retired, president of the Air Force Association; Brigadier General Dana Born, Retired, professor at Harvard Kennedy School; and Colonel Christopher Bennett, headquarter AFROTC commander.
- We conducted a Northeast Region-wide Field Training Exercise that included seven Detachments, with over 400 cadets and cadre members. The cadets learned expeditionary skills, executed a number of problem-solving challenges, and traversed an obstacle course. This event gave the cadets a glimpse into a simulated operational environment, and developed their leadership and followership skills.
- We proudly commissioned seven new second lieutenants this year. One was an Air Force Distinguished Graduate—an honor reserved for the top 10% of graduates in all of AFROTC.

- Our program's enrollment is consistently driven by the award of full-tuition scholarships. With a strong recruiting effort, we continue to grow and look forward to our largest cadet wing in fall 2021, made up of students with both full and partial scholarships.

Notable Statistics and Data

- Spring 2020 total enrollment was 72; Spring 2021 was 90. We are expecting more than 30 incoming first-year students this fall to bring our total enrollment to 120!
- AFROTC scholarships now pour \$4 million in undergraduate tuition into our four schools annually.
- In addition to our undergraduates, Detachment 365 also serves as the military focal point and administrative oversight and support to approximately 50 active duty officers pursuing advanced academic degrees at our four schools.

Awards and Recognitions

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

Looking Ahead

- Captain Madelaine Sawyer 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 Reserve Officers Training Corps (ROTC).
- 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 they mature and bring officers to campus for research and degrees.

Reserve Officer Training Corps—Army

The mission of the [Army Reserve Officers Training Corps \(AROTC\)](#) is to select, retain, train, and commission cadets from MIT, Harvard University, Tufts University, Wellesley College, Gordon State College, Endicott College, and Salem State College to prepare them for future leadership roles in the US Army, the nation, and the world. Our vision is to be the premier ROTC program in the country, leading Cadet Command in all measurable categories.

Accomplishments

Six of the 20 commissioned cadets this spring earned the honor of “Distinguished Military Graduate,” placing them in the top 20% of all cadets nationwide. Additionally, a Cadet from MIT placed ninth of 5,000 in the National Order of Merit List. The Class of 2022 is expected to commission 22 officers, which means we will exceed the Army directed commission for the second consecutive year. The future is bright for Army ROTC with a commissioning mission of 15 and each of the next four years expected to commission upwards of 20.

Year-End Enrollment for Army ROTC as of May 1, 2021

	First-Year students (Class of 2024)	Sophomores (Class of 2023)	Juniors (Class of 2022)	Seniors (Class of 2021)	Total
Contract mission	17	17	17	17	N/A
Commission mission	15	15	15	15	N/A
Contracted	14	16	21	20	71
Enrolled not contracted	6	4	1	0	11
Enrollment Total	20	20	22	20	82

The past year was very different operationally than previous years. During the ongoing global pandemic, the AROTC program continued to excel in all measurable categories. Additionally, the major lines of effort (LOE) our higher headquarters has charged us with pursuing, never once faltered. As indicated in the table above, the ROTC program successfully produced 20 second lieutenants (LOE1) and prepared them to be officers in the ever-changing environment. As with any great organization, transitions, and change happen without any retrograding as this program continued to produce world-class cadre (LOE2) thru determination and dedication to the cadets, the university, and the community. Finally, working alongside the fantastic MIT staff, the Greater-Boston area, and surrounding high schools and universities, the MIT Army ROTC Program continued to build lasting relationships and community engagement (LOE3) needed for future success.

Along with the major program initiatives, many cadets were afforded opportunities to train alongside active duty units. Recently, the AROTC Hackathon Team collaborated with MIT Lincoln Laboratory to jump-start the Southern Operations Command Ignite program, where colleges and universities from around the country participate to solve complex issues using technical means. Recently, the Army awarded four cadets internships at Fort Bragg, NC, to continue working on projects they started months ago. Another great opportunity for cadets is the ProjectGO Program, and three cadets were selected to participate. They will work with students from the US and partner with China, the Middle East, and Spain to further develop their critical language skills. Finally, we sent three cadets to Air Assault School over the winter break and all three graduated successfully.

During the fall semester, Army ROTC taught a First-year Advising Seminar to help share the Army’s story and partner with adjacent departments. Additionally, we hosted a virtual Vets and Cadets event where veterans and veterans clubs from all the universities come together to coach, teach, and mentor the cadets about military life.

Looking Ahead

The Army ROTC program plans to continue giving back to the MIT community by providing more leadership training opportunities.

