unleash

unprecedented

innovation

open wild

new

frontiers

MIT Facts

transform

society

2017

Massachusetts Institute of Technology

make a

better

world

invent

the future

MIT Facts 2017

Massachusetts Institute of Technology

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An online version of *MIT Facts*, with links to additional information about the topics covered here, is available at web.mit.edu/facts.

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Center spread: Campus map by MIT Department of Facilities and Wing-Ip Ngan, with ship by Marius Ursache.

Contents

MIT at a Glance

History

Incorporated by the Commonwealth of Massachusetts on April 10, 1861

Motto

Mens et manus—
"Mind and Hand"

Campus

168 acres (0.68 km^2) in Cambridge, Massachusetts
18 student residences
26 acres (0.11 km^2) of playing fields
20 gardens and greenspace areas
100+ public works of art

Employees

~12,110, including faculty

Faculty

Professors (all ranks): 1,036
Other teaching staff: 827
Student-faculty ratio: 3:1

Selected Honors

(Current and Former MIT Community Members)

87 Nobel Laureates
58 National Medal of Science winners
29 National Medal of Technology and Innovation winners
47 MacArthur Fellows

Undergraduate Financial Aid 2015–2016

Students attending tuition-free: 33%
Students awarded need-based MIT scholarship: 56%
Average need-based MIT scholarship: $38,871

Freshman Admission Class of 2020

Applicants: 19,020
Admits: 1,511 (8%)

Students, 2016–2017

Total: 11,376
Undergraduates: 4,524
  Women: 2,086 (46%)
  Minorities: 2,108 (34%)
Graduate students: 6,852
  Women: 2,326 (34%)
  Minorities: 1,221 (18%)

Undergraduate Costs, 2016–2017

Tuition and fees: $48,452
Room and board: ~$14,210

Undergraduate Majors and Minors

Major programs: 48
Minor programs: 56
(Plus a pirate certificate!)

International Students, 2016–2017

Undergraduate students: 430
Graduate students: 2,876
Exchange, visiting, special students: 515

Mission

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

The Institute is committed to generating, disseminating, and preserving knowledge, and to working with others to bring this knowledge to bear on the world's great challenges. MIT is dedicated to providing its students with an education that combines rigorous academic study and the excitement of discovery with the support and intellectual stimulation of a diverse campus community. We seek to develop in each member of the MIT community the ability and passion to work wisely, creatively, and effectively for the betterment of humankind.

Leadership

Origins

The Institute admitted its first students in 1865, four years after the approval of its founding charter, and admitted its first woman student shortly thereafter in 1871. MIT's opening marked the culmination of an extended effort by William Barton Rogers, a distinguished natural scientist, to establish a new kind of independent educational institution relevant to an increasingly industrialized America. Rogers stressed the pragmatic and practicable. He believed that professional competence is best fostered by coupling teaching and research and by focusing attention on real-world problems. Toward this end, he pioneered the development of the teaching laboratory.

Today MIT is a world-class educational institution. Teaching and research—with relevance to the practical world and transforming society for the better as guiding principles—continue to be its primary purpose. MIT is independent, coeducational, and privately endowed.

Presidents of the Institute

2012		L. Rafael Reif
2004	2012	Susan Hockfield
1990	2004	Charles Marstiller Vest
1980	1990	Paul Edward Gray
1971	1980	Jerome Bert Wiesner
1966	1971	Howard Wesley Johnson
1959	1966	Julius Adams Stratton
1948	1958	James Rhyne Killian, Jr.
1930	1948	Karl Taylor Compton
1923	1930	Samuel Wesley Stratton
1921	1922	Ernest Fox Nichols
1909	1920	Richard Cockburn Maclaurin
1900	1907	Henry Smith Pritchett
1897	1900	James Mason Crafts
1881	1897	Francis Amasa Walker
1879	1881	William Barton Rogers
1870	1878	John Daniel Runkle
1862	1870	William Barton Rogers

Administrative Organization

The Institute's chief executive officer is the president. Senior academic and administrative officers include the provost; chancellor; executive vice president and treasurer; senior vice president and secretary of the Corporation; associate provosts; deans of the schools, undergraduate and graduate education, and digital learning; vice presidents, and vice president and dean for student life; chancellor for academic advancement; director of libraries; Institute community and equity officer; and deputy executive vice president.

MIT's academic departments and institutes—each under the leadership of a head or director—are organized within five schools that encompass numerous degree-granting programs and interdisciplinary centers, laboratories, and programs whose work cuts across traditional departmental boundaries.

The MIT faculty determines the Institute's educational policy. The faculty meets monthly and conducts much of its business through elected standing committees.

The Institute's board of trustees, known as the Corporation, includes 78 distinguished leaders in engineering, science, industry, education, and other professions, and (ex officio) the MIT chairman, president, executive vice president and treasurer, secretary of the Corporation, president of the Alumni Association, and three representatives of the Commonwealth of Massachusetts. The Corporation also includes some 35 emeritus members. Approximately 75% of the members of the Corporation are MIT alumni.

Faculty and Staff

12,109

Faculty and staff

1,036

Faculty (professors of all ranks)

227

Women faculty

3:1

Student:faculty ratio (undergraduates only)

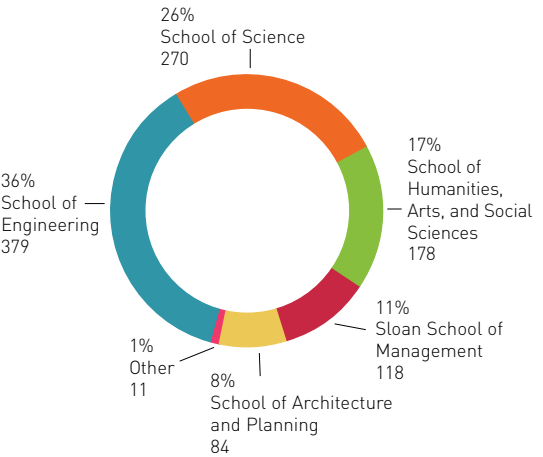
Minority group representation among faculty includes **American Indian or Alaska Native**, **Native Hawaiian/Pacific Islander**, **Black**, **Hispanic**, and **Asian**.

Faculty and Staff, as of October 2016	
Category	**Number**
Faculty	1,036
Other academic staff	4,406
Research staff	1,623
Administrative staff	2,528
Support staff	1,543
Service staff	829
Clinical/Medical staff	144
Total	**12,109**

The MIT faculty instructs undergraduate and graduate students and engages in research.

Teaching Staff	
Category	**Number**
Professors	665
Associate professors	208
Assistant professors	167
Senior lecturers, lecturers, and professors emeriti	647
Instructors (including technical instructors)	152
Professors of the practice and adjunct faculty	33
Total	**1,872**

Distribution of Faculty by School



Many MIT staff are international scholars (i.e., non-US citizens, non-US permanent residents) from around the world who come to the United States for teaching, research, collaboration, and other purposes. This diverse group of professionals includes visiting scientists, professors, artists, and scholars, as well as postdoctoral fellows and associates, lecturers, instructors, research associates and scientists, and tenure-track faculty. During academic year 2015–2016, MIT hosted 2,436 international scholars (76% men, 24% women) from 96 countries.

International Scholars, by Region

Region	%
Asia	42%
Europe	35%
Middle East	9%
North America	6%
Mexico, Latin America, and the Caribbean	6%
Africa	1%
Oceania	1%

Awards and Honors

Members of the MIT community have received accolades too numerous to list. Several of the most notable honors and awards won by MIT community members over the years are highlighted below, with winners currently on faculty and staff listed.

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Nobel Prizes

Faculty members **Bengt Holmström**, economics (2016), **H. Robert Horvitz**, medicine/physiology (2002), **Wolfgang Ketterle**, physics (2001), **Robert C. Merton**, economics (1997), **Richard R. Schrock**, chemistry (2005), **Phillip A. Sharp**, medicine/physiology (1993), **Susan Solomon**, peace (co-chair of IPCC Working Group One recognized under Intergovernmental Panel on Climate Change, 2007), **Samuel C. C. Ting**, physics (1976), **Susumu Tonegawa**, medicine/physiology (1987), and **Frank Wilczek**, physics (2004).

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National Medals of Science

Faculty members **Sallie Chisholm** (2012), **Ann M. Graybiel** (2001), **Rudolf Jaenisch** (2011), **Robert S. Langer** (2006), **Susan Lindquist** (2010), **Stephen J. Lippard** (2004), **Phillip A. Sharp** (2004), **Susan Solomon** (1999), **JoAnne Stubbe** (2008), and **Robert A. Weinberg** (1997).

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National Medals of Technology and Innovation

Faculty member **Robert S. Langer** (2012).

