

James Madison University
Harrisonburg, Virginia

March 23, 2015

President of the United States
The White House
1600 Pennsylvania Avenue NW
Washington, DC 20500


Dear Mr. President,

I would like to share details of the Engineering program at James Madison University that integrates the five key elements in the U.S. Engineering Dean's response to the National Academy of Engineering's Grand Challenges. Our program was designed in the 21st Century for the 21st Century and weaves the key elements throughout the curriculum, as detailed below:

- **A creative learning experience connected to the Grand Challenges**
Our students complete a four-semester capstone design sequence. Many of the projects have Grand Challenge themes, and all projects include considerable reflection on process and product.
- **Development of social consciousness through service-learning,**
Sophomores take a two-semester introductory design class that focuses on a service learning project. Interacting with a community member with mobility limitations, students design and prototype self-propelled vehicles that provide freedom of mobility.
- **Authentic interdisciplinary experiential learning with clients and mentors**
The combination of the projects mentioned above provides multiple experiential, interdisciplinary learning experiences with clients and mentors.
- **Entrepreneurship and innovation experience**
We are developing an innovation leadership minor. We have a Maymester Madison Innovation Exchange where students work in both the Shenandoah and Silicon Valleys to study innovation. Students can take part in an innovation incubator.
- **Global and cross-cultural perspectives**
We have an active chapter of Engineers Without Borders. We sponsor summer study abroad experiences in Benin, Kenya, and Malta, with a focus on sustainable development that is aligned with the culture in which it is taking place.

We will soon be applying for our program to be designated as a Grand Challenges Scholars Program, and adding many of our graduates to the ranks of the 10,000 Grand Challenge Engineers.

Sincerely,



Dr. Bob Kolvoord
Dean, College of Integrated Science and Engineering

