

School of Management, Engineering and Technology  
Department of Electrical Engineering and Renewable Energy  
REE 449: Senior Project II

Catalogue Description (2009/2010):	A continuation of REE 339. Prototype construction of project solution begins. Written documentation is produced including design calculations and functional analysis of hardware and/or software needed for project solution.		
Hours/Credits: (Lecture-Lab-Total)	(0-6-2)		
Class Schedule:	Scheduled meetings with faculty advisor, one term		
Lab Schedule:	Access to senior project room, faculty advising, one term		
Prerequisites:	WRI 327, REE 339.		
Required Text:	none		
Reference Text:	none		
Course Coordinator:	Robert Bass, Ph.D.		
Regular Instructors:	Mateo Aboy, Robert Bass, Slobodan Petrovic, Frank Rytkonen, Thomas White, James Zipay		
Course Objectives:	<p>During the term, students are expected to:</p> <ul style="list-style-type: none"> <li>• Prepare a detailed project description chapter for the final project document. This chapter (“Chapter 4”) should discuss design calculations and functional analysis of hardware and/or software needed for the project solution.</li> <li>• Begin writing the final project document by integrating chapters from the project proposal with the detailed project description chapter.</li> <li>• Develop a project design and begin construction of the project solution.</li> <li>• Prepare bi-weekly progress reports.</li> <li>• Record intermediate design calculations and analyses.</li> <li>• Prepare a plan for testing and verification of the project.</li> <li>• Prepare a plan for an economic analysis of the project.</li> </ul>		
Topics Covered:	Dependant on senior project topic		
Relevant Program Outcomes:	<p>(a) an ability to apply knowledge of mathematics, science, and engineering  (b) an ability to design and conduct experiments, as well as to analyze and interpret data  (c) an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability  (d) an ability to function on multi-disciplinary teams  (e) an ability to identify, formulate, and solve engineering problems  (f) an understanding of professional and ethical responsibility  (g) an ability to communicate effectively  (h) the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context  (i) a recognition of the need for, and an ability to engage in life-long learning  (j) a knowledge of contemporary issues  (k) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice  (l) an ability to apply the fundamentals of energy conversion and applications  (m) an understanding of the obligations for implementing sustainable engineering solutions  (n) an appreciation for the influence of energy in the history of modern societies</p>		
Required or Elective:	Required		
Criterion 5:	Engineering Topics		
Prepared By:	Robert Bass, Ph.D.	Updated:	April 26, 2010