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John Bates Clark Medal

Faculty members **Daron Acemoglu** (2005), **Esther Duflo** (2010), **Amy Finkelstein** (2012), and **Jerry Hausman** (1985).

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Pulitzer Prizes

Faculty members **Junot Díaz** (2008) and **John H. Harbison** (1987), and staff members **Deborah Blum** (1992) and **B. D. Colen** (1984).

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Millennium Technology Prizes

Faculty members **Tim Berners-Lee** (2004) and **Robert S. Langer** (2008).

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MacArthur Fellows

Faculty members **Angela Belcher** (2004), **Tim Berners-Lee** (1998), **James J. Collins** (2003), **Erik D. Demaine** (2003), **Junot Díaz** (2012), **Esther Duflo** (2009), **Linda G. Griffith** (2006), **John H. Harbison** (1989), **Dina Katabi** (2013), **Eric Lander** (1987), **Heather N. Lechtman** (1984), **Nergis Mavalvala** (2010), **John A. Ochsendorf**

(2008), **David C. Page** (1986), **Daniela L. Rus** (2002), **Sara Seager** (2013), **Peter W. Shor** (1999), **Marin Soljačič** (2008), **Frank Wilczek** (1982), **Heidi L. Williams** (2015), **Jack Wisdom** (1994), and staff members **Amy B. Smith** (2004), **Richard M. Stallman** (1990), and **George Zweig** (1981).

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Institute Professors

The title of **Institute Professor** is the highest honor awarded by the faculty and administration at MIT. The current Institute Professors are **Emilio Bizzi**, **Sallie (Penny) Chisholm**, **Ann M. Graybiel**, **John H. Harbison**, **Robert S. Langer**, **John D. C. Little**, **Thomas Magnanti**, **Joel Moses**, **Ronald Rivest**, **Phillip A. Sharp**, **Marcus A. Thompson**, **Daniel I. C. Wang**, and **Sheila Widnall**. Institute Professors emeriti are **Noam A. Chomsky**, **John M. Deutch**, **Peter A. Diamond**, **Mildred S. Dresselhaus**, **Jerome I. Friedman**, **Morris Halle**, **Barbara Liskov**, **Mario J. Molina**, **Isadore M. Singer**, and **Robert M. Solow**.

223

National Academy of Sciences members

202

National Academy of Engineering members

52

National Academy of Medicine members

195

Guggenheim Fellows

33

Fulbright Scholars

Schools and Departments

School of Architecture and Planning

Architecture (Course 4)
Media Arts and Sciences (MAS)
Urban Studies and Planning (Course 11)

School of Engineering

Aeronautics and Astronautics (Course 16)
Biological Engineering (Course 20)
Chemical Engineering (Course 10)
Civil and Environmental Engineering (Course 1)
Electrical Engineering and Computer Science (Course 6)
Materials Science and Engineering (Course 3)
Mechanical Engineering (Course 2)
Nuclear Science and Engineering (Course 22)
Institute for Data, Systems, and Society (IDS)
Institute for Medical Engineering and Science

School of Humanities, Arts, and Social Sciences

Anthropology (Course 21A)
Comparative Media Studies/Writing (CMS/Course 21W)
Economics (Course 14)
Global Studies and Languages (Course 21G)
History (Course 21H)
Humanities (Course 21)
Linguistics and Philosophy (Course 24)
Literature (Course 21L)
Music and Theater Arts (Course 21M)
Political Science (Course 17)
Science, Technology, and Society (STS)

MIT Sloan School of Management

Management (Course 15)

School of Science

Biology (Course 7)
Brain and Cognitive Sciences (Course 9)
Chemistry (Course 5)
Earth, Atmospheric, and Planetary Sciences (Course 12)
Mathematics (Course 18)
Physics (Course 8)

Degrees Offered

Bachelor of Science (SB)
Master of Architecture (MArch)
Master of Business Administration (MBA)
Master of Business Analytics (MBAn)
Master in City Planning (MCP)
Master of Engineering (MEng)
Master of Finance (MFin)
Master of Science (SM)
Engineer (each degree designates the field in which it is awarded)
Doctor of Philosophy (PhD)
Doctor of Science (ScD)

Admission

The selection process at MIT is holistic and student centered: each application is evaluated within its unique context. No school, state, or regional quotas are applied; neither is preference given to those with alumni relations. Selection is based on outstanding academic achievement as well as a strong match between the applicant and the Institute, including:

- Alignment with MIT's mission
- Collaborative and cooperative spirit
- Initiative and risk taking
- Hands-on creativity

- Intensity, curiosity, and excitement
- Balancing hard work with downtime

Selected 2016 Undergraduate Admissions Statistics

19,020
Applications for freshman admission

1,511 (8%)
Offers of admission

1,113
Freshmen enrolled

46%
Female

67%
Attended public high schools

49
US states represented

10%
International citizens from 63 countries

15%
Among the first generation in their family to attend college

Graduate Admission

Applicants for graduate degree programs are evaluated for previous performance and professional promise by the department in which they wish to register.

Selected 2016 Graduate Admissions Statistics

26,463

Applications for graduate study

3,480 (13%)

Offers of admission

2,277 (65%)

Students registered in advanced degree programs

For more information, visit mitadmissions.org.

Enrollments 2016–2017

11,376

Students

4,524

Undergraduates (40%)

2,086

Women (46%)

2,108

US minority groups (47%)

6,852

Graduate students (60%)

2,326

Women (34%)

1,221

US minority groups (18%)

In 2016–2017, MIT students come from all 50 states, the District of Columbia, four territories, and 128 foreign countries.

For more information, visit web.mit.edu/registrar.

Undergraduate Enrollment, by School

First-year, undeclared second-year, and special undergraduate students	Number
First-year*	1,115
Undeclared second-year*	8
Special undergraduate students	35

By school	Majors	2nd Major
Architecture and Planning	35	3
Engineering	2,479	72
Humanities, Arts, and Social Sciences	77	45
Management	69	18
Science	706	110

*MIT students do not enroll in an academic department until the start of their sophomore year, and may defer decision on a course of study until the end of that year.

Graduate Enrollment, by Degree Level and School

School	Master's	Doctoral	Special
Architecture and Planning	446	195	0
Engineering	1,038	2,086*	139
Humanities, Arts, and Social Sciences	28	302	0
Management	1,298	171	17
Science	8	1,124	0
Total	**2,818**	**3,878**	**156**

*Includes 172 students working on Harvard degrees only through the Harvard-MIT Health Sciences and Technology Program.

Minority Group Representation among Students		
Minority group	**Undergraduate**	**Graduate**
African American	269	88
American Indian or Alaska Native	5	8
Asian American	1,162	725
Hispanic	671	400
Native Hawaiian or other Pacific Islander	1	0
Total	**2,108**	**1,221**

International Students

There are 3,303 international students enrolled in degree programs at MIT—430 undergraduates (10%) and 2,876 graduate students (43%)—for the current academic year. Additionally, there are 515 exchange, visiting, and special students on campus.

International Students, by Region*	
Region	**%**
Asia	51%
Europe	22%
Latin America and the Caribbean	8%
North America	7%
Middle East	7%
Africa	3%
Oceania	1%

*Percentages are rounded.

Tuition and Financial Aid

Undergraduate Tuition and Living Expenses

$48,452

2016–2017 tuition and fees (9 months)

~$14,210

Room and board, depending on the student's housing and dining arrangements

~$2,816

Books and personal expenses

Undergraduate Financial Aid

The Institute's undergraduate financial aid program ensures that an MIT education is accessible to all qualified candidates regardless of their financial circumstances. MIT provides financial aid to meet the full price of an MIT education, based on the calculated financial need of the family. For 2015–2016, 91% of undergraduates received $133.3 million in financial aid from all sources, with MIT being the largest source. For students with a family income under $80,000, the Institute ensures that scholarship funding from all sources will allow them to attend MIT tuition-free.

Financial need is the difference between the price to attend MIT and the family's ability to finance that price, which is determined using information parents provide on the Free Application for Federal Student Aid (FAFSA) and the College Scholarship Service (CSS) Profile. The first $5,500 of financial need is met with an offer of a student loan/term-time job. The remaining need, if any, is met with an MIT scholarship. Students receiving scholarships and grants from sources outside MIT may use this financial aid to replace the student loan/term-time job.

Selected Undergraduate Financial Aid Statistics, 2015–2016	
Average net price of an MIT education*	$41,547
Average need-based MIT scholarship	$38,871
Average need-based financial aid award	$45,419
Students awarded a need-based MIT scholarship	56%
Students attending tuition-free	33%
Class of 2016 graduates with no student loan debt	72%
Average student loan debt for those who borrowed	$24,698
Average term-time earnings for those who worked	$3,278

*Cost of attendance minus MIT scholarships averaged across all undergraduates.

