**MIT Schools & Masters Course Options Summary (researched 2017)**

Please note that what follows is a summary, indicating the breadth of what is available. It is not intended as a substitute for detailed searches by potential applicants, followed by contact with the relevant Admissions Team(s) and also with individual faculty with whom applicants may hope to study. Note that US admissions’ culture is different from the UK’s: questions – by phone if possible – are the norm once initial research has been done from what is on the web and personal approaches to faculty are expected. You will simply be doing what is expected and not regarded as a nuisance.

**SCHOOL OF ARCHITECTURE & PLANNING** [**http://sap.mit.edu/**](http://sap.mit.edu/)

*“The unifying theme of all our activities is design. Through the design of physical spaces, and through the design of policies and technologies that shape how those spaces are used, we aim to sustain and enhance the quality of the human environment at all scales, from the personal to the global.”*

***Architecture*** [***http://architecture.mit.edu/overview/graduate-degrees***](http://architecture.mit.edu/overview/graduate-degrees)

***M Arch*** – 3-4 years
The great majority of students enter the program and graduate in 3.5 years. A small number of students who have completed a four-year undergraduate degree in architecture at another school may be admitted with advanced entry to the program and graduate in 2.5 years.

C 30 places per year; professional degree for those with no prior architectural qualification

**SMArchS** - a two-year program of advanced study founded on research and inquiry in architecture as a discipline and as a practice. The program is intended both for students who already have a professional degree in architecture and those interested in advanced non-professional graduate study. The degree may be pursued in one of six areas: Architectural Design, Architecture & Urbanism, Building Technology, Design & Computation, History, Theory & Criticism, and the Aga Khan Program in Islamic Architecture.

***Master of Science in Building Technology – SMBT***:

*Basic engineering disciplines along with subjects that apply these topics to the built environment*; open to qualified students with a degree in a variety of engineering disciplines, the physical sciences or in architecture.

The program concentrates on the development of the next generation of technology for the built environment as well as the innovative application of state-of-the-art concepts to building and urban systems. The program is run jointly by the Departments of Architecture, Civil and Environmental Engineering, and Mechanical Engineering.

1 year plus summer or (usually) 2 years

***Master of Science in Art, Culture & Technology – SMACT****focuses on the development of critical and visionary positions of artistic practice in the context of an advanced technological and scientific community and on* *the development of artist-thinkers advancing their critical and production practices.* Strong emphasis is placed on critical thinking, knowledge mining, and creative engagement, along with explorations of changing public and private spheres. The program facilitates artist-thinkers’ exploration of art’s broad, complex, global history and conjunction with culture, science, technology, and design via rigorous critical artistic practice and practice driven theory. ACT emphasizes experimentation and transdisciplinary approaches to studio production in both traditional and new media. Students are encouraged to consider both the physical and the cultural context of their artworks/projects as central to their interpretation.

2 years 10 places per year

***Department of Urban Studies & Planning*** [***http://dusp.mit.edu/***](http://dusp.mit.edu/) ***http://dusp.mit.edu/degrees/masters***

***Master in City Planning - MCP***

*graduate professional education for persons who will assume planning roles in public, private, and nonprofit agencies, firms, and international institutions, in the United States and abroad.*

Focusses on skills and specialized knowledge needed to fill traditional and emerging planning roles & emphasizes the mastery of the tools necessary for effective practice.Includes training in policy analysis & institutional intervention. 4 specialisms: city design & development; environmental policy & planning; housing, community & economic development; international development.

