

**Job Description**

**Teaching Assistant/Grader for Biomedical Engineering Innovation**

**Course Description:**

Biomedical Engineering Innovation (BMEI) is an online course for high school students who have an interest in learning more about engineering allowing them to make informed college and career decisions.

BMEI introduces biomedical engineering to high school students by (1) modeling biological systems and designing experiments to test those models and (2) introducing engineering principles to solve design problems that are biological, physiological, and/or medical. Students will model human efficiency and the cardiovascular system, design a biomedical sensor using Arduino, and complete an independent research project.

Students have the opportunity to earn three college 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.

**Teaching Assistant or Grader Description:**

Teaching Assistants (TAs) and Graders must be punctual, have a positive attitude, treat students with respect, and generate enthusiasm for learning. They must also be able to effectively communicate both orally and in writing. They must be willing to learn how to use Microsoft Teams, Canvas, and Zoom. TAs and Graders must have completed their first year of an engineering degree and demonstrate knowledge of the content covered in BMEI. Special preference will be given to students who have completed EN.580.111 Biomedical Engineering and Design.

**Biomedical Engineering Innovation Course Dates:**

In 2023, the course will be offered June 26 to August 4. The course is mostly asynchronous with student submission deadlines every 1-2 days. Each class has at least three hours of synchronous study sessions a week. The timing of study sessions depends on the availability of the Instructor, TA(s), and students.

**Teaching Assistant and Grader Responsibilities:**

The responsibilities of each Teaching Assistant (TA) and Grader include but are not limited to:

* TAs and Graders must be present and available for the duration of the course. They must login to the online course at least five of seven days per week.
* TAs and Graders must be comfortable with the course material and be able to relate the curriculum to high school students.
* TAs and Graders 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.
* TAs and Graders must ensure that child safety protocols are upheld.

Additional TA responsibilities include:

* TAs must work with the instructor to monitor the discussion board, answer student emails, and submit assignment feedback and grades for Discussions, Asking Questions, Reflections, and Peer Reviews.
* TAs may be asked to attend one-on-one design reviews between the Instructor and each student three times during the session.
* TAs must work with the Instructor to develop a sense of community for the high school students participating in this online class.
* TAs and the Instructor working together must respond to all student questions within 24 hours.
* TAs must be able to assist students remotely as they conduct the various lab activities and projects throughout the course.
* Instructors must arrange for at least three study session hours each week that are hosted by one member of the team. At least one of these hours should be held by each TA. The study session hours should be scheduled so that all students may participate in at least one hour each week.

Additional Grader responsibilities:

* Graders must ensure that students receive their graded 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.
* Graders are responsible for grading all Assignments and may be asked to assist with grading other student work.
* Graders must ensure that grades are posted to the learning management system in a timely manner.

**Contact:**

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