This course covers efficient power/energy systems, energy security, high energy and pulsed power in the mission-critical context of the US Navy’s present and future challenges.

Course Number: 1. Power and Energy, Onshore and Afloat, IT 58100 (CRN: 19980)

Course Title: Power and Energy, Onshore and Afloat

Where: Fall 2017; 3 credit hours; Starting Monday August 21 (3:30-6:20 pm)

More Information: MSEE B010


Description: This interdisciplinary course is aimed at upper-class undergraduate and graduate students interested in developing an understanding of power and energy technologies and systems, energy security, high energy and pulsed power. US Navy leadership has recognized Power and Energy as a strategic imperative for the success of their operations and the Nation’s future technological superiority. This course will explore topics important to the National Defense including batteries, liquid transportation fuels, hydrogen, thermal management, power electronics, flexible electronics, cyber security of control and sensing systems from the perspective of the Navy in its onshore bases and afloat. The course comprises both academic and military practitioner lectures, Navy and Defense relevant design projects, and includes a professional orientation or research and operational support performed at the Naval Surface Warfare Center, Crane (Indiana).

Contact:
- Prof. Maureen McCann, Professor of Biological Sciences, Director of DOE/EFRC Center for Direct Catalytic Conversion of Biomass to Biofuel, Director of the Energy Center, Discovery Park at mmccann@purdue.edu.
- Prof. Eric Dietz, Professor of Computer and Information Technology; Director of Purdue Homeland Security at jedietz@purdue.edu.
- Dr. Pankaj Sharma, Professor of Engineering Technology (courtesy), Managing Director, Energy Center, Discovery Park at sharma@purdue.edu
- Dr. Thomas Adams, Alternative Energy and Power Engineering, Naval Surface Warfare Center, Crane, Indiana (thomas.e.adams@navy.mil) Purdue Visiting Scholar (adams30@purdue.edu)

The development of this course is funded by the Office of Naval Research N00014-15-1-2420 to inspire leadership in Science and Technology for the workforce of the future fleet.