WTP EECS 2022 Tutor Role

Make a Difference: Teach for WTP-EECS this summer!

We will hire 8 WTP-EECS 2022 Tutors (4 for EE, 4 for CS).

The MIT Women's Technology Program (WTP) is a four-week summer academic experience to introduce high school students to engineering and computer science in the summer after 11th grade. The goal of the WTP-EECS curriculum track is to give these students an initial exposure to EECS in a supportive, collaborative learning environment, and get them excited about learning more after WTP ends.

- Tutors must be current MIT or Wellesley students (or recent graduates).
- Tutors must be age 18 or older as of June 13, 2022.
- Women and other genders historically underrepresented in engineering are preferred.

WTP 2022 will be a virtual online program (as it was in summer 2021). see this FAQ

The best Tutors have a dedication to mentoring and teaching and enthusiasm for EECS and STEM education that they want to communicate to high school students.

WTP-EECS: Curriculum

You will assist the EE or CS Instructor (an MIT graduate student) in teaching a class of 20 high school students who excel at math and science, but who have no prior background (or very little) in engineering or computer science. We particularly select students for WTP who attend high schools with limited STEM resources, or who are the first in their family who will attend college, or who are from groups historically underrepresented in engineering (such as African American, Hispanic, Native American).

Collaboration is an essential part of engineering, so we encourage the students to ask questions, brainstorm, persist, and work together to build projects and write code. They explore multiple problem-solving approaches, experience the iterative nature of the design process, and develop critical thinking and debugging skills.

The EECS courses will be updated this spring by the 2022 Instructors, but will be similar to past Curriculum.

**Computer Science:** The computer science class is a fast-paced introduction to thinking computationally and programming in Python. The course assumes no prior CS experience, but moves very quickly to cover fundamental topics such as data types, lists, loops, functions, and objects. Students complete challenging conceptual exercises and daily programming assignments, with an extensive final project. WTP will ship loaner laptops to students pre-loaded with the software they will need (such as Spyder).

**Electrical Engineering:** The EE curriculum introduces fundamental electronics through short lectures, readings, homework, and hands-on projects, with emphasis on experimentation, design, and troubleshooting. WTP will send students materials, components, and equipment that will allow them to build and test projects at home. Students complete several complex projects, including an Arduino microcontroller project that also applies programming skills learned in the CS course.

This job requires true commitment and dedication…

…but it is also lots of fun and very rewarding!

See the next page for more details about the job responsibilities, schedule, and How to Apply

Revised 2/9/22
WTP-EECS 2022 Tutor Job Description

Responsibilities:

Academic:
- Before WTP students arrive: During the 2 or 3 weeks of staff training (see schedule below): help prepare classes, labs and homework and attend all Mon-Fri staff meetings to prepare yourself for the Tutor role.
- Once WTP students are in session 6/25-7/22:
  - Help with Orientation weekend activities 6/25-26 to get students involved, set expectations.
  - Work in your assigned classroom (EE or CS), helping students build, write code, and complete assignments. Help Instructor prepare daily class materials. Introduce students to concepts, encourage them to persist completing projects, conduct scheduled evening (maybe weekend) office hours.
  - Help students 7/18-22 with Physics of Energy/Motor projects and closing WTP activities and events.
  - Note which students need extra academic help, and consult with other staff about how to provide this.
- After WTP students depart: Wrap up course materials 7/25-29, write college recommendation notes.

Community:
- Promote collaboration, working together to brainstorm and problem-solve. Socialize with the students and other staff. Be a good listener and observer.
- Notice when students are having problems (socially shy, having difficulties with academics, challenged by the online environment, need some structure to make friends at WTP). Try to help or get help for the student.
- Talk with students about MIT, prospective majors, and college life, research or internships you’ve done; be a person they feel they can approach with questions about academics and possible future career directions.
- Plan and lead fun activities such as online games or virtual tours of MIT.

Role Model:
- Be a mature influence and role model.
- Provide WTP students with support and encouragement as they are challenged by the WTP curriculum.
- Tutors are friendly to the WTP high school students, but they are also figures of responsibility (we will go over the necessary boundaries with minors during staff training)

WTP 2022 is virtual: you will work from your own home and teach online. We are also currently exploring whether MIT will allow WTP to provide dorm housing for Tutors and the Program Facilitator, so staff can live together on campus.

Compensation:
WTP is a paid full-time position, $750/week for 7 weeks: Total $5,250 (before taxes).
We may possibly start a week earlier to increase staff training time. If so, we would pay you for 8 weeks -- Total $6,000.

Tutors should not have any other jobs, classes, or responsibilities during the weeks working for WTP. You will be busy!!

Schedule:  Monday June 13 through Friday July 29, 2022

June 13 - 24 Staff Training: Meetings and class preparations, Mon-Fri roughly 9:30am – 4:30pm EDT.
(Staff training may start one week earlier (June 6) to allow more preparation time).

June 25 - July 22 WTP in Session: Your will work most weekdays in the zoom classrooms, run office hours/help sessions in the evenings. There is a rotating schedule of days/evenings on/off. Some preliminary schedule info is here.

July 24 - 29: Final wrap-up: a few meetings, but work is mostly in your own time: gather course materials for archives, help write college recommendation notes about students. If living in dorm: clean out own room, pack up WTP supplies.

Most of all: do all you can to make the WTP experience fun, educational, and safe for our students!

To Apply: 2 step process:

1. Complete the WTP-EECS Tutor or Program Facilitator Application: WTP-EECS 2022 AND

2. Email wtp-eecs@mit.edu to schedule an interview. Attach your Resume AND Websis Grade Report or Unofficial Transcript (even if you are a first-year student with only P/NR).

MIT requires all WTP Staff to undergo a background check before hiring, and follow the MIT Guidelines for Online Programs for Minors.

Revised 2/9/22