C 55-60 places per year (30% international students, 50% women)

Need strong academic record + some field experience 2 years

**PhDs** ***Architecture***:

 Building Technology

 Computation

 History, Theory & Criticism: History & Theory of Architecture or History & Theory of Art

 ***Urban Studies & Planning*** *– specialisms as in the MCP above*

 ***Media Lab*** [***http://www.media.mit.edu/***](http://www.media.mit.edu/)

*The Media Lab is a community of inventors who work atelier style as members of research teams, doing the things that conventional wisdom says can’t or shouldn't be done. The approximately 400 projects under way at the Lab are as varied as the students who conduct them: from tools for learning and expression, to innovative devices for human adaptation and augmentation, to new modes of transportation for tomorrow's smart cities.*

Each year, the program accepts approximately 50 master’s and PhD candidates with backgrounds ranging from computer science to psychology, architecture to neuroscience, mechanical engineering to material science, and more. MAS applicants should be:

* committed and accomplished in their area of concentration prior to application, with an emphasis on creative extensions of that domain;
* able to work in an engineering environment; and
* proficient at computer programming and/or hardware design.

2-year ***SM Media Arts & Sciences*** & ***closely-related doctoral program***. Applicants for the SM should identify 3 research groups they wish to join. The Trust office can assist applicants who have done thorough research.

*MIT’s [Center for Bits and Atoms](http://cba.mit.edu/), an interdisciplinary initiative investigating the interface between computer science and physical science, also admits students through the Program in Media Arts and Sciences. The Center is known for its global network of digital fabrication facilities.*

**SCHOOL OF ENGINEERING** [**http://engineering.mit.edu/education/graduate/**](http://engineering.mit.edu/education/graduate/)

*The School of Engineering educates 45 % of MIT’s graduate students. Just over a third of MIT’s faculty are in the School’s 10 departments. There is a vast range of specialisms on offer in the School plus an equally wide range of inter-disciplinary options. The following is a summary; please go to the relevant section of the MIT site to research further.*

***Please note that the majority of the webpages regarding the Master’s options now state they are for those who ‘intend eventually to seek doctoral study’.***

***Leaders for Global Operations*** [***https://lgo.mit.edu***](https://lgo.mit.edu)Offered jointly by MIT Sloan and MIT School of Engineering, LGO graduates earn an MBA and an SM in one of seven engineering departments. Currently, the following departments partner with LGO to offer an SM through the program:

* Aeronautics and Astronautics
* Biological Engineering
* Chemical Engineering
* Civil and Environmental Engineering
* Electrical Engineering and Computer Science
* Mechanical Engineering

The centerpiece of the program is a six-month internship project conducted at one of LGO’s world-class operations and manufacturing partner companies, where students do research and problem-solving that form the basis of their master’s thesis. All LGO students receive generous fellowships. LGO students are immersed in the full spectrum of operations related to the global production, new product development, high tech fields, and distribution of goods and services.

2 year program.

Average age of students: 28 Average work experience: 5 years

Number of students: 48

***Department of******Aeronautics and Astronautics***[*http://aeroastro.mit.edu/*](http://aeroastro.mit.edu/)

The two-year ***Master of Science in******Aeronautics and Astronautics*** degree program prepares students for an advanced position in the aerospace field and provides a solid foundation for doctoral study. Students are required to complete a thesis and related research or design experience.

*The* ***Department of Biological Engineering*** *offers a PhD program—and, in certain cases, an SM degree—with two tracks, one in bioengineering and another in applied biosciences.* [*https://be.mit.edu/academic-programs*](https://be.mit.edu/academic-programs) *These tracks complement one another as a reflection of the importance of approaching quantitative biological and biomedical problems from the two perspectives.*

*The* ***bioengineering track*** *educates students to use engineering principles in the analysis and manipulation of biological systems, allowing them to solve problems across a spectrum of important applications. The* ***applied biosciences track*** *complements the bioengineering track by focusing on understanding the interactions of organisms with chemical, biological, and physical agents from the molecular to the systems level.*

***Department of Chemical Engineering*** *<https://cheme.mit.edu/>* 6 sub-disciplines for doctoral research

**The Master of Science in Chemical Engineering Practice (M.S.CEP)** requires two semesters of graduate-level courses at MIT and one semester at the field stations of the Practice School, under the direction of resident MIT staff. Credit for the Practice School semester is accepted in lieu of a Master’s thesis.
The *M.S.CEP may be pursued as a terminal degree*. It is possible to complete the degree in one calendar year by taking courses during Fall and Spring terms and attending Practice School during the following summer.

