

# HOWARD UNIVERSITY

COLLEGE OF ENGINEERING, ARCHITECTURE AND COMPUTER SCIENCES  
OFFICE OF THE DEAN

March 13, 2015

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

Dear Mr. President,

As we consider and conceptualize the significance of educating students to achieve the Engineering Grand Challenges of the 21<sup>st</sup> century, Howard University has committed to the development of student programs that engage engineering and computer science students in opportunities that build on coursework to provide students with:

- creative design experiences,
- experiential, interdisciplinary learning experiences,
- entrepreneurship and innovation experiences,
- global research experiences, and
- service learning experiences

all connected to the Grand Challenges. We are accomplishing these objectives through two premier campus initiatives – HowU Innovate and the Global Education and Awareness Research Undergraduate Program (GEAR UP).

The HowU Innovate initiative includes the Bison StartUp course, in which students learn by proposing and testing business model hypotheses in an experiential learning, flipped classroom design. Beginning in fall 2014, the initiative expanded to our Introduction to Engineering course whereby all first-year engineering students now engage in innovative engineering design through instruction, rapid prototyping, and a first-of-its-kind intellectual property module, with instruction and mentoring by the US Patent & Trademark office. The grand opening of the HowU Innovate maker space is scheduled for August 2015. In this space, students will dream and design to improve the human experience through curricular, co-curricular, and extra-curricular projects. Finally, student participants in the Global Education and Awareness Research Undergraduate Program (GEAR-UP) prepare for global engagement and leadership through seminars, coursework, and summer research experiences at partner universities abroad.

We are excited to be part of the “Educating Engineers to Meet the Grand Challenges” movement and will continue to assess and improve our student programs to align with its goals.

Sincerely,



Lorraine N. Fleming, Ph.D., PE  
Interim Dean

