Office of Engineering Outreach Programs

The Office of Engineering Outreach Programs (OEOP) in the School of Engineering runs academic enrichment programs that reach more than 500 middle and high-school students locally and nationally. These programs are all offered free of charge and focus on exposing students to engaging and challenging curricula in engineering and science. The goal is to provide traditionally underserved students with multiple entry points to academic and professional careers in the science, technology, engineering, and mathematics (STEM) disciplines.

The OEOP's core programs—the Minority Introduction to Engineering and Science (MITES) Program, the Engineering Experience at MIT (E2@MIT) Program, the MIT Online Science, Technology, and Engineering Community (MOSTEC) Program, the Saturday Engineering Enrichment and Discovery (SEED) Academy, and the STEM Program—also support MIT's mission to sponsor K–12 programs that foster unique learning experiences for students and help build a pipeline of diverse and highly qualified scientists and engineers.

Highlights

The following table shows the number of students served since 2007 in various OEOP programs.

	2014	2013	2012	2011	2010	2009	2008	2007
ACES				20	12			
E2@MIT	107	75	76	64				
MOSTEC	133	88	105	80				
CORE		20	20	20	14	7	15	
MSBP		30	30	30	26	22	27	24
STEM	86	90	87	93	89	78	84	80
MITES	72	78	78	80	71	70	66	64
SEED	95	90	92	100	92	93	94	85
Total	**493**	**471**	**488**	**479**	**300**	**280**	**276**	**253**

The following are some of the most notable achievements and highlights for OEOP from the 2015 academic year:

- Seventy-three students who applied to MIT from the 2014 MITES, MOSTEC, and E2@MIT Programs were accepted.
- In fall 2014, the seventh SEED Academy student was admitted to MIT.
- Of the students who graduated from the 2015 SEED Academy, 100% were accepted to college.

Programs

Minority Introduction to Engineering and Science Program

Minority Introduction to Engineering and Science (MITES) MITES Program participants take courses in calculus, physics, and life science (chemistry, biology, or biochemistry);

a writing-intensive humanities course; and a project-based course (genomics at the Broad Institute, digital design, engineering design, electronics, or architecture). In 2015, the MITES Program selected 72 high-school seniors from a pool of more than 2,000 applicants to participate in its rigorous six-week summer session. The selected students came from 19 states and Puerto Rico. Thirty-three of these students were admitted to MIT; 27 students who participated in the MITES Program in 2013 are currently enrolled. Others are pursuing studies at prestigious institutions such as Harvard, Stanford, Princeton, and Yale.

Engineering Experience at MIT Program

To serve more students from the growing MITES applicant pool, in 2014 the OEOP provided 107 promising high school seniors with a one-week, residential, summer enrichment program called Engineering Experience at MIT (E2@MIT). Students from the MITES applicant pool with high academic potential and a strong interest in science and engineering were selected to participate in the program the summer before their senior year in high school. During E2@MIT, students completed a short project course in an engineering field while attending admissions and financial aid sessions, touring laboratories, meeting MIT faculty, students, and alumni, and participating in social events. Thirty-one E2@MIT students were admitted to MIT in the fall of 2014, and 17 students who attended E2@MIT in 2013 are currently enrolled at MIT.

MIT Online Science, Technology, and Engineering Collaboration

To serve more students from the growing MITES applicant pool, in 2014 the OEOP provided a group of 133 promising high-school seniors with an enriching online experience that extended from the fall into the spring as they submitted their college applications. Via this online community, students were exposed to MIT's faculty and staff, provided with admissions and financial aid tips, and enriched with discussions about science and engineering research. By being part of MIT Online Science, Technology, and Engineering Collaboration (MOSTEC), students also shared their own research and were offered mentorship opportunities. At the MOSTEC 2014 Conference, all students gave presentations on their summer projects and received feedback from their instructors. Students also took engineering workshops, toured laboratory and industry facilities and MIT's campus, attended a college admissions panel, participated in social events, and met MIT faculty, researchers, staff, and students. Twenty-seven MOSTEC students were admitted to MIT in the fall of 2014 and 21 students who attended MOSTEC in 2013 are currently enrolled at MIT.

Saturday Engineering Enrichment and Discovery Academy

The Saturday Engineering Enrichment and Discovery (SEED) Academy, an academic enrichment and technical career exploration program for public high-school students in Boston, Cambridge, and Lawrence, Massachusetts, recently completed its 13th year. The seven-semester program is designed to strengthen participants' fundamental mathematics, science, and communication skills using an original, hands-on curriculum. In academic year 2015, the SEED Academy graduated a class of 22 students who were accepted to a number of prestigious universities including MIT, Georgetown University, Dartmouth College, Harvard College, Wentworth Institute of Technology, Worcester Polytechnic Institute, Boston University, Northeastern University, University

of Southern California, Bridgewater State University, the University of Massachusetts, Amherst, and the University of Massachusetts, Lowell.

Science, Technology, Engineering, and Mathematics Program

The Science, Technology, Engineering, and Mathematics (STEM) Program is a nonresidential, year-round academic enrichment and mentoring program for local public school students who are entering grades six through nine. The STEM Program consists of two components: a five-week summer academic institute on MIT's campus to expose students to advanced math and science courses, and an academic-year mentoring program that pairs each STEM Program participant with an undergraduate or graduate student to encourage their interest in pursuing technical careers. In 2014, 86 students from Boston, Cambridge, and Lawrence public schools completed the summer institute. Fifty-six of these participants chose to continue in the mentoring program during the 2015 academic year.

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