

Contact: Diana Gonzalez

**FACULTY PRESENTATION AT THE UNIVERSITY OF IOWA:
“ENGINEERING GRAND CHALLENGES SCHOLARS PROGRAM”**

Action Requested: Receive the presentation.

Executive Summary: The National Academy of Engineering has identified 14 “Grand Challenges” (key problems that our society will face in the coming century which our engineers must step up and solve) ranging from providing access to clean water to securing cyberspace to reverse engineering the brain. To cultivate a new generation of engineers able to tackle these programs, the National Academy also proposed guidelines for establishing Grand Challenges Scholars Programs at engineering schools throughout the country. These programs offer students both the structure and support to prepare themselves to approach these challenges from multiple angles. There are five curricular components to the programs – Research, Entrepreneurship, Service Learning, Interdisciplinary Studies, and Global Perspective.

Each component will be necessary to arrive at a comprehensive solution to any of the Grand Challenges; therefore, students must gain experience in all five components to complete the Program. In 2011, the University of Iowa became the 7th school in the nation, and the first in the Big 10, to establish a Grand Challenges Scholars Program; in the past three years, the number of programs has doubles. Thanks to the generous support of the James R. Whiteley Grand Challenges Scholars Fund, the Program designates up to six new Grand Challenges Fellows per year. This fellowship, renewable for up to three years, supports the scholars in their training with a \$2,000/year stipend and \$1,000/year programmatic support which the scholar can use for any activities related to their Challenge training. These activities may range from international service learning projects to exploratory research to business start-up. By graduation, the scholars will have not only an engineering degree from a top institution, but also an impressive portfolio of activities and experiences demonstrating their preparation to tackle the most challenging problems of the 21st century.

Dr. Alex Scranton, UI Foundation Distinguished Professor of Chemical & Biochemical Engineering and Dean of the College of Engineering; Dr. Eric Nuxoll, Assistant Professor of Chemical & Biochemical Engineering; Mr. Nicolas Glynn, senior in Chemical & Biochemical Engineering from Clear Lake; and Ms. Theresa Beskin, senior in Biomedical Engineering from Cumming will describe the Engineering Grand Challenges Scholars Program at the University of Iowa.