***Department of Civil and Environmental Engineering*** <https://cee.mit.edu/>
We offer advanced Master’s and Doctoral degrees within the areas of environmental chemistry; environmental fluid mechanics; environmental microbiology; hydrology and hydroclimatology; networks, systems and computation; materials, structures and geomechanics; and supply chain and logistics.

The **Master of Engineering (MEng)** degree program is our professional-oriented graduate program that consists of high level, fast paced coursework and significant engagement with a real world engineering project, preparing our graduates for a professional career path, or further graduate studies at MIT or elsewhere. This ***9 month program***, with opportunities for individualized tracks in CEE prepares our graduates for addressing significant challenges in the domains of Civil and Environmental Engineering.

The Master of Science (SM) and Doctor of Philosophy (PhD) are the research focused graduate degrees in the department of Civil and Environmental Engineering (CEE). Each SM and PhD graduate student in our department is matched with one of our top tier faculty members to work together on the research component of the graduate degree. (AT: implication from the website is that the SM can be a terminal, research degree but please check this out with admissions.)

**Interdepartmental Program in Transportation (SM and PhD)**

**Master of Science in Transportation**
The interdepartmental Master of Science in Transportation (MST) degree program emphasizes the complexity of transportation and its dependence on the interaction of technology, operations, planning, management and policy-making. For this reason, the Master of Science in Transportation program is interdepartmental. Faculty members and research staff from several centers, departments and divisions within MIT are affiliated with the program and serve as research advisors and mentors to MST students.

***Department of Electrical Engineering & Computer Science*** <https://www.eecs.mit.edu/>
The EECS Department is the largest in the School of Engineering with about 700 graduate students in the doctoral program. ***Application is for the doctoral program only — there is no terminal Master’s degree.***

***Institute for Data, Systems and Society*** <https://idss.mit.edu/>

**Doctoral Program in Social and Engineering Systems**

For the next generation of *researchers and practitioners* addressing complex systems of societal importance, IDSS offers its signature program, the [Doctoral Program in Social and Engineering Systems (SES)](https://idss.mit.edu/ses_doc/)

**Technology and Policy Program**

IDSS hosts the [Technology and Policy Program (TPP),](http://tppserver.mit.edu/) which has offered the Master of Science in Technology and Policy at MIT since 1976. TPP’s ongoing mission is to develop *leaders* who can create, refine, and implement responsible policies that are informed not only by an understanding of technology and its instruments, but also by their broad social contexts. Combining a core in science and engineering with studies in applied social sciences, TPP’s curriculum imparts strength in both a technical field and in the policy process. The Master of Science in Technology and Policy is an engineering research degree with a focus on the increasingly central role of technology in the framing, formulation, and resolution of policy problems. Many students combine TPP's curriculum with complementary subjects to obtain dual degrees in TPP and either a specialized branch of engineering or an applied social science, such as political science or urban studies and planning.
<http://catalog.mit.edu/schools/engineering/data-systems-society/#master-technology-policy>

***Institute for Medical Science & Engineering*** <http://imes.mit.edu/>

The Harvard-MIT Program in Health Sciences and Technology (HST) brings together the Massachusetts Institute of Technology (MIT), Harvard Medical School (HMS), Harvard University, and Boston area teaching hospitals in a unique collaboration that integrates science, medicine, and engineering to solve problems in human health. At MIT, IMES provides a robust home for HST. <http://hst.mit.edu/>

As an HST student, you'll become an expert in your field--be it [medicine](http://hst.mit.edu/academics/md) or one of eleven [science/engineering discplines](http://hst.mit.edu/academics/memp).

**Department of Materials Science and Engineering** <https://dmse.mit.edu/>

The Department offers the graduate degrees of Master of Science (S.M.), Doctor of Philosophy (Ph.D.) and Doctor of Science in Materials Science and Engineering (Sc.D.).

