The title of the August 12, 2015 op-ed in the STEM Solutions section of the *US News and World Report* was, “How Can Engineers Heed Pope Francis’ Challenge on Climate Change?” By publishing this op-ed, I joined 22 members of the Engineering Deans of Catholic Colleges and Universities (EDCU) to provide a response to Pope Francis’ encyclical on the environment and human ecology. The encyclical states that, “The specialization which belongs to technology makes it difficult to see the larger picture. The fragmentation of knowledge proves helpful for concrete applications, and yet it often leads to a loss of appreciation for the whole, for the relationships between things, and for the broader horizon, which then becomes irrelevant.” Searching for connections and avoiding fragmentation is an essential part of science and engineering education in liberal arts Jesuit institutions. Scientific knowledge empowers us to develop a better understanding about us and the world we live in. As Marie Currie noted, “Nothing in life is to be feared, it is only to be understood. Now is the time to understand more, so that we may fear less.” Last year, when we started “Pathways to Innovation,” a collaborative initiative involving science and
engineering programs at Loyola, we began by developing
a vision: “Loyola University Maryland will be nationally
recognized as an institution that provides innovation and
entrepreneurial learning for all its undergraduate students
based on a foundation of liberal arts education and the
commitment to social justice.” My efforts in developing
and teaching “Grand Challenges and Nanotechnology”
Honors Seminar course shares this vision when I introduce
nanotechnology in the context of grand challenges including
the environment, health, energy, food, or water. The vision
is also reflected in the development and teaching of the
“Technical Innovation and Entrepreneurship” course, where
my students explore the role of social entrepreneurship in
view of the application of scientific and technical knowledge
to serve justice. I also live justice at Loyola by seeking truth
through scientific knowledge and also seeking meaning when
supporting faculty efforts who are committed to justice
by developing a new “Environmental and Sustainability
Studies” minor, organizing “No Impact Week,” offering the
“Environmental Film Series,” and promoting the “Diversity
of Science” through a lecture series. Considering Martin
Luther King, Jr.’s idea that “Injustice anywhere is a threat to
justice everywhere,” we should support justice and seek truth
in everything we do. As Mahatma Gandhi once said, “Truth
never damages a cause that is just.”