Reserve Officer Training Corps—Navy

The mission of the [Navy Reserve Officer Training Corps \(NROTC\)](#) is to develop our midshipmen into well-rounded leaders by serving with honor, courage, and commitment. On behalf of the Naval Science staff, we would like to express our gratitude for another tremendous year of support and growth for the Naval ROTC program. As we send on the 10 graduates from the Class of 2021, we are also preparing to welcome a class of seven incoming students.

Key Accomplishments

Despite the challenges the Covid-19 pandemic presented to the mission during most of this academic year, the Naval Science Department staff and students were able to execute it admirably. Notably, for the first time since 2019, we were able to host each individual university's Commissioning ceremony in person, on board the deck of the *USS Constitution*. It was a fitting way to send our graduates on their journey as Naval and Marine Corps officers.

We are proud to recognize the outstanding accomplishments of our 10 Class of 2021 graduates, and we commend their commitment to our program. The graduates and their post-graduation plans are noted below:

- Humberto Caldelas II (MIT): naval reactors engineer
- Emily Colby (MIT): naval aviation
- Alexander Craig (MIT): cyber warfare
- Samuel Dorchuck (MIT): US Marine Corps, cyberspace officer
- Alison Louthain (MIT): nuclear submarines
- Nicholas Venanzi (MIT): naval reactors engineer
- Ryan Bayer (Harvard): surface warfare officer
- Morgan Whitten (Harvard): submarine warfare
- Collin Carroll (Tufts): naval aviation
- Collin Seeley (Tufts): surface warfare officer

Notable Statistics and Data

While our enrollment last year continued a growth trend, we anticipate that this year's admissions will be significantly reduced. We attribute this to a combination of Covid-19 concerns, which depressed overall applications to the NROTC program, and a lower acceptance rate from the universities based on much a higher number of applications submitted.

Naval ROTC Enrollment

	Class of 2025 (tentative)	Class of 2024	Class of 2023	Class of 2022	Class of 2021
MIT	3	8	8	4	6
Harvard University	3	9	5	1	2
Tufts University	1	3	1	1	2

Notable Recognitions

We are excited to welcome the following new staff members to our Naval Science Department:

Marine Officer Staff

- Captain Joseph Garland, US Marine Corps, combat engineer
- Gunnery Sergeant Heek-Yu Chae, aviation logistics

Navy Officer Staff

- Lieutenant Andrew Canady, US Navy, nuclear-trained surface warfare officer
- Lieutenant Alexander Francher, US Navy, helicopter pilot

Civilian Staff

- Manasés Cabrera, supply technician

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

- Our new director of student financial counseling started in January.
- A new associate director of financial education will join the team in August 2021.

Administrative Initiatives

Diversity, Equity, and Inclusion

- All SFS staff completed the Atlas course “Diversity and Inclusion for Staff” and are using it as a springboard for continued team discussions over the coming fiscal year.

Financial Aid, Loans, and Affordability

- Worked with OGE to align graduate stipend rates to a standardized graduate student cost of attendance.
- Developed a long-term financial hardship assistance application, review, and appeals process for PhD students.
- Received one-time funding from Medical SEIP reserves to cover the cost of the MIT Extended Student insurance for our highest-need seniors. Awarded an insurance grant to all undergraduates with income under \$65,000 and typical assets for AY2022.
- Joined the Federal Yellow Ribbon program for undergraduate students who are members of the National Guard. MIT will provide an annual contribution of \$5,400 (per undergraduate student, per year) to supplement the Post- 9/11 GI Bill base tuition benefit, with the US Department of Veterans Affairs (VA) matching MIT's contribution.
- Worked with campus partners to implement and highlight several new graduate student support programs, including doctoral long-term financial hardship funding, MIT Grant for Graduate Students with Children, and short-term emergency funding.

Customer Service, Operations, and Communications

- Implemented a new SFS Communications Advisory Committee to work with undergraduates to improve information access and understanding.
- Developed new budgeting worksheet to help undergraduate students map out their expenses by semester or by year.
- Presented eight information sessions and three days of one-on-one financial aid counseling for admitted students during CPW.
- Developed an overpayment policy and process to notify students when wire payments exceed billed charges and can't be held for future terms.
- Coordinated with Housing to advance bill housing charges to prevent students from incurring return fees.

Continued Response to Covid-19

- Awarded and disbursed \$22 million in Covid-19 grants in September 2020 (\$5,000 to each undergraduate student enrolled in the fall).
- Assisted Sloan in processing and distributing an additional \$7 million in Covid-19 grants to Sloan graduate students in spring 2021.