Graduate Tuition and Living Expenses

Graduate students generally incur greater expenses than undergraduates. Most attend the Institute for a calendar year rather than an academic year, increasing the cost of tuition.

$48,452

2016–2017 tuition and fees (9 months) (specific programs and departments may have different tuition amounts)

$16,030

2016 summer tuition for students enrolled in courses

MIT's residential system can accommodate about one-third of its graduate students; the rest find housing in the Boston/Cambridge area. Graduate students' costs for housing, food, books, medical insurance, and incidentals vary widely, depending on marital status, quality-of-life expectations, and housing arrangements. For example, monthly charges for on-campus housing range from $837 to $1,870 for single students and from $1,568 to $2,015 for family housing.

Graduate Financial Aid

Financial aid for graduate students is in large part provided by individual departments, and the amount of aid varies significantly. Financial support includes fellowships, traineeships, teaching and research assistantships, and loans. Most forms of support are granted for merit, while others are granted for financial need or a combination of merit and need.

Doctoral Student Support, by Type and School, 2015–2016

School	RA	FE	TA	Other or none
Architecture and Planning	53%	13%	20%	14%
Engineering	58%	22%	8%	11%
Humanities, Arts, and Social Sciences	26%	39%	20%	15%
Management	39%	49%	12%	0%
Science	50%	36%	13%	0%
Doctoral total	52%	28%	11%	8%

RA=research assistantship, FE=fellowship, TA=teaching assistantship

Academics

MIT's strength—as represented by its official seal and motto, *mens et manus*, mind and hand—is the fusion of academic knowledge with practical purpose.

Undergraduate Education

MIT believes the best education occurs when students are self-motivated and engaged participants in a dynamic community of learners. Thus, an MIT undergraduate education combines rigorous academics with a "learning-by-doing" approach.

One avenue for student engagement is the Undergraduate Research Opportunities Program (UROP), pioneered at MIT in 1969 and now emulated in academic institutions around the globe. UROP offers students the opportunity to join a faculty-led research team or to initiate their own research project.

Students may also choose to participate in the Undergraduate Practice Opportunities Program (UPOP), which provides them with real-world skills, coaching, experiential workshops, company field trips, one-on-one counseling, networking events, exclusive panel discussions with major companies, and access to internships with more than 2,000 employers.

Another unique feature of an MIT education is the Independent Activities Period, a special four-week term in January that encourages students to set their own agenda within a creative and flexible environment.

As part of a complete MIT experience, undergraduates are encouraged to add an international

dimension to their education. Students may choose from Institute-wide or departmental study-abroad programs. They may also decide to conduct research abroad, assist with building sustainable communities overseas, or venture out on fieldwork or internships arranged through MIT International Science and Technology Initiatives or the International Development Initiative.

MIT undergraduates can also take advantage of cross-registration at several Boston-area universities and art schools. Leadership training opportunities include the Bernard M. Gordon-MIT Engineering Leadership Program and ROTC programs in the United States Army, Navy/Marine Corps, and Air Force.

Selected Undergraduate Facts

- MIT offers 48 undergraduate major and 56 minor programs.
- MIT's General Institute Requirements ensure that all students are broadly educated in the physical, natural, and social sciences, and in the humanities and arts.
- The first semester at MIT is graded on a pass/no record basis.
- Freshmen seeking a more collaborative environment can choose to participate in an alternative learning community, such as the Concourse Program, Experimental Study Group, Media Arts and Sciences Freshman Program, or Terrascope.
- Each year nearly 60% of MIT undergraduates participate in UROP, with 90% having done so by the time they graduate.
- Nearly 50% of graduating seniors in the Class of 2016 reported participating in an international experience while at MIT.

Majors

Aerospace Engineering
American Studies*
Ancient and Medieval Studies*
Anthropology
Archaeology and Materials
Architecture
Architecture Studies
Asian and Asian Diaspora Studies*
Biological Engineering
Biology
Brain and Cognitive Sciences
Business Analytics
Chemical Engineering
Chemical-Biological Engineering
Chemistry
Civil and Environmental Engineering
Comparative Media Studies
Computer Science and Engineering
Computer Science and Molecular Biology
Earth, Atmospheric and Planetary Sciences
Economics
Electrical Engineering and Computer Science
Electrical Science and Engineering
Finance
French
German
History
Humanities and Engineering**
Humanities and Science**
Latin American and Latino Studies*
Linguistics and Philosophy
Literature
Management
Materials Science and Engineering
Mathematical Economics
Mathematics
Mathematics with Computer Science
Mechanical Engineering
Mechanical and Ocean Engineering
Music
Nuclear Science and Engineering
Philosophy
Physics
Planning
Political Science
Russian and Eurasian Studies*
Science, Technology and Society**
Spanish
Theater Arts
Women's and Gender Studies*
Writing

*Major-departure, **Joint major or 2nd degree

Graduate Education

MIT graduate programs provide collaborative environments for advanced study, where students work together with faculty to extend the boundaries of knowledge.

Traditionally a leader in engineering and science graduate education, MIT has also attained national prominence for its doctoral programs in mathematics, architecture, management, and the humanities. Top-ranked graduate programs in architecture; neuroscience; economics; linguistics; management; media studies; political science; science, technology, and society; supply chain management; and urban studies have broadened the spectrum of graduate education at the Institute.

There is no cap on the number of graduate students admitted to MIT. Applicants apply directly to the academic department or degree-granting program of interest, and departments admit as many as they can support based on their research assistantship, teaching assistantship, and fellowship resources, as well as the number of faculty available to advise on research.

Cross-registration opportunities at Harvard, Wellesley, and with the Graduate Consortium in Women's Studies are available for graduate students. The Harvard-MIT Health Sciences and Technology Program and the MIT-WHOI Joint Program in Oceanography/Applied Ocean Science and Engineering also present interdisciplinary options for graduate students. Other study opportunities are available at Brandeis and Tufts.

MIT Libraries

Supporting teaching, learning, research, and innovation at MIT and globally, the Libraries connect faculty and students—wherever they are—to the best scholarly information available. Expert staff, state-of-the-art technologies, and abundant resources serve every part of the Institute, bridging disciplines and communities across campus. The Libraries advance knowledge at MIT and beyond in many ways.

Increasing access. Each year, the MIT community downloads tens of millions of items from the Libraries, and performs more than 45 million searches on scholarly databases. The Libraries are a leader in Open Access; scholarly works by MIT authors that have been made freely available have been downloaded more than 6.7 million times around the world. In addition, partnerships with other top research libraries give the MIT community access to materials from libraries worldwide.

Preserving knowledge. MIT is at the forefront of disseminating groundbreaking research and scholarship and of ensuring its accessibility for future use, tackling the complex issues of preserving digital information. The Institute Archives and Special Collections serve as the "memory" of MIT and contain its founding documents and the personal papers of noted faculty.

Providing community spaces. Five library locations offer welcoming spaces for quiet study or collaboration, with some accessible 24/7. The Libraries sponsor more than 400 events each year, including classes, wellness events, and an Institute-wide reading program.

Engaging in research and development. The Libraries' interdisciplinary research and development efforts aim to tackle complex challenges in developing new, sustainable models for producing, using, managing, sharing, preserving, and discovering scholarly information in a digital age.

Learn more at libraries.mit.edu.

Computing on Campus

The computing environment at MIT supports an impressive array of information technologies and resources.

MITnet. MIT's network infrastructure in the Cambridge/Boston area is made up of 7,300 miles (11,748 km) of fiber, 5,600 wireless access points, and 2,500 switches that provide on-campus wired connectivity. The Institute also owns and operates the MIT Regional Optical Network—a 2,500-mile (4,023 km) optical ring connecting researchers in Boston, New York City, and about 10 other locations. In addition, MIT has 10-gigabit dedicated connections to Internet 2, Akamai, Amazon, VMware, and the Energy Sciences Network, as well as a 100-gigabit connection to the CERN Large Hadron Collider.

Mobility. MIT is a fully wireless campus. The MIT Mobile App, for iPhone and Android, connects users to the MIT map, shuttles, news, and events.

Cloud-based Infrastructure and Services. About half of MIT's managed servers have been transitioned to a Cloud environment. In addition, the MIT community has access to several enterprise Cloud applications, including CrashPlan, Dropbox, Duo Security, and LastPass.

Kerberos and Athena. Kerberos was originally developed at MIT to secure network services on Athena, MIT's main academic computing environment, and is now a widely adopted protocol for network authentication. Athena provides academic software, courseware, and public computing facilities, primarily to students.