The Department offers a single Master’s degree in Materials Science and Engineering
<https://dmse.mit.edu/academics/graduate/programs/master-science>

***Department of Mechanical Engineering <http://meche.mit.edu/>***

[***http://meche.mit.edu/education/graduate***](http://meche.mit.edu/education/graduate)9 graduate degrees offered, including the PhD and LGO joint-degree options.

A typical Master’ s degree in Mech Eng should take not longer than one and a half years – 3 full-time terms plus the intervening summer.

Master of Science in Mechanical Engineering SMME

The SM in mechanical engineering is awarded based on the completion of advanced study and a major thesis. The thesis, considered the centerpiece of a students’ graduate experience, must be an original work of research, development, or design, performed under the supervision of a faculty or research staff member. Students usually spend as much time on thesis work as on coursework. This degree typically takes about one and one-half to two years to complete.

Master of Science in Ocean Engineering SMOE

The curriculum leading to an SM in ocean engineering assumes that students have broad working knowledge in engineering. Graduates of this program are interested in developing the ocean for the good of humanity and are prepared to use whatever engineering disciplines are necessary to address problems.

Master of Science in Naval Architecture and Marine Engineering SMNAME

Naval architecture and marine engineering are concerned with all aspects of waterborne vehicles operating on, below, or just above the sea surface. This program is intended for individuals planning to specialize the design of waterborne vehicles and/or their subsystems.

Master of Science in Oceanographic Engineering SMOGE

To complete this joint program with the Woods Hole Oceanographic Institution (WHOI), students study and conduct research on the campuses of MIT and WHOI. Students are advised by an MIT faculty member, but may conduct their thesis research under the supervision of MIT or WHOI faculty. While in residence at MIT, students follow a program similar to that of other master’s students in the department.

Master of Engineering in Manufacturing MEng

This twelve-month professional degree program prepares students to assume technical leadership in an existing or emerging manufacturing company. To earn this degree, students must complete a highly integrated set of projects that cover the process, product, system, and business aspects of manufacturing, as well as a group-based thesis project.

Mechanical Engineer’s degree ME

This program provides an opportunity for further study beyond the Master’s level for those who wish to enter engineering practice rather than conduct further research. This degree emphasizes breadth of knowledge in mechanical engineering and its economic and social implications. It is quite distinct from the PhD program. The engineer’s degree requires a broad program of advanced coursework and an applications-oriented thesis, and typically requires at least one year of study beyond the master’s degree.

Naval Engineer’s degree NE

This program provides an opportunity for further study beyond the Master’s level and is intended for those who wish to enter practice, or who plan a career in the design, acquisition, repair, and modernization of ships and ship systems. This degree emphasizes breadth of knowledge in naval engineering and is quite distinct from the PhD.

***Department of Nuclear Science and Engineering <http://web.mit.edu/nse/>***

**SM Nuclear Science and Engineering** The object of the Master’s degree program is to give the student as thorough a knowledge of some phase of nuclear engineering as can be obtained in *a minimum of one academic year of full-time study*. The Master’s program may serve either as the first part of the student’s work for a more advanced degree or as training for professional employment in nuclear engineering.

The object of the **Nuclear Engineer's degree program** is to provide a broader knowledge of nuclear engineering than required for the Master's degree and to develop competence in engineering application or design but with less emphasis on research than that characterizing a doctoral program. The program includes completion of both an extensive and individually arranged academic course program and a special project of significant engineering value.

***A student with full undergraduate preparation normally needs two years to obtain the Nuclear Engineer's degree.*** Each Nuclear Engineer's degree program is individually arranged. The principal fields of study are fission nuclear technology, applied plasma physics, or nuclear science and technology. Suitable thesis topics may be either analytical or experimental but should be "application oriented" with respect to the particular area in which the research is conducted. Students should plan a program of study with their Registration Officers. Since a Nuclear Engineer's program is to be more comprehensive than a Master's program, the curriculum recommendations and requirements given in "Requirements for the Degree of Master of Science in Nuclear Science and Engineering" should be consulted.