- Repackaged all MIT Scholarship recipients throughout the year due to changes in on- vs. off-campus policies and student plans.
- Developed a process with Housing to charge Student Housing Assistance Review Process (SHARP) students monthly for summer 2021 rather than by term, to help them better manage expenses.
- Reached out to undergraduate students, encouraging appeals due to a change in family circumstance; approved 279 of 348 appeals totaling an additional \$3.5 million awarded for AY2021. As of June 30, 203 of 231 AY2022 appeals had been approved, resulting in an additional \$2 million in MIT Scholarships awarded.
- We established a lockbox for incoming payments, resulting in faster electronic processing of what would otherwise be paper checks. This reduced office visits during the pandemic and resulted in a better audit trail and access to processed documents, particularly scholarship checks.
- Delayed billing processes one month for fall 2020 and spring 2021 to accommodate unanticipated changes to the academic calendar and to ensure more accurate charges.

Notable Statistics

Financial Aid

- In AY2021, MIT awarded \$136.9 million in institutional grants to 4,397 undergraduates, of which \$115.0 million was need-based aid to 2,548 undergraduates with an average family income of \$104,602. The median need-based grant was \$51,082, or 78% of the cost of tuition, fees, room, and board.
- Twenty-six 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 \$15,524. This is lower than typical because of reduced cost of attendance for many students living off campus during the pandemic.
- Fifty-seven percent of the 4,471 undergraduates received need-based financial aid from the Institute. Twenty percent received Federal Pell Grants, which are typically awarded to US students with family incomes below \$60,000.
- Fifty-eight percent of undergraduates (2,579 students) earned wages totaling nearly \$2.5 million from MIT employment or the Federal Work Study program. This is lower than typical because of the reduced cost of attendance for many students living off campus or being unable to work during the pandemic.
- The percentage of undergraduates taking out loans decreased from 10% in AY2020 to 7% in AY2021. Among seniors graduating in 2021, 82% graduated with no debt. Of those with education debt, median indebtedness at graduation was \$15,721.

Customer Service and Operations

- Answered over 9,900 calls and fielded over 29,000 email inquiries.
- Processed 176 MIT Education Loan applications, averaging \$9,740 per application, and disbursed over \$1.7 million in funds to MIT staff and faculty.
- Tuition and fees for the Institute totaled \$724 million in AY2021. Graduate tuition and fees were \$431 million, or 60% of total tuition. Undergraduate tuition and fees were \$234 million, or 32%; and non-degree tuition and fees were \$59 million, just under 8%.

Teaching + Learning Lab

During AY2021, the [Teaching + Learning Lab \(TLL\)](#) supported and enhanced the foundational undergraduate 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 the development of a faculty mentoring program in the School of Engineering; 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.

Throughout the Covid-19 disruption, TLL has actively supported OVC offices, academic departments, faculty, instructors, and TAs in remote teaching. The office continues to help all who teach at MIT reflect on and learn from teaching remotely and incorporate lessons learned from the pandemic into their classroom teaching.

Key Accomplishments

Support for MIT Educators

TLL developed and offered the following seminars and workshops throughout AY2021:

- The “Get Ready to Teach Remote” series included 11 workshops and served 296 unique faculty and instructors, supplemented by 58 asynchronous videos and related content.
- Ad-hoc workshops to support timely issues, such as Teaching in a Tense Political Climate.
- The AY2021 TLL Speaker Series built on the success of the previous three years, generating dialogue across MIT on all aspects of student well-being, sense of belonging, and community. TLL hosted six events, which averaged 70 attendees each.

Fresh Perspectives Video Series

TLL conducted interviews with 13 MIT faculty and instructors, aiming to share reflections on building community, supporting student wellness, enabling two-way

communication, and better aligning assignments with learning goals. The resulting video series offers perspectives on ways to continue these practices in our physical classrooms and learning spaces moving forward. The [Fresh Perspectives trailer](#) represents the initial launch of an ongoing series with MIT faculty, lecturers, and instructors on their responses, adaptations, and innovations during the pandemic.

