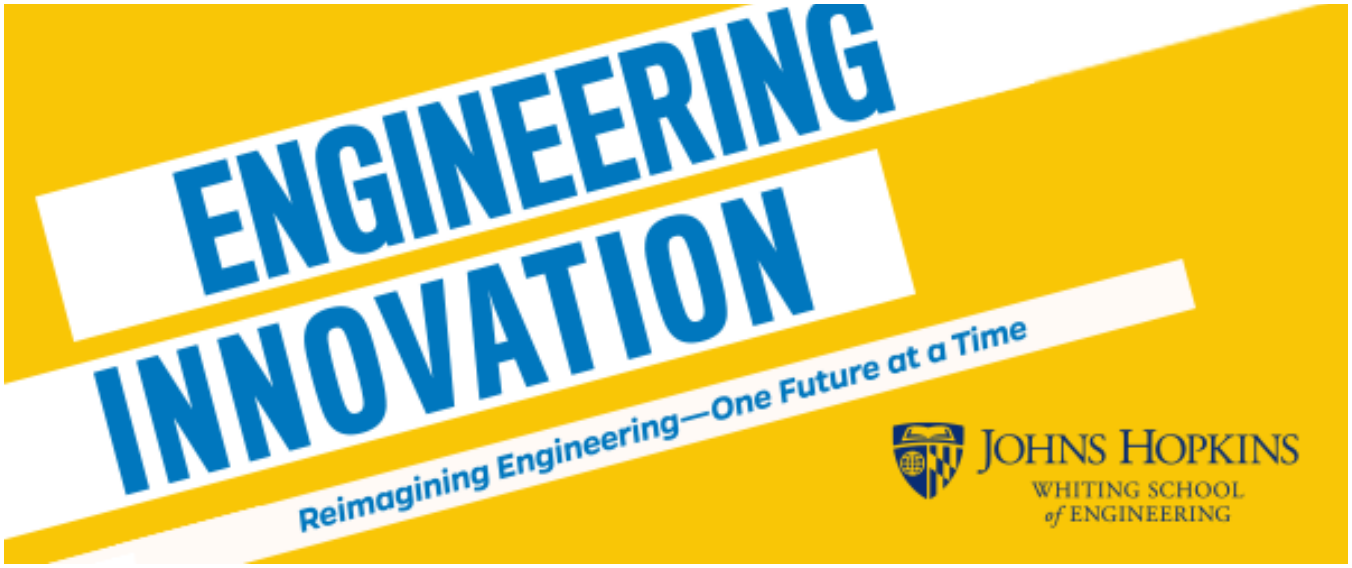

Job Description

Sustainable Energy Engineering: In-Person Instructor

Course Description

Sustainable Energy Engineering (SEE) is a freshman-level course that guides students through the inner workings of the world's energy systems, from thermodynamics to economics. The course includes lectures but focuses on hands-on demonstrations and data analysis. Graded coursework includes homework assignments, case studies, and a capstone design project. Students have the opportunity to earn three credits from Johns Hopkins University. Ultimately, the goal of the course is to expose students to engineering principles, allow them to apply the math and science they learn in high school to solving real world problems, and to help students develop critical thinking skills. More information can be found at https://ei.jhu.edu/programs/see.

Each class of SEE consists of 16-24 students with diverse academic backgrounds. Each class is typically team-taught by a PhD-level engineer (the Instructor) and a high school STEM teacher (the Teaching Fellow). The Instructor is the lead teacher when it comes to delivering course content. Select sections of SEE also have assigned to them a Teaching Assistant (TA).

Course Dates

In 2026, the course dates for SEE in-person are June 29 to July 24, Monday through Friday, from 8:45 a.m. to 3:30 p.m. A few of our sites may operate on a different schedule. Please check our website (http://ei.jhu.edu/locations) for site-specific dates and times. There will also be training before the course starts and wrap-up activities after the course ends.

Instructor Responsibilities

We are looking for Instructors who understand, appreciate, and can apply an instructional style that emphasizes the process of problem-solving rather than memorizing material. The object is to engage students by getting them to think and participate rather than being lectured to. Instructors must be prepared to accommodate a multitude of learning styles. Finally, the Instructor must be able to engage, encourage and excite the students.

The ideal candidate will have experience teaching at the college level and a PhD in an engineering discipline that is covered in the SEE course. Substantial experience in engineering practice along with teaching is also acceptable.

The responsibilities of each Instructor include but are not limited to:

- Instructors must be present and available during the entire course. This includes the daily class time as well as time to coordinate with the teaching team, grade student submissions, set up and clean up the in-person classroom and lab space, check student messages daily outside of class time, and hold occasional study sessions.
- Instructors must be prepared to spend time independently to review course materials and complete the online training program prior to the first day of the course.
- Instructors should be able to deliver lectures on a wide range of engineering topics and be able to relate the curriculum to high school students.
- Instructors must take the lead in organizing the course, giving lectures, and ensuring assignments are graded and returned to students in a timely manner.
- Instructors will be responsible for providing feedback and assigning grades for capstone project and for the course overall.
- Instructors must work with the Teaching Fellow to monitor the discussion boards and answer student messages in less than 24 hours.
- Instructors must work with the Teaching Fellow to develop a sense of community for the high school students participating in the class.
- Instructors must work with the Teaching Fellow to manage labs and projects.
- Instructors must ensure that students receive their graded assigned work promptly – within 1-2 days of the assignment due date – and provide detailed feedback to students so that they are able to learn from the activity and improve their future performance.
- Instructors must ensure that grades are posted to the learning management system in a timely manner.
- Instructors must ensure that child safety protocols are upheld.

Candidates for these positions will be subject to a pre-employment background check and fingerprinted per policies related to working with minors.

All employees participating in Hopkins Pre-College programs must enroll and participate in mandatory online training relevant to working with minors and working at JHU.

Sustainable Energy Engineering Instructors receive an academic appointment from Johns Hopkins University's Academic Council and are subject to prescreening.

Contact

Please email ei@jhu.edu to inquire about this opportunity.