

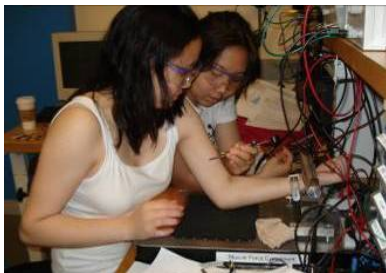
Are You an 11th Grade Female?



Wondering what engineers do?



Are you good at math and science?



Do you like solving problems?



...building things?

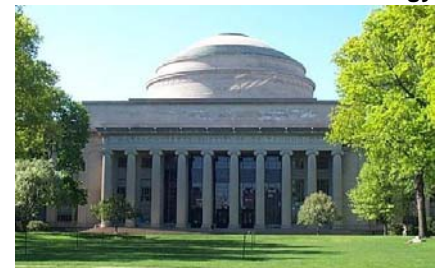


Spend 4 weeks at MIT this summer

- learning about engineering
- making new friends
- having fun!



Massachusetts Institute of Technology



<http://wtp.mit.edu>

Application Deadline: Feb 1, 2007

Women's Technology Program

Women's Technology Program

The Women's Technology Program (WTP) is a rigorous four-week summer academic and residential experience at the Massachusetts Institute of Technology where female high school students explore engineering through hands-on classes, labs, and team-based projects in the summer after their junior year.

Students attend WTP in either Electrical Engineering and Computer Science (EECS) or Mechanical Engineering (ME).

Our goals are to:

- interest girls in studying engineering and computer science, and
- help them recognize their potential for success in these fields.

Female MIT graduate students teach the classes, assisted by female MIT undergraduate student residential tutors. Students live on campus in an undergraduate dormitory and have free time to participate in activities and field trips with other WTP students on weekends and after classes

Calendar

February 1	Application Deadline
Early April	Admissions Notifications
Early May	Acceptance Forms Due
End of June	Students Arrive at MIT
End of July	Students Depart MIT

For more detailed and up to date information visit <http://wtp.mit.edu/calendar.html>

Who should apply to WTP?

Female students in grade 11 who:

- love and excel at math and science
- think engineering might possibly be of interest, but need more info to decide
- would like to experience hands-on activities where they design and build
- enjoy problem solving and collaboration
- want to spend 4 summer weeks before senior year challenging their brains and making friends with girls from around the U.S. who share their math and science interests

To download an application, visit our website after November 1st
<http://wtp.mit.edu/application.html>

Admissions Criteria

Sixty participants (40 for EECS and 20 for ME) are selected each year from a nationwide applicant pool of the top female 11th grade math and science students. Students must reside in the U.S. (or be U.S. citizens if living outside the U.S.).

Successful applicants have excellent grades in advanced high school math and science classes and 80th percentile (or higher) PSAT, ACT, or SAT math test scores. We ask for three essays by applicants and two letters from science and math teachers. Students should be able to handle college-level material at a rapid pace, but prior coursework in computer programming, physics, calculus, or engineering is not expected.

We are looking for students who are not yet certain about their future college majors, and who would like to explore engineering and computer science to determine whether these fields might be of interest.

Curriculum -- EECS Track

Computer Science: This class uses the Java language to introduce students to computer science, problem solving and programming. Students learn to think like computer scientists; they write their own stand-alone programs and work on final projects that apply their new understanding of these concepts.

Electrical Engineering: Students learn the basics of digital and analog electronics through hands-on labs where they design and build projects. By the end of the session, students are familiar with the behavior of circuits, resistors, capacitors, inductors, diodes, CMOS transistors and NAND/NOR gates.

Mathematics: The discrete mathematics curriculum covers a range of topics related to EE and CS. Topics include probability, recursion, combinatorics, graph theory, logic, and algorithms.

Special Projects: Students select and complete final projects for their EE, CS, and Math classes. In past years a 3-day stand-alone motor building project has also allowed student teams to design and construct a DC motor. Specific special projects may change from year to year.

Curriculum -- ME Track

The ME curriculum exposes students to the wide range of disciplines within Mechanical Engineering. Three integrated daily class periods explore selected topics using both intensive analytical and modeling work and nuts and bolts designing and building.

Students study a variety of topics including solid materials, fluid mechanics, thermodynamics, heat transfer, system design, manufacturing, bioengineering, and sustainable engineering. Students learn to use SolidWorks, a 3D solid modeling program, to design mechanical systems. Integrated into these topics, students are equipped with the mathematical tools needed for more in-depth study of ME topics. Matlab, a numerical computing package widely used by engineers, is used for applications ranging from data analysis to numerical methods for solving complicated problems.

Final Projects: Students select and complete two capstone projects. In the first, they concentrate on the analytical and modeling work essential to effective engineering by working in pairs to investigate and formally present an in-depth mathematical model of a specific topic in ME of personal interest. In the second, small groups of students design and build multi-step machines for a Rube Goldberg Challenge. Both projects are demonstrated to the wider MIT community.

Guest Speakers and Tours:

In both curriculum tracks, MIT faculty and engineers from industry present information about their research and career paths at lunch time sessions several days each week. Tours of MIT labs or off campus facilities are also included to highlight how and where engineers work.

Program Fees

Tuition for admitted students is \$3,000 for summer 2007; this covers classes, books, lab materials, food, housing and group activities for the four-week program. Students are responsible for their own transportation to MIT. There is no fee to apply to the program. If admitted, students are asked to submit the \$3,000 tuition to the program in early May.

Financial assistance is available. We often waive or discount tuition (and sometimes reimburse transportation costs) to admitted students who demonstrate financial need. To request financial assistance, complete the financial aid request page of the WTP application form.