Systems. Stellar/LMOD, MIT's course management system, currently houses 1,000 sites containing course materials, assignments, and other resources. WebSIS, the student information system, provides access to personal records, course information, and scheduling.

Support. The central IT Service Desk handles approximately 25,000 telephone calls, 9,500 in-person requests, and 55,000 emails per year. Distributed Support Teams provide desk-side support to 42 departments, labs, and centers. An extensive Knowledge Base draws on the cumulative IT expertise at MIT to deliver close to 10,000 self-help articles to the community.

For more information about MIT's computing environment, visit ist.mit.edu.

Digital Learning

The Office of Digital Learning (ODL) works to transform teaching and learning both at MIT and around the globe through the innovative use of digital technologies. Specifically, ODL:

- Supports MIT faculty and students in bold experiments in digital teaching and learning to enhance residential education
- Facilitates research on how people learn and on new technologies that might improve understanding, retention, and application of knowledge
- Provides platforms for technological advances in education
- Partners with companies, universities, governments, and organizations that wish to develop new learning capabilities and enhance the competencies of their workforce, students, and citizens
- Extends MIT's knowledge and classroom to the world

Digital learning technologies enable students to do more outside of the class so that class time can focus on deeper discussion, practical experiments, and other forms of active learning. Digital technology can deliver lecture content, provide students with rapid feedback, and engender more active reading and discussion through annotation tools. Digital platforms can also augment learning via visualizations, simulations, and games. These technologies further provide flexibility in course delivery, allowing students to access content anytime anywhere.

In 2012, MIT and Harvard launched edX, a not-for-profit digital platform that enables universities to

leverage learning technologies. For teaching on campus, MIT uses a residential MITx platform. To reach students globally, MIT offers massive open online courses (MOOCs) on the edX platform.

On campus, more than 90 MIT instructors have taught over 120 courses using the residential platform. Between 30 and 50 MIT on-campus courses are using Residential MITx each semester for a substantial portion of their coursework.

Globally, as of summer 2016, MITx courses on edX had had more than 1.9 million unique participants from over 200 countries earning nearly 142,000 course certificates. In 2015–2016, MIT launched 22 MITx MOOCs and managed 48 rerun MOOCs that had been offered in prior semesters.

To further serve global learners, MIT's OpenCourseWare (OCW) offers free, open, publicly accessible web-based materials from more than 2,350 MIT courses, including more than 100 full video courses. MIT's OCW site logged an average of 2.3 million visitors per month in 2015–2016. In addition, OCW offers Highlights for High School to better serve high school constituencies, and OCW Educator, aimed at helping educators understand more about how courses are taught at MIT.

This year, MIT began piloting a new academic credentialing program called MITx MicroMasters. This program allows online learners from around the world access to a series of courses offered by MIT faculty and lecturers via MITx. Learners who perform well in their online course work and on a comprehensive proctored exam will earn the MicroMasters credential. Students who perform exceptionally well in the MicroMasters program

may then be eligible to apply to a full master's degree program at MIT through an "inverted admissions" process that converts the students' online work to MIT credit equivalent to one residential semester, allowing them to complete the remaining degree requirements in a shortened period on campus.

For more information about ODL and its programs, visit odl.mit.edu.

Campus Life

The Campus

168
Acres (0.68 km^2)

20+
Gardens and green spaces

18
Residence halls

100
Public works of art

In 1916, MIT moved from its Boston location to Cambridge, where the campus now extends more than a mile (1.6 km) along the Cambridge side of the Charles River Basin. The heart of the campus is the initial group of interconnecting buildings, designed by architect W. Welles Bosworth (Class of 1889) to facilitate interaction and communication among MIT's schools and departments.

The architecture on campus now showcases a range of styles, from neoclassical through modernist, brutalist, and deconstructivist. Among the remarkable landmarks on campus are buildings designed by leading architects such as Alvar Aalto, Frank Gehry, Steven Holl, I. M. Pei '40, and Eero Saarinen. Many of the buildings are compelling inside as well, housing state-of-the-art facilities designed to support MIT's ongoing research efforts in multiple disciplines. These facilities include wind tunnels, linear accelerators, robot test labs, and—soon to be in construction—a 200,000-square-foot (18,580 m^2) nanotechnology and advanced imaging center.

For students, the campus has 18 residence halls, each with its own distinctive personality and community. As a whole, the campus is urban and walkable. At its edges, the campus merges with various Cambridge neighborhoods, including Kendall Square—where the close association of industry and research expertise has made this area the most innovative square mile on the planet.

Housing

Undergraduates

Most undergraduates live on campus in one of MIT's 11 Institute houses or 37 MIT-affiliated fraternities, sororities, and living groups. All unmarried first-year students must live in one of the Institute's residence halls—except those who commute from home. Each dormitory has a live-in head of house who is usually a senior faculty member. Students may elect to remain on campus following their freshman year or move to a fraternity, sorority, or independent living group. The current number of undergraduates living on campus is 3,370.

In 2016–2017, approximately 1,900 students were affiliated with a fraternity, sorority, or independent living group (FSILG); approximately 1,100 of them chose to live in an FSILG community as an alternative to a traditional residence hall.

Graduate Students

More than 1,900 single graduate students live in MIT's five campus houses. Two campus apartment complexes accommodate over 400 graduate and undergraduate students with families. More than 90 graduate students live in undergraduate dorms as graduate resident tutors.

The Arts

60+
Music, theater, visual arts, writing, and dance groups

12
Museums and galleries on campus

70%
Incoming freshmen with training in the arts

>50%
Undergraduates enrolled in arts courses each year

The arts at MIT are rooted in experimentation, risk taking, and imaginative problem solving. The Institute offers highly regarded degree programs in architectural design; art, culture, and technology; comparative media studies; history, theory, and criticism of architecture and art; music; theater arts; and writing; and minors in several of these fields. Many MIT faculty have received awards, including the Pulitzer Prize, Grammy Award, Guggenheim Fellowship, and MacArthur Fellowship, in recognition of their work in the arts. MIT students are also strong contributors to the vibrant arts culture that permeates campus life.

The MIT Museum draws nearly 125,000 visitors each year to programs and exhibitions that explore the foundations and frontiers of science and technology. Highlights include the world's finest collection of holograms, robots and robotic devices, and Arthur Ganson's kinetic

sculptures. The Mark Epstein Innovation Gallery gives visitors direct access to some of the latest MIT research, and the Kurtz Gallery for Photography features changing exhibitions of renowned photographers. The Institute's Architecture and Design Collection, housed at the museum, ranks among the top architectural drawing collections in the world. The museum also produces the annual Cambridge Science Festival, featuring 10 days of programs and activities citywide serving over 50,000 people.

The MIT List Visual Arts Center is the contemporary art museum at MIT. Its core mission is to exhibit, collect, and commission visual arts for MIT. The List presents six to eight exhibitions annually in conjunction with a broad range of education programs for the MIT community and the general public. It also maintains and adds to MIT's permanent collection of over 3,500 artworks that includes over 50 publicly sited sculptures and hundreds of paintings, prints, photographs, and drawings located throughout MIT's campus. The List center commissions new works for the MIT Public Art Collection through the MIT Percent-for-Art Program, and oversees the Student Loan Art Program that allows MIT students to annually borrow original works of art from the collection to hang in their living spaces.

The MIT Center for Art, Science & Technology facilitates and creates opportunities for artists at MIT and beyond to exchange ideas with and collaborate with engineers and scientists. The center fosters a culture where the arts, science, and technology thrive as interrelated, mutually informing modes of exploration, knowledge, and discovery.

The Eugene McDermott Award in the Arts at MIT celebrates innovative talents in all arts disciplines and is one of the most generous cultural honors in the United States. Recent recipients of the award include architect David Adjaye (2016), artist Olafur Eliasson (2014), and director, filmmaker, playwright, and actor Robert Lepage (2012).

Athletics and Recreation

33
Varsity sports (16 men's, 15 women's, 2 coed)

33
Club teams, with 800+ participants

18
Intramural sports, with 4,000 participants from the MIT community

>25
Different classes to satisfy GIRs

MIT's Athletics, Physical Education, and Recreation Department offers opportunities for sports instruction and participation at all levels.

As part of the General Institute Requirements (GIRs), each student must earn eight points through physical education courses and complete the swim requirement. Seasonal offerings include golf, sailing, broomball, and ice-skating, while additional specialty courses include scuba, backpacking, top-rope climbing, kayaking, downhill skiing, and snowboarding.

- Approximately 20% of undergraduates join a team during their time at MIT.
- MIT competes mainly against Division III New England colleges, but also routinely participates in regional and national championships.
- The Institute has earned 250 Academic All-America citations, the most for any Division III program in the nation.
- MIT provides group exercise and wellness classes, personal and group training, a variety of aquatic classes, and sport skill instruction for those who wish to engage in other recreational programs.

