

## MSE 455/556 Course Objectives

The objectives of this course are to give the student the capability to understand the key issues surrounding sustainable development and to articulate through projects and case studies the role that materials have in advancing the ability of the human race to live sustainability. At the conclusion of this course the student should be able to:

1. Discuss issues of climate change, renewable energy and sustainability from an informed, factual perspective.
2. Objectively investigate the Impact of Climate Change related to a specific potential manifestation.
3. Quantitatively and qualitatively evaluate the feasibility of national renewable energy proposals.
4. Identify bottlenecks and the properties of potential materials solutions for particular renewable energy storage or conversion technologies.
5. Perform a case study of the sustainability of a proposed technical endeavor.
6. Quantitatively assess the impact of suggested technologies or behavioral changes on the global climate/energy challenge.