Make A Difference: Teach for WTP this summer!

The MIT Women’s Technology Program (WTP) is a four week summer experience to introduce top math and science high school girls to engineering and computer science. Many WTP alumnae are now MIT students; others are studying engineering and computer science at other colleges, so this program really makes a difference and sparks their interest in these fields! View this [YouTube video](https://www.youtube.com/watch?v=...) to learn more about WTP!

**Instructor Job Description:** Women’s Technology Program in EECS - 2018

The EECS curriculum introduces students to computer science, electrical engineering, and mathematics topics related to EECS. The EECS students are divided into 2 groups of 20 students; everyone attends each of the 3 classes daily. Instructors teach the same class lesson twice daily to two different class groups. We need one Instructor for each of the following subjects (course descriptions below are from the 2017 summer curriculum):

**Computer Science:** an intensive introduction to thinking computationally and programming in Python, with challenging conceptual exercises and daily programming assignments. Topics include the basics of computer science (variables, lists, loops, functions, and classes), the use of tools such as Git and the command line, and introduces graphics, machine learning, and web programming. Although the students arrive at WTP with no prior programming experience, by the end of the third week they complete several projects, such as a hangman game and a fully functioning game of Tetris.

**Electrical Engineering:** introduces several core topics in electrical engineering, including analog electronics, system theory and signal processing, device physics and semiconductors, and digital electronics. Short lectures, readings, and homework prepares students for daily hands-on labs exploring real-world applications of electrical engineering, with emphasis on experimentation, design, and troubleshooting. Students complete several complex projects, which change each year, such as an infrared heartbeat monitor, a dye-sensitized solar cell, and Arduino microcontroller projects.

**Mathematics for EECS:** covers a range of math concepts, ideas and tools applicable to electrical engineering and computer science, and focuses on thinking critically and learning problem-solving. Topics change each year, but may include binary numbers, set theory, introductory abstract algebra, linear algebra, game theory, probability, information theory, and cryptography.

**Requirements:** Instructors who will be MS/PhD students in the MIT EECS department during summer 2018 are preferred; MIT Post-Docs and MEng students who will graduate in June 2018 will also be considered. The best Instructors will have a dedication to mentoring and teaching and enthusiasm for EECS that they want to communicate to younger women.

It is important that you have NO other responsibilities - including research June-July 2018. **Check with your advisor before applying** to confirm that you are free to work full-time for WTP.

**Compensation:** Instructors receive a 3-month summer TA appointment and TA credit towards your PhD (Post-Docs and graduated MEng receive equivalent TA salary over 7 weeks).

This job requires true commitment and dedication…
...but it is also lots of fun and very rewarding!

See the next page for 2018 Instructor Schedule and How to Apply
2018 Schedule for WTP-EECS Instructors:

Jan-May -- Curriculum Preparation and Tutor (TA) Interviewing:
Instructors work a few hours each week, reviewing previous curriculum years, planning and designing for summer 2018, and meeting monthly with the WTP Director and each other. Instructors also help interview the undergraduate students who will be WTP-EECS Tutors (TAs) in their classrooms.

June 1-22 -- Final Course Preparation and Staff Training:
Focus 100% on WTP. Instructors will work independently the first two weeks before the Tutors (TAs) arrive. The curriculum should be at least 70% completed and lectures, labs, and homework for the first week of classes should be mostly finished and ready for testing; create a work plan for your Tutors (TAs) when they arrive on June 11 for staff training.

Formal Staff Training runs Mon-Fri June 11-22 (9:30am-4pm). Instructors work with classroom Tutors to set up, test, and finalize the curriculum, labs, and equipment. Also attend training sessions in working with minors, effective teaching, collaboration, and teamwork. Give 2 practice lectures in front of the entire WTP-EECS staff on June 18-19 and incorporate staff feedback. Prepare class activities and presentations for WTP-EECS Student Orientation arrival weekend on June 24.

June 23-July 21 -- WTP 2018 classes in session:

Saturday, June 23 Welcome Dinner, 7pm: attend and socialize with the students who just arrived.

Sunday, June 24 Orientation Day 10am – 4pm: lead activities to introduce students to WTP-EECS expectations and your class curriculum.

June 25-July 13: Teach your course - this is intense and fast-paced. Students are in two class Groups of 20. Monday – Friday you will teach the same class twice each day. Attend a daily staff meeting (roughly 4-5pm) and prepare your Tutors to lead evening homework help office hours (you may need to attend these evening sessions yourself). Weekends you may need to revise curriculum, correct homework, consult with the Tutors (though classes are not scheduled, we do have office hours for homework help). We also hold short morning class sessions on July 4th (not a WTP holiday).

July 14-21: Instructors are finished teaching their classes (students are doing a motor building project with Tutors and MIT faculty this week). Instructors spend this week collaborating to write college letters of recommendation for the high school students and begin packing up equipment. Attend the WTP farewell dinner and final talent show on July 20. Students depart for home on July 21.

July 22 - August 31 -- Wrap-Up:
Finish writing college letters of recommendation for the high school students and wrap up your curriculum for the archives.

TO APPLY:
1) Complete the 2018 WTP-EECS Instructor Application Form at: https://tinyurl.com/Instructor2018

AND

2) Email your CV/Resume to wtp-eecs@mit.edu

MIT also requires background checks before final hiring (because you will be working with minors).