***Interdisciplinary Degrees:***

[***http://catalog.mit.edu/interdisciplinary/graduate-programs/***](http://catalog.mit.edu/interdisciplinary/graduate-programs/)*for full list*

 ***Supply Chain Management - Master of Engineering in Logistics (MLOG)***

Supply Chain Management (SCM) is a nine-month, intensive degree program designed to supply the global logistics industry with a new breed of supply chain professional, one who is highly trained in both analytical problem solving and change management leadership. This highly individualized program prepares graduates for logistics and supply chain management careers in manufacturing, distribution, retail, transportation, logistics, consulting, and software development organizations. Graduates from the SCM program receive the Master of Engineering in Logistics (MLOG) degree that was created in 1998.
<http://catalog.mit.edu/interdisciplinary/graduate-programs/supply-chain-management/>

***Woods Hole Oceanographic Institution
Applied ocean science and engineering*** involves the application of physics and the engineering sciences to the study of oceanic processes and the design of instruments, systems, and structures required to observe, measure, and work in the ocean. The Departments of Civil and Environmental Engineering, Electrical Engineering and Computer Science, and Mechanical Engineering offer joint programs with WHOI in oceanographic engineering. The programs lead to the master's degree, engineer's degree, Doctor of Science, or Doctor of Philosophy.
<http://catalog.mit.edu/interdisciplinary/graduate-programs/joint-program-woods-hole-oceanographic-institution/>

**SCHOOL OF HUMANITIES, ARTS & SOCIAL SCIENCES** [**http://shass.mit.edu/fields**](http://shass.mit.edu/fields)

5 schools: Economics; History, Anthropology, Science Technology & Society (HASTS); Philosophy; Linguistics; Political Science

Language Lab options for sophisticated Japanese & Chinese technical-language programmes.

***Master of Science (SM) in Science Writing***[***http://cmsw.mit.edu/education/writing/science-writing/***](http://cmsw.mit.edu/education/writing/science-writing/)

This programme is an opportunity to contribute to public understanding of science, medicine, engineering, and technology. It’s a chance to work closely with a distinguished core faculty of award-winning journalists, authors, and scholars within one of the most exciting scientific communities in the world. And it’s a place to produce news articles, features, essays, and radio/video broadcasts about lasers and genes, capillaries and quarks.

***Master of Science (SM) in Political Science*** [***http://web.mit.edu/polisci/graduate/masters.html***](http://web.mit.edu/polisci/graduate/masters.html)

This one-year Master’s (a summer semester is typically needed to complete the required thesis) is designed for students who want to build proficiency in applied research so that they can pursue successful careers in government, business, and public policy. The program runs alongside the doctoral study in the department and emphasizes intensive preparation in one of the following fields of study. Applicants are required to have identified one or two faculty with whom they could work and also be sure that person will be in the department for the year in question. Fields are: American Politics; Comparative Politics; International Relations; Models and Methods; Political Economy; Security Studies.

Advice is available once preliminary research into options/faculty interests has been conducted.

**SLOAN SCHOOL OF MANAGEMENT** [**http://mitsloan.mit.edu/**](http://mitsloan.mit.edu/)

***MBA Program***

MIT Sloan’s two-year MBA Program is designed to educate principled, innovative leaders who improve the world. At MIT Sloan, we focus on the big problems that the world faces, and we place a premium on real-world engagement and blending theory with practice. The MBA Program is designed for maximum flexibility, allowing students to create a program best suited to their academic and professional interests.

***Master of Finance MFin*** *1 year*

Designed to prepare students for careers in the financial industry, this one year program consists of required and elective courses, a proseminar, and an optional Master's thesis.

Average age of students: 23.5 Average work experience: 13 months

Number of students: 58

***Leaders for Global Operations***

Offered jointly by MIT Sloan and MIT School of Engineering, LGO graduates earn an MBA and an SM in one of seven engineering departments. 2 year program.

Average age of students: 28 Average work experience: 5 years

Number of students: 48