With 10 buildings and 26 acres (0.11 km^2) of playing fields, MIT boasts one of the most expansive athletic complexes in New England. The Zesiger Sports and Fitness Center on the west side of campus features two swimming pools, a fitness center, international-scale squash courts, and a multi-activity court. Roberts Field and Barry Field, lighted sports-turf venues, are adjacent to the Zesiger Center. The summer of 2016 saw full renovation of Briggs Field (softball), Fran O'Brien Field (baseball), and the grandstands and track and field facilities at Steinbrenner Stadium. The east side of campus is served by the Alumni Pool and Wang Fitness Center, located in the Stata Center at the edge of Kendall Square.

MIT Traditions

Hacking

MIT culture distinguishes itself not only for its seriousness of purpose but also for its unique sense of humor, as expressed through "hacking." Hacks at the Institute are elaborate but benign practical

jokes, perpetrated anonymously—on campus, around Cambridge, or even farther afield—that amaze for their creativity, cleverness, and difficulty of execution. A 1958 prank in which the Harvard Bridge was measured in increments of fraternity pledge Oliver Smoot has achieved such fame that "smoot" has been incorporated into the American Heritage Dictionary and is included as a unit of measure in Google Earth. The bridge still displays its quirky unit of measure today.

Although not officially sanctioned, hacks can be appreciated for their technical prowess and humorous digs at rival institutions, for example in the astonishing emergence of a large black weather balloon with MIT written all over it in the middle of a Harvard-Yale football game in 1982, or in the 2006 cross-country theft of Caltech's Fleming Cannon. Other famous hacks involve rather large objects falling from building rooftops (the Baker House Piano Drop) or appearing where they don't belong, most notably on MIT's Great Dome, which over the years has been graced by a Hilltop Steakhouse plastic cow, a Campus Police cruiser, the Wright Flyer, an MIT fire truck, and the Apollo Lunar Module.

Pirate Certificate

Not content to just produce exceptional graduates in the usual fields of study, the Institute also offers its swashbuckling students the opportunity to become certified pirates. Students who complete four physical education courses—archery, fencing, pistol (or rifle), and sailing—are eligible to receive a Pirate Certificate, officially awarded by the Department of Athletics, Physical Education, and Recreation. In addition to receiving a tangible

document printed on faux parchment, newly minted pirates are rumored to swear a secret oath. Although they are no longer lily-livered landlubbers, their pirating activities nevertheless are limited to "entertainment purposes only."

Brass Rat

In a ritual long enjoyed by MIT undergraduates, a committee of sophomores gathers each year to design their class ring, which is ceremoniously revealed during the spring term. The history of MIT's class ring dates back to 1929 when a student committee convened to design what is formally known as the "Standard Technology Ring." Featuring a beaver on top (an industrious, nocturnal, American animal), the Boston and Cambridge skylines on the sides, and the MIT seal and dome on the shank, the ring also incorporates unique design elements related to each individual graduating class. Made of gold, the ring's nickname, "the Brass Rat," derives from its color—similar to brass—and the prominence of the beaver mascot—resembling a rat.

A concrete symbol of an MIT education, the distinctive Brass Rat is recognized worldwide and instantly identifies MIT alumni to one another, serving as a reminder of the bond that all MIT students share.

F.A.T. Chain Reaction

For 19 years, the Friday After Thanksgiving (F.A.T.) Chain Reaction has been a highly anticipated event that brings participants together to link their chain reaction devices in order to form one enormous, collaborative chain reaction, which is then set off as the culmination of the afternoon. Partici-

pants range from Girl Scout troops to artists and engineers, from MIT clubs to middle schools and family teams. More than 1,000 people attend this giant chain reaction each year.

MIT Mystery Hunt

The MIT Mystery Hunt is a puzzle hunt competition that takes place on the MIT campus every year in January. The hunt challenges each participating team to solve a large number of puzzles that lead to an object (called a "coin") hidden somewhere on campus. The winning team gets to write the subsequent year's hunt.

Mystery Hunt was launched in 1981 and is widely regarded as one of the oldest and most complex puzzle hunts in the world. It attracts more than 2,000 people every year and has inspired similar competitions at universities, companies, and cities around the world.

Pi Day

In true MIT fashion, the Institute typically releases admission decisions on Pi Day (March 14), an annual celebration of the mathematical constant. Frequently, these admissions decisions are released at 6:28 p.m., which is known colloquially as "Tau time" (π×2). An exception was made for the release time of early decisions on March 14, 2015—known as "Super Pi Day" as the date reflects the full first five digits of Pi (3.1415)—when admissions decisions were released at 9:26 a.m. in order to continue with the next three digits of Pi. MIT Admissions creates a humorous video to accompany the announcements and celebrate the tradition, and posts this to the MIT Admissions Blog.

MIT and the Community

MIT is an integral member of its host city of Cambridge, a diverse and vibrant community noted for its intellectual life, history, and thriving innovation climate. With a campus nestled between Central and Kendall Squares, and across the Charles River from Boston's Seaport District, the Institute is in an optimal position to engage in collaborative endeavors with its neighbors and to contribute to the growing innovation community.

The city's approximately 105,000 residents, including more than 46,000 college and university students, together form a lively community within its 6.26 square miles (16.2 km^2). Cambridge is pedestrian- and bicycle-friendly, with 82 parks and playgrounds, six subway stations, a commuter rail line, 29 bus routes, multiple shuttles, 39 bike sharing stations, and numerous dedicated bicycle lanes and bikeways, enabling visitors and students to get around the city and the MIT campus without a car.

Service to the community. Since its founding, MIT has maintained a commitment to be a good neighbor and serve the local community. The Institute actively supports nonprofit organizations that address local challenges by providing educational programs, financial resources, representation on boards and committees, volunteer engagement, and the use of MIT facilities. In addition, members of the MIT community support the Institute's Community Service Fund, which provides assistance for nonprofits where MIT volunteers are at work.

The Institute's Priscilla King Gray Public Service Center provides programming, guidance, infor-

mation, and support to students, faculty, and staff interested in public service, and serves as a resource for both MIT and the community at large. More information is available at web.mit.edu/mitpsc.

Economic impact and innovation catalyst. MIT has a far-reaching impact on the economy of the region. The Institute is Cambridge's second largest employer and largest taxpayer, representing 14% of the city's tax revenue stream. MIT pays taxes on its commercial property and provides an annual payment in lieu of taxes (PILOT) for property that is used for academic purposes and is legally tax exempt. In fiscal year 2016, the Institute made a voluntary PILOT contribution of approximately $2 million to the City of Cambridge and paid approximately $50 million in real estate taxes.

MIT is a magnet for investment and fuels the innovation economy with the research, start-ups, and talent pool that it generates. Kendall Square, at the eastern end of MIT's campus, is the seat of a thriving innovation cluster in which MIT plays a catalyzing role.

In 2016, MIT took a bold step to advance innovation by launching The Engine, a new Cambridge-based accelerator focused on solutions to the biggest, toughest problems facing the world. The Engine will provide affordable workspaces, access to specialized equipment and expertise, and streamlined business services, including support for legal, accounting, operating, and technology licensing for locally based startups that require "patient" capital investment to bring their ideas to market.

For more information about MIT and the community, visit ogcr.mit.edu.

Sustainability

MIT is committed to leadership in sustainability and strong climate action at the local level, making strides to reduce the greenhouse gas emissions of the MIT campus, using the campus itself as a test bed for sustainability innovation and education, and partnering with the cities of Cambridge and Boston.

In a five-year Plan for Action on Climate Change, released in 2015, the Institute set a goal to reduce its campus emissions by at least 32% below 2014 levels by 2030 and to strive to reach carbon neutrality as soon as possible. As of 2016, the campus had already reduced its emissions by 7%. An off-site renewable energy project in development will further neutralize MIT's emissions by an additional 17%. Further strategies—developed in partnership with staff, students, and faculty—will continue to drive emissions down and demonstrate innovative approaches to climate mitigation, adaptation, and resiliency.

New construction and major renovation projects on campus aim to meet the national LEED Gold (version 4) certification standard, reflecting MIT's dedication to building healthy, high performance facilities that meet the highest standards of sustainability. To date, seven buildings have achieved LEED Gold Certification. MIT's proactive Capital Renewal program is engaged in continuous renewal and renovation projects that ensure the buildings are able to support the community's educational, research, and student life activities.

The Institute also offers many courses focused on understanding or solving challenges in sustain-

ability, some of which use the campus itself as a test bed, such as one that explored the solar energy potential of MIT rooftops.

