Instructor 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.

Instructor Description:
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. Each EI class has a broad range of 16-24 students with diverse backgrounds and 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 a PhD in an engineering discipline that is covered in the EI course, and experience teaching at the college level. Substantial experience in engineering practice along with teaching is also acceptable. It should be noted that each EI class is taught by a team comprised of an instructor and a teaching fellow who is a high school math or science teacher.
**Instructor Responsibilities:**
The responsibilities of each instructor include but are not limited to:

- Instructors must be present and available during the entire course. New instructors must attend training in Baltimore, MD during the third week in June.
- Instructors should be able to deliver lectures on a wide range of engineering topics, and be able to relate curriculum to high school students.
- Instructors must help set up and supervise laboratories and analyze experimental data.
- Instructors must help with grading assignments.
- Instructors must be available for supplementary instruction outside class hours.
- The ability to relate curriculum to high school students.
- Instructors must work alongside a teaching fellow to organize the course, give lectures, manage labs, grade assignments and give supplementary instruction.
- Instructors at Maryland sites are required to participate in grading final exams the week following the end of the course.

Engineering Innovation Instructors receive an academic appointment from Johns Hopkins University’s Academic Council and are subject to prescreening.

**Engineering Innovation Course Dates:**
In 2016, most sites will offer EI June 27th to July 22nd, Monday through Friday, from 9 a.m. to 3 p.m. There will be no class on July 4th. A few of our sites operate on a different schedule. Please check our website (http://engineering.jhu.edu/ei/) for site specific dates.

Teacher training will be held on the main campus of JHU in Baltimore, MD the June 12 to 17, 2015. Travel expenses for training will be reimbursed.

**Salary:**
Instructors are paid $6,000 for the course and $200 per full day of training. Instructors local to Baltimore will participate in final exam grading. These instructors will receive $200 per day to assist with grading of the final exams.

**Contact:**
Please send your CV and a 1-page teaching philosophy 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