Support for Teaching Assistants, Graduate Students, and Postdoctoral Scholars

- **TA Days:** Instead of two days of workshops offered in past years, the AY2021 offerings of TA Days each spanned two weeks before the start of their respective semesters, in August 2020 and January 2021. This adjustment was made to better align with the constraints and affordances of remote workshop delivery.
- **Grad Teaching Development Tracks:** This alternative pathway to graduate student development was developed by TLL staff in consultation with directors of similar programs from 10 peer institutions. The design of this program provides graduate students with more choice over their teaching development, prioritizing the topics that are of most interest to them, while also allowing for the receipt of a certificate upon completion of all four tracks.
- **Kaufman Teaching Certificate Program:** The program was offered remotely in fall 2020 and spring 2021, each with roughly 100 participants. Improvements included new assignment rubrics, more regular peer-review (facilitated by Canvas), and explicit discussions of anti-racist pedagogy.
- **Teaching Development Fellowship Network:** TLL staff continue to support and manage the network. Fellows are expected to complete two departmental projects. During AY2021, 15 Fellows worked with 13 different MIT departments, including one focusing on Institute-wide TA issues.

Office of the Vice Chancellor Initiatives

TLL implemented several projects to support the larger priorities of OVC and the Institute.

- **Flipping Failure** focused on the development of a workshop series to explore how the pandemic had affected students' lives. Through mindful reflections, storytelling, and media coaching, students were actively guided to creatively express their reflections on challenges that were either created by the pandemic or further exacerbated by it. These efforts resulted in COVID Stories, a series of independently produced short films made by MIT students about their experiences during the pandemic.
- **Support for and evaluation of the first-year advising pilot:** This included a submission of a report: Part I (5/2020) and Part II (7/2020); a presentation to CUP; and a TLL Speaker Series presentation (New Insights and Directions for MIT First-Year Advising) for the MIT Community.

- Data Talks, a workshop series focused on topics related to data acquisition and use, continued remotely with a focus on expanding related resources and redefining its scope for AY2022.
- Faculty Mentoring Support: Working with colleagues in the Office of the Vice Chancellor, TLL staff oversaw and managed the School of Engineering (SoE) Spring 2020 Faculty Mentoring Pilot. Work involved: integration and tailoring the work of Center for the Improvement of Mentored Experiences in Research, and ongoing meetings with SoE administration, Institute Community and Equity Officer, members of the Office of the Provost, and Institute Research to gather information, design, refine, and deliver the program. It also included the development of a Graduate Advising Playbook, envisioning the implementation of graduate advising practices.
- Comms Café: To support new and early career MIT communicators, TLL's communications and operations officer initiated a community-focused networking and working group that met weekly throughout AY2021.

Studies

- Conducted an 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' view of themselves, their research, and the future, as well as their relationships with their research advisor, faculty members, and laboratory colleagues.
- Collaboratively conducted a qualitative analysis of data from 70 charrette discussion groups and created a summary report to provide community input on decisions for AY2021 Covid-19 planning.
- Collaboratively developed a remote learning survey for APART (spring 2021).
- Led a subject evaluation modification for remote instruction (spring 2020 and fall 2021).
- Provided assessment and evaluation support for a variety of faculty and program grants and initiatives, including the Virtual Manufacturing Lab; MIT Center for Art, Science and Technology (CAST); 21M.370 Digital Music Design, and Alumni Class Fund grants.
- Collaboratively led an initiative to survey communicators Institute-wide about key aspects of their work (i.e., roles, tools and platforms used, target audiences, interests, key messages, needs, and etc.). The survey results are being used by MIT's Office of Communications to directly develop and inform the development of tools, resources, and initiatives to improve internal communications and better support communicators across MIT.

Awards, Recognition, and Staffing

This year saw the departure of two TLL staff members: one associate director for research and evaluation and one senior associate director. They have moved on to positions in the broader teaching and learning, and institutional research communities. TLL hired one new replacement staff member and is in the final stages of the search process for the second open position.

Looking Ahead

- Leverage and implement lessons learned from teaching and learning during remote teaching to improve in-person teaching moving forward.
- Refinement and improvement on the Research and Evaluation Team's ability to engage in valuable and fulfilling projects within the MIT community.
- Continued development of additional programming to support the professional development of future faculty.
- Continued development of web-based resources on best practices in Assessment and Evaluation, and Teaching and Learning for members of the MIT community.
- Support for a variety of faculty cohort(s): Well-being (fall 2021); and Anti-racist Pedagogy (IAP 2022).
- Continued work on the Flipping Failure project, including the development of additional videos and audio stories.
- Enhanced programming and support for diversity, equity, and inclusion in MIT learning spaces.
- Continued dissemination of alternatives for the Evaluation of Faculty Contribution to Teaching/Education. Support for departments as they select and collect additional forms of evidence, and implement alternative forms of evaluation.

Ian Waitz

Vice Chancellor for Undergraduate and Graduate Education