MIT has a vibrant ecosystem of student and staff groups promoting sustainability on campus, such as the Graduate Student Council and Undergraduate Association's committees on sustainability as well as the Green Committee, Staff for Sustainability. Initiatives range from a monthly swapfest called Choose to Reuse to student hackathons, which engage students, industry, and thought partners in finding real-life solutions to sustainability challenges.

As a founding member of the Cambridge Compact for a Sustainable Future, MIT works with Cambridge, Harvard University, and more than 15 local businesses and organizations to achieve a more healthy, livable, and sustainable future. MIT is also a member of the Boston Green Ribbon Commission.

- Eighty-six percent of MIT commutes to campus in ways other than driving alone in a car, such as by using public transportation, or by bicycling, walking, and ride-sharing to work.
- Through its Access MIT program, the Institute provides generous subsidies for parking and MBTA commuter rail, subway, and bus passes for benefits-eligible faculty, staff, and all postdoctoral scholars.

- The Zesiger Center offers limited-access, discounted membership designed specifically so that bike commuters can stop by for an early morning workout and/or shower.
- The campus also offers on-site bicycle benefits for students and staff, including fix-it stations, secure bicycle cages, and a bike-share program.
- MIT sponsors two Hubway bike rental stations on campus, and four more rental stations are accessible to campus. MIT also provides Hubway membership subsidies for employees and students.
- MIT hosts 25 Zipcars on campus and subsidizes Zipcar memberships for staff and students.
- There are currently 20 electric vehicle charging-station spaces available across campus.
- The Office of Sustainability offers a Sustainable Event Certification to help guide planners toward making smart choices about food, energy, transportation, and materials.
- The MIT Sustainable Workplace Certification Program empowers staff, faculty, and student workers to take a leadership role in implementing strategies and practices that will make their workplace a healthy, resource-efficient, proactive steward of the Institute and our planet.

Research

The soul of MIT is research. For more than 150 years, the Institute has married teaching with engineering and scientific studies—and produced an unending stream of advancements, many of them world-changing. Examples of some of MIT's historical achievements follow:

1930s Pioneering high-speed photography

1940s Engineering practical microwave radar

1957 Achieving the first chemical synthesis of penicillin

1950s Building the magnetic core memory that made digital computers possible

1960s Developing the inertial guidance systems for the Apollo space program

1960s Developing the world's first biomedical prosthetic device

1977 Inventing the first workable public key cryptographic system

1986 Creating the first free-standing hologram

1988 Discovering the smallest known, most abundant photosynthetic bacteria in the ocean

1994 Developing a robot that can "learn" exercises from a physical therapist, guide a patient through them and, for the first time, record biomedical data on the patient's condition and progress

1996 Use new genetic and multiple-cell monitoring technologies to demonstrate how animals form memory about new environments

2002 Creating the first acrobatic robotic bird—a small, highly agile helicopter for military use in mountain and urban combat

2007 Genetically reprogramming skin cells to cure a mouse model of sickle-cell anemia

2009 Finding a way to use RNA interference to silence multiple genes at once

This stream of discovery continues. Here are just a few accomplishments from this decade:

2010 Designing computer techniques that automatically decipher ancient languages

2011 Building a new radar technology system that can see through walls up to 60 feet away

2012 Demonstrating experimentally the existence of a fundamentally new magnetic state called a quantum spin liquid

2013 Developing a new steelmaking process that produces no emissions other than pure oxygen

2014 Designing a new paper strip diagnostic test to rapidly diagnose Ebola and other viral hemorrhagic fevers

2015 Designing the bandage of the future: a sticky, stretchy, gel-like material that can incorporate temperature sensors,

LED lights and other electronics, as well as tiny drug-delivering reservoirs and channels that can release medicine in response to changes in skin temperature and be designed to light up if medicine is running low

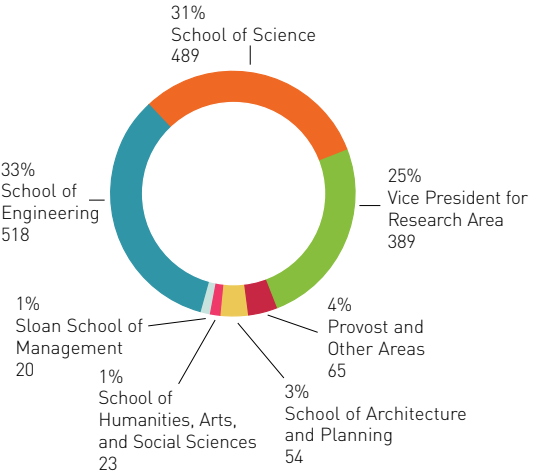
2016 Making the first direct detection of gravitational waves reaching the Earth (in collaboration with Caltech and others around the world), confirming Albert Einstein's prediction from 100 years ago

Undergraduates can plunge directly into this world of exploration through the Undergraduate Research Opportunities Program, which offers students a chance to collaborate on cutting-edge research as junior colleagues of Institute faculty.

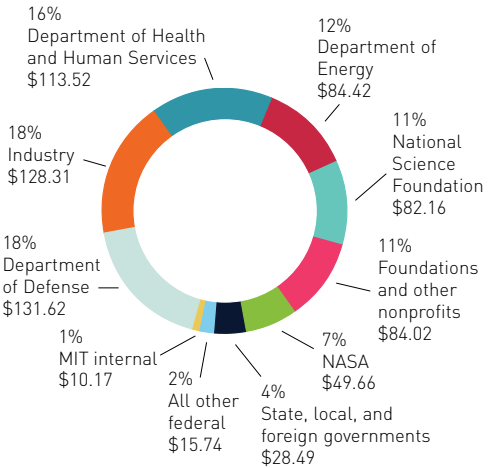
During the academic year, approximately 3,825 researchers (including some 1,550 postdoctoral scholars, and 540 visiting faculty and scientists) work with MIT faculty and students. Approximately 2,600 graduate students are primarily supported as research assistants and 690 are appointed as teaching assistants; 1,610 are supported on fellowships. Postdoctoral scholars pursue a program of research and training under the direction of an MIT faculty member and are widely distributed.

As an institution, MIT encourages interdisciplinary research across department and school boundaries while focusing on tackling great challenges for society at large. More interdisciplinary teams are found off-campus in nearby Lexington, Massachusetts, at MIT Lincoln Laboratory, a federally funded research and development center focused on national security.

Distribution of Postdoctoral Scholars, by School/Area



Research Expenditures, by Primary Sponsor (in Millions),* Fiscal Year 2016 Total: $728.11



*Figures are rounded.

Interdisciplinary Centers, Labs, and Programs

Today's researchers tackle complex problems that cannot be resolved within a single academic discipline—and MIT constantly creates and evolves academic organizations that foster interdisciplinary work.

Abdul Latif Jameel Poverty Action Lab
Abdul Latif Jameel World Water and Food Security Lab
Center for Archaeological Materials
Center for Bits and Atoms
Center for Collective Intelligence
Center for Computational Engineering
Center for Computational Research in Economics and Management Science
Center for Energy and Environmental Policy Research
Center for Environmental Health Sciences
Center for Global Change Science
Center for International Studies
Center for Materials Science and Engineering
Center for Real Estate
Center for Transportation and Logistics
Clinical Research Center
Computer Science and Artificial Intelligence Laboratory
Concrete Sustainability Hub
Deshpande Center for Technological Innovation
Division of Comparative Medicine
Francis Bitter Magnet Laboratory
Haystack Observatory
Initiative on the Digital Economy
Institute for Data, Systems, and Society
Institute for Medical Engineering and Science
Institute for Soldier Nanotechnologies
Institute for Work and Employment Research

Joint Program on the Science and Policy of Global Change
Knight Science Journalism Program
Koch Institute for Integrative Cancer Research
Laboratory for Financial Engineering
Laboratory for Information and Decision Systems
Laboratory for Manufacturing and Productivity
Laboratory for Nuclear Science
Legatum Center for Development and Entrepreneurship
Lincoln Laboratory
Martin Trust Center for MIT Entrepreneurship
Materials Processing Center
McGovern Institute for Brain Research
Microsystems Technology Laboratories
MIT Center for Art, Science, and Technology
MIT Energy Initiative
MIT Environmental Solutions Initiative
MIT Innovation Initiative
MIT Kavli Institute for Astrophysics and Space Research
MIT Media Lab
MIT Portugal Program
MIT Professional Education
MIT Program in Art, Culture, and Technology
MIT Sea Grant College Program
Nuclear Reactor Laboratory
Operations Research Center
Picower Institute for Learning and Memory
Plasma Science and Fusion Center
Research Laboratory of Electronics
Simons Center for the Social Brain
Singapore–MIT Alliance
Singapore–MIT Alliance for Research and Technology
Sociotechnical Systems Research Center
Technology and Development Program
Transportation@MIT
Women's and Gender Studies Program

Research Alliances

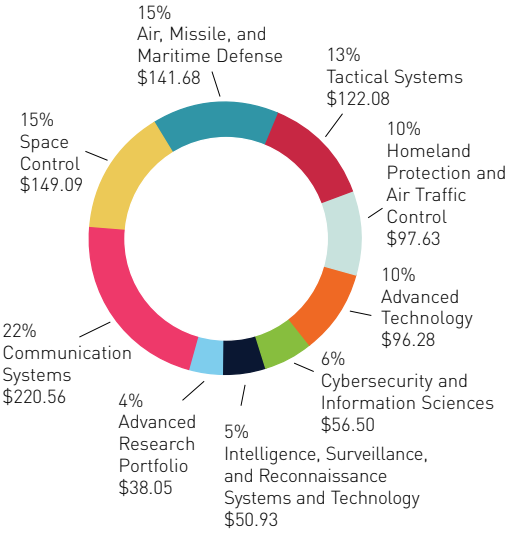
MIT's research extends out through collaborations with leading institutes and consortia around the world.

