DIGITAL LEARNING

MITx and edX

MITx (https://openlearning.mit.edu/beyond-campus/mitx-edx-moocs/courses) is the Institute’s interactive learning initiative that offers online versions of MIT courses on edX (https://www.edx.org/school/mitx), a partnership in online education between MIT and Harvard University. MIT instructors teach these MITx courses to learners around the world.

Many people refer to MITx courses as MOOCs—massive, open, online courses. The learning experience features multimedia and video content, embedded quizzes with immediate feedback, online laboratories, and peer-to-peer communications. Course materials are organized and presented in ways that enable students to learn at their own pace and that allow for the individual assessment of each student’s work. Students who demonstrate their mastery of subjects may earn certificates of completion. MITx operates on a cost-free, open-source, scalable software infrastructure. MITx and edX are building a global community of online learners.

The vast array of data gathered through MITx global and residential uses is helping educational researchers better understand how students learn and how technology can facilitate effective teaching both on campus and online. Research findings are then introduced into new generations of learning tools, creating a continuous loop of educational innovation.

MITx also offers MicroMasters programs (https://micromasters.mit.edu). MicroMasters is a professional and academic credential for online learners from anywhere in the world. Learners who pass an integrated set of MITx graduate-level courses on edX.org, and one or more proctored exams, will earn a MicroMasters credential from MITx, and can then apply for an accelerated, on campus, master’s degree program at MIT or other top universities.

MIT OpenCourseWare

MIT OpenCourseWare (OCW) (http://ocw.mit.edu) is a free, open, publicly accessible web-based resource that offers high-quality educational materials from more than 2,400 MIT courses—virtually the entire MIT graduate and undergraduate curriculum—reflecting the teaching in all five MIT schools and 33 academic units. This near-total coverage in all disciplines makes OCW unique among open education offerings around the world. MIT continually updates OCW, adding new courses as they become available and refreshing existing courses with new materials. More than 1,000 MIT OCW courses have been independently translated into at least 10 other languages.

Through OCW, MIT faculty share their teaching materials with a global audience of teachers and learners. Educators use these resources for teaching and curriculum development, while students and self-learners draw upon the materials for self-study or supplementary use. OCW attracts about 2.5 million visits in a typical month, and to date more than 300 million people from virtually every country in the world have accessed these resources.

Beyond its service to a worldwide audience, OCW has significant impact on campus at MIT, where both faculty and students embrace it. Students use OCW resources such as problem sets and exams for study and practice. New first-year students often report that they checked out MIT by looking at OCW before deciding to apply. Instructors often refer students to OCW for part of their coursework. OCW staff work extensively with faculty to develop and refine course materials for publication, and faculty frequently use these updated materials in their classroom teaching. Alumni access OCW materials to continue their lifelong learning.

OCW course content includes thousands and thousands of individual resources such as syllabi, lecture notes, course calendars, problem sets and solutions, exams, reading lists, selected readings, videos, simulations, animations, sample programming code, and more. More than 100 courses include complete, captioned video lectures for the entire course. Beyond core academic content, a relatively new feature known as OCW Educator allows MIT faculty to share their pedagogical insights, with tips on how they teach their courses to students on campus.

Course materials contained on the OCW website are offered under a Creative Commons license and may be freely used, copied, distributed, translated, and modified by anyone, anywhere in the world for noncommercial educational purposes.