

Project Proposal for Senator Mason

The Life Sciences industry in Virginia is a key part of the economy and a growing sector that continues to create jobs every year. In 2016, Virginia's Life Sciences Industry employed over 25,000 people and had a direct economic impact of \$7.6 billion.¹

As a public research university, The College of William & Mary has a responsibility to prepare students to contribute to this growing industry. The W&M Bioengineering Lab is specifically interested in getting students interested in and excited about molecular and cellular bioengineering. This entails both involving undergraduate students in research and acting as a resource for K-12 public school students in the area. As such, one of our main outreach goals is to educate local primary and secondary school students regarding this dynamic and quickly growing field. We feel that the most sustainable and impactful method to accomplish this goal is to work with teachers who will in turn teach their students about the interdisciplinary field of bioengineering and its huge potential.

We aim to have an ongoing relationship with local teachers to help introduce students to the field of bioengineering and integrate it into the curriculum. To facilitate this process, we will attempt to integrate bioengineering concepts into existing SOL requirements, ensuring that it will be easier for teachers to use the material. This will also help make SOLs reflect the most recent research and advances in this quickly burgeoning field. We hope to find a core group of teachers who would be interested in building a long-term relationship with the Bioengineering Lab at William & Mary. We will host workshops about teaching bioengineering and synthetic biology and provide lesson plans that teachers can easily adapt into their own classrooms. We will also act as a resource for teachers who would like to visit the lab (either with or without students) and perform an activity, and provide consultations motivating teachers to apply for grants that will fund efforts to improve bioengineering education at the primary and secondary school level. We will also serve as a place where teachers could try out projects and develop new curricular ideas.

Our research team hopes that you can put us in touch with a group of teachers and administrators who could benefit from collaborating with us and who would be motivated to teach their students about bioengineering.

¹ "Virginia Advantages: Life Sciences." *YesVirginia.org*. Virginia Economic Development Partnership, 2016. www.yesvirginia.org/Content/pdf/Industry%20Profiles/VA%20Life%20Sciences%20Profile%202016.pdf. Accessed August 1, 2017.