Alliance for Global Sustainability
Broad Institute
Charles Stark Draper Laboratory
Howard Hughes Medical Institute
Massachusetts Green High Performance Computing Center
Northeast Radio Observatory Corporation
Ragon Institute of MGH, MIT and Harvard
Whitehead Institute for Biomedical Research

Lincoln Laboratory

MIT's Lincoln Laboratory, located in Lexington, Massachusetts, is a federally funded research and development center focused on applying advanced technology to problems of national security. Lincoln Laboratory's core competencies are in sensors, information extraction (signal processing and embedded computing), communications, integrated sensing, and decision support, all supported by a broad research base in advanced electronics. Other areas of innovative research and development are cybersecurity, autonomous systems, bioengineering, and homeland protection systems. The laboratory has a strong focus on developing and field-testing unique prototype systems, and is very engaged in transitioning technologies to industry. Approximately 3,988 employees work at Lincoln Laboratory.

Lincoln Laboratory Program Funding, by Mission Area (in Millions),* Fiscal Year 2016** Total: $973



*Figures are rounded.
**Lincoln Lab's fiscal year runs from October 1 to September 30.

MIT and Industry

Since its founding, MIT has fostered a problem-solving approach that encourages researchers to work together across departments, fields, and institutional boundaries. The resulting collaborations have included thousands of fruitful partnerships with industry and other leading research institutions.

Over 700 companies are working with faculty and students both in Institute-wide programs such

as the Industrial Liaison Program (part of the Office of Corporate Relations and the main conduit between corporations and MIT) and the MIT Energy Initiative, and in smaller collaborations.

Research sponsored directly by industry totaled $141 million in fiscal year 2016, or 19% of all MIT research funding. According to the National Science Foundation, MIT ranks second in industry-financed research and development expenditures among all universities and colleges without a medical school.

The Technology Licensing Office (TLO) brings about, through technology licensing, commercial investment in the development of inventions and discoveries flowing from research at MIT and Lincoln Laboratory. It is through these investments, and the economic development and new products that follow from them, that MIT technology provides direct benefits to the public. Fiscal year 2016 saw 800 new invention disclosures (plus 82 from Lincoln Lab), 341 US patents filed, 279 US patents issued, 110 licenses granted, 25 companies started, and $62 million in total licensing income.

MIT's strong corporate connection also is reflected in its extensive business-oriented curricula, such as the Leaders for Global Operations program, System Design and Management program, Sloan Fellows Program in Innovation and Global Leadership, Supply Chain Management program, and other degree programs that offer an industry internship component.

MIT Sloan Executive Education offers programs that combine innovation and entrepreneurship with strategic thinking and global leadership for

mid- to senior-level executives. Led by senior faculty, programs provide participants with the tools and frameworks they need to create and lead successful organizations.

MIT Professional Education provides engineering, science, and technology professionals a gateway to renowned MIT expertise, research, and knowledge through advanced education programs designed for working professionals.

Entrepreneurship and Innovation

MIT's preeminence in entrepreneurship is rooted in its founding. As one of the first land-grant colleges, the Institute was designed to deliver a practical education rather than to focus on the classical education that was provided by many private universities of that era. This emphasis on practice is infused into the entrepreneurship curriculum and programming, which emphasizes learning by doing. Over the course of the 2015–2016 academic year, more than 60 entrepreneurship courses were offered, as well as not-for-credit boot camps over the Independent Activities Period and the summer MIT delta v accelerator program, formerly known as the MIT Global Skills Accelerator program.

Several MIT departments, labs, and centers foster entrepreneurship and innovation at MIT:

- The Martin Trust Center for MIT Entrepreneurship supports students with an entrepreneurship curriculum, programming, coaching and mentoring from Entrepreneurs in Residence, and connections to the MIT and broader entrepreneurial communities.

- The MIT Innovation Initiative combines opportunities for hands-on innovation and entrepreneurship education, building a dynamic innovation infrastructure across campus, and fostering a connected community of innovation science researchers focused on global relevance and impact.
- The Technology Licensing Office assists MIT inventors in protecting their technology and in licensing that technology to startups and to existing companies.
- The Deshpande Center for Technological Innovation funds innovative faculty research and supports faculty in technology commercialization.
- The Venture Mentoring Service matches student, faculty, staff, and alumni entrepreneurs with talented mentors.
- The Bernard M. Gordon–MIT Engineering Leadership Program promotes leadership and communications skills among undergraduate engineers.
- The Legatum Center for Development and Entrepreneurship supports MIT students creating ventures focused on solving challenges in developing economies.
- The Lemelson-MIT Program promotes invention at MIT, in particular among students, through the Lemelson-MIT National Collegiate Student Prize Competition.
- The MIT Enterprise Forum, part of Technology Review, produces programs and events through its worldwide network of chapters for technology entrepreneurs and the communities where they reside.
- The Samuel Tak Lee MIT Real Estate Entrepreneurship Lab aims to create a

new generation of socially responsible entrepreneurs and academics in the fields of architecture, planning, and real estate through faculty funding, graduate fellowships, online courses, programs, and more.
- DesignX is an entrepreneurial accelerator for endeavors from the School of Architecture and Planning that aims to transform cities and the built environment.
- The MIT Sandbox Innovation Fund Program provides selected teams of MIT student innovators up to $25,000 in seed funding, tailored educational opportunities, advising and mentoring, and access to materials and makerspace resources.
- The MIT Startup Exchange is a web community for the MIT innovation ecosystem composed of MIT Industrial Liaison Program members, MIT-connected startups, and employees and alumni with active startup engagements.

MIT also has over 40 student clubs and initiatives involved in entrepreneurship or innovation, among them the MIT $100K Entrepreneurship Competition, MIT Clean Energy Prize, and conferences such as Hacking Arts and Hacking Medicine.

MIT's educational efforts in entrepreneurship and innovation have an impressive impact at local, regional, and global levels. A 2015 report suggested that 30,000 companies founded by MIT alumni were active as of 2014, employing 4.6 million people and producing annual revenues of $1.9 trillion, equivalent to the world's 10th largest economy. MIT alumni form hundreds of new companies each year, and approximately 40% of MIT founders are serial entrepreneurs, starting multiple companies. Twenty-three percent of MIT alumni's new firms are founded outside the United States.

Alumni

MIT Students after Graduation

During 2015–2016, 261 employers recruited in MIT Global Education and Career Development (GECD). Computer technology companies (30%), financial services (22%), consulting (16%), engineering (13%), and energy (7%) were the top five industries participating in on-campus recruiting and accounted for 87% of total recruiters.

Undergraduates after Graduation

- Twenty-two percent of 2016 bachelor's degree graduates found jobs through a career fair.
- Twenty percent found jobs through various networking venues, including MIT faculty and administrators, GECD contacts, and professional conferences.
- Nineteen percent had internships that led to a full-time job offer.
- Eighteen percent found jobs through on-campus recruiting and MIT-sponsored job listings.
- Eighty-three percent of all graduating seniors completed internships while at MIT.

Fifty-two percent of MIT undergraduates took jobs after graduation; 37% went on to graduate school. The top graduate school destinations were MIT, Stanford, Harvard, University of California at Berkeley, California Institute of Technology, Georgia Institute of Technology, Carnegie Mellon, Johns Hopkins University, Northeastern University, and Yale.

Graduate Students after Graduation

- Eighty percent of master's students graduating from MIT entered the work sector and 12% went on to further study.
- While 93% of PhD students planned to work after graduation, 1% continued their education. Of those with confirmed employment, 45% were postdoctoral positions.

