Teaching Assistant for Engineering Innovation Job Description

Course Description:
Engineering Innovation (EI) is a summer course for high school students who have an interest in learning more about engineering. EI is administered by the Center for Educational Outreach in the Whiting School of Engineering at Johns Hopkins University. The mission of the Center is to increase the number of youth pursuing STEM education and careers. Engineering Innovation is designed to give students a significant understanding of engineering, allowing them to make informed college and career decisions.

Engineering Innovation is based on an introductory engineering course taught to undeclared freshmen engineering students at JHU. EI covers a range of fundamental engineering topics including materials science, civil, mechanical, electrical, robotics, and chemical engineering. The course includes lectures, but focuses on hands-on lab experiments and group projects. Graded coursework includes lab reports, a mini research report, homework assignments, weekly quizzes, and a final exam. At the end of the course, students who earn an A or B receive JHU credit for the course. 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.

Teaching Assistant (TA) Description:
Each class of EI consists of 16-24 students with diverse academic backgrounds. Each class is team taught by a PhD level engineer and a high school teacher who teaches math or science. Select sections of EI also have assigned to them a teaching assistant. The role of the teaching assistant is to support the teaching efforts of the instructor and teaching fellow.

TAs must have completed the Engineering Innovation course and received a letter grade. They must have knowledge of Trigonometry, Algebra 2, and Physics. Teaching assistants must be punctual, have a positive attitude, and treat students with respect. They must also be able to effectively communicate both orally and in writing. A strong understanding of general engineering principles and extensive lab experience is preferred. Finally, TAs must have a positive attitude and generate enthusiasm for engineering in the classroom.
Teaching Assistant Responsibilities:
Teaching assistants (TAs) work with the Teaching Fellow and the Instructor to ensure labs, lectures, and student projects run smoothly. TAs must have a thorough understanding of labs to ensure that they are conducted with minimal errors. Tasks may include:

- Helping with lectures
- Grading labs or homework
- Preparing and cleaning the classroom
- Preparing the Labs before each activity. This includes ensuring that all equipment is in working order, all supplies required for the lab are setup in the space, and that all required safety equipment is available.
- Cleaning up the lab space after each activity
- TAs also work closely with students, acting as a mediator between the students and the instructors.
- TAs confirm students’ understanding of lectures, labs, assignments and projects.

Engineering Innovation Course Dates:
In 2014, most sites will offer EI June 29th to July 24th, Monday through Friday, from 9 a.m. to 3 p.m. There will be no class on July 3rd. A few of our sites operate on a different schedule. Please call the EI office at (410) 516-6224 or check our website (www.engineering-innovation.jhu.edu) for site specific dates. TA’s will generally need to be available before or after class to assist the Instructors and Teaching Fellows.

Compensation:
TA’s will be paid $11/hour. TA’s will keep a record of their hours and forward this to the Engineering Innovation office.

Contact:
Please send your resume and a 1-page description of how your strengths will be an asset to the course to: Johns Hopkins University, The Center for Educational Outreach, 3400 North Charles Street, Shriver Hall 040, Baltimore, MD 21218, or email to engineering-innovation@jhu.edu.