



# Northeastern University

## College of Engineering

March 12, 2015

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

Dear Mr. President,

The College of Engineering (COE) at Northeastern University is uniquely equipped to contribute to the corps of "Grand Challenges for Engineers" that will arise from this exciting nationwide initiative. A Northeastern engineering education integrates the key elements of the initiative:

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- COE provides **creative learning experiences connected to the Grand Challenges themes** starting with our freshman "cornerstone" that links two design courses via these themes. Undergraduate involvement in faculty research is encouraged in an annual "recruitment fair," and senior design capstone courses across all undergraduate majors are based on projects driven by the themes.
- Northeastern's cooperative education model offers **authentic experiential learning** that is virtually unparalleled in higher education. These experiences include two or three 6-month periods during the undergraduate degree program for students to work in paid positions.
- COE's Michael and Ann Sherman Center for Engineering Entrepreneurship Education arms students with **entrepreneurial skills** through courses, co-curricular activities and mentoring. Undergraduates working in research labs are also exposed to **dissemination of technology** through co-authorship of scholarly publications and participation in patent applications.
- COE offers its students a myriad of opportunities to be exposed to **global and cross-cultural perspectives gained through experiences**. COE actively participates in traditional semester abroad and six-week intensive academic-cultural experiences. Our co-op model includes international positions. Our nationally-recognized Engineers without Borders (EWB) student group is active in Honduras and Uganda, while international service learning trips allow students to apply their engineering skills in different cultural settings.
- Our students are exposed to the ethos of **social consciousness** through student groups like EWB, Enabling Engineering, which offers engineering technology-enabled assistance to handicapped community members; and the American Society of Civil Engineers, working with the community on local infrastructure projects. Our first year engineering faculty have partnered with local schools to bring our engineering students into those K-12 classrooms.

Through all of these opportunities, COE students gain the skills, knowledge and professional attitudes to empower them to become leaders in addressing societal challenges in the U.S. and abroad.

Sincerely,

A handwritten signature in black ink, appearing to read "Nadine Aubry".

Nadine Aubry, Ph.D.  
Dean, College of Engineering