Top Employment Sectors for 2016 MIT Graduates, by Degree Type

Employment sector	Bachelor's	Master's	PhD
Aerospace/defense	9%	6%	3%
Computer technologies	24%	17%	11%
Consulting	11%	21%	5%
Education	2%	1%	27%
Energy/utilities	5%	3%	3%
Engineering (all fields)	27%	14%	20%
Finance/banking	10%	13%	3%
Health/medicine	3%	4%	11%

The top employers for bachelor's degree recipients were Google, Boeing, Apple, Oracle, Amazon, Boston Consulting Group, General Motors, Ab Initio, Accenture, Bain & Company, Microsoft, MIT, Morgan Stanley, NASA, and SpaceX.

The top employers for master's degree recipients were McKinsey, Amazon, Boston Consulting Group, the US Navy, Deloitte, Bank of America, Falabella, Goldman Sachs, PricewaterhouseCoopers, and the US Army.

The top employers for doctoral degree recipients were MIT, Harvard, Stanford, UC Berkeley, McKinsey, University of Washington, Boston Consulting Group, Lam Research, Microsoft, Princeton, and Analog Devices.

Average Salaries Earned by MIT Graduates Entering Industry Positions, by Degree

Degree	Mean	Median
Bachelor of Science	$84,882	$80,000
Master of Science	$86,307	$85,000
Master of Engineering	$111,021	$115,000
Master of Business Administration	$134,851	$130,000
PhD entering postdoctoral positions	$60,605	$50,000
PhD entering other positions	$117,404	$110,000

MIT Alumni Association

The MIT Alumni Association is a gateway to one of the most diverse, talented, and invigorating communities in the world: the 134,344 living MIT alumni. It provides services and resources that strengthen alumni's ties to MIT and to each other, from face-to-face gatherings to a suite of online services.

More than 14,202 alumni volunteer their services for the Institute, serving as class and club officers, educational counselors, and members of the MIT Corporation and its visiting committees. In fiscal year 2016, the Annual Fund reported $75.7 million in gifts from 44,696 alumni, students, parents, and friends.

Geographic Distribution of Alumni*		
United States and Possessions		102,339
Mid-Atlantic	26,152	
New England	26,036	
West	20,654	
Southwest and South Central	8,497	
Great Lakes	7,563	
Southeast	6,813	
Northwest and Great Plains	5,858	
Alaska and Hawaii	521	
Puerto Rico, the Virgin Islands, and other US territories	245	
Asia		7,807
Europe		6,014
North America (other than US)		2,028
South America		1,515
Pacific Islands and Australia		579
Africa		483
Central America		79
Total		**120,844**

*Includes only alumni with known addresses.

Building MIT's Resources

The MIT Campaign for a Better World officially launched in May 2016 with the ambitious goal of raising $5 billion to meet humanity's urgent global challenges through the vision and talent of the people of MIT.

The Campaign is guided by six priority areas that span the full breadth of the Institute:

- Discovery Science: Transforming our world through fundamental scientific research
- Health of the Planet: Addressing critical environmental and sustainability challenges facing humankind
- Human Health: Defining the future of health through advances from bench to bedside across a broad range of disciplines
- Innovation and Entrepreneurship: Accelerating the journey from idea to impact
- Teaching, Learning, and Living: Reimagining education for the 21st-century learner
- The MIT Core: Attracting extraordinary students and faculty and providing them with the resources they need to thrive

The Campaign began its public phase with $2.6 billion already raised toward its goal. Thanks to the enthusiasm and generosity of friends and alumni, the Institute closed fiscal year 2016 with an additional $529 million in new gifts and pledges, and a total of $2.9 billion raised in the Campaign.

Financial Data

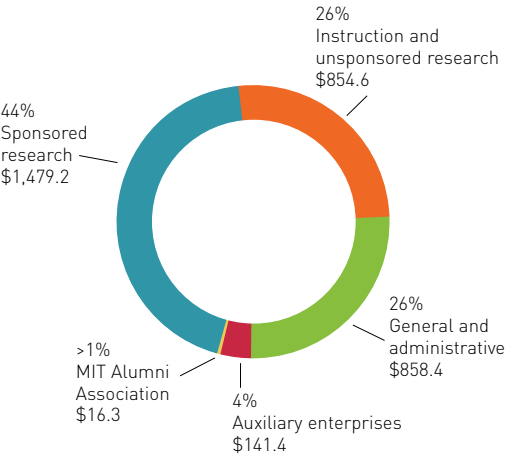
Year-end Statistics (in Millions), Fiscal Year 2016

Value of Plant and Invested Assets	
Asset	**Value (in millions)**
Land, buildings, and equipment, net book value	$3,092.4
Market value of endowed funds	$13,181.5
Market value of total investments	$17,478.4

Gifts and Pledge Payments to MIT	
Source	**Amount (in millions)**
Individuals	$163.7
Corporations	$66.9
Foundations	$192.0
Other	$5.5
Total	**$428.1**

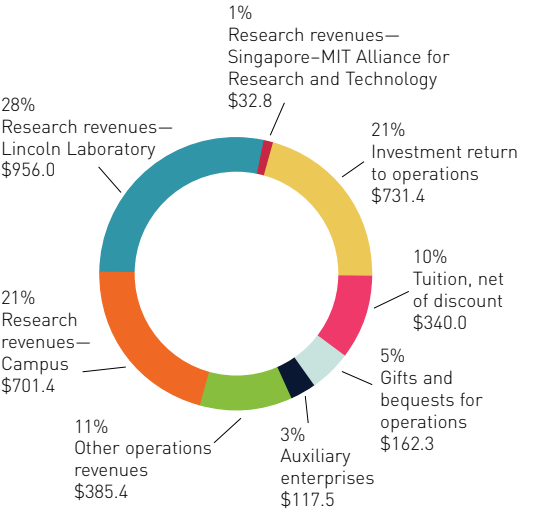
Gift and Pledge Payment Designations	
Designation	**Amount (in millions)**
Faculty chairs	$49.9
Scholarships and other undergraduate aid	$15.8
Undergraduate education and student life	$41.7
Graduate fellowships	$13.5
Research and education programs	$204.8
Construction and renovations	$31.8
Unrestricted	$64.5
Undesignated and miscellaneous	$6.0
Total	**$428.1**

Operating Expenditures (in Millions)*
Fiscal Year 2016
Total: $3,349.9



*Figures are rounded.

Operating Revenues (in Millions)*
Fiscal Year 2016
Total: $3,426.8



*Figures are rounded.

Accreditation

MIT is accredited by the New England Association of Schools and Colleges, Inc., through its Commission on Institutions of Higher Education.

Many degree programs at MIT are accredited by specialized professional accrediting bodies, including ABET, the Association to Advance Collegiate Schools of Business, the American Chemical Society, the American Institute of Chemical Engineers, the Computer Science Accreditation Board, the National Architectural Accrediting Board, and the Planning Accreditation Board. Academic departments can provide information on the accreditation of the specific degree programs they offer.

About the Cover

The MIT Campaign for a Better World—a bold and ambitious $5 billion fundraising initiative—was officially launched in May 2016. In the words of MIT Corporation chairman Robert B. Millard '73, the Campaign "is an opportunity to re-inspire, reenergize, and recommit the MIT community to our shared vision and values, while amplifying the power of our students, faculty, and staff to shape the future by providing them with the resources they need to do their best work."

The Campaign is guided by six priority areas that span the full breadth of the Institute: discovery science; health of the planet; human health; innovation and entrepreneurship; teaching, learning, and living; and strengthening MIT's core (see Building MIT's Resources for more detail). In his announcement of its launch, President L. Rafael Reif stated that the Campaign is MIT's response to the urgent challenges facing humanity and an intensive effort to "seek the support of enthusiastic partners" that will help MIT accelerate positive change and amplify the impact of its work in the world.

In keeping with the Campaign's focus on the greater good, this year's cover calls to mind the global nature of MIT's mission, vision, education, and reach, reminding us that the opportunities for us to build a better world are infinite.

For more information, visit betterworld.mit.edu.

CAMPAIGN FOR A BETTER WORLD

MIT's greatest invention may be itself—an unusual concentration of unusual talent, restlessly reinventing itself on a mission to make a better world.

—President L. Rafael Reif

Massachusetts Institute of Technology

A few of the most visited locations on campus are highlighted below:

W16 Kresge Auditorium
W20 Student Center
N52 MIT Museum
7 Information Center
10 Lobby 10 and Great Dome
K Killian Court
N North Court
32 Stata Center
76 Koch Building
E14 Media Lab
E15 List Visual Arts Center
E51 Wong Auditorium, Tang Center
E62 Sloan School
Kendall T Station

whereis.mit.edu
m.mit.edu