

UNIVERSITY CORE CURRICULUM

SECTION III. INTEGRATIVE STUDIES - INTERDISCIPLINARY

1. COURSE NUMBER: **ENGR 303i** SEMESTER HOURS: **3**

COURSE TITLE: **The Role of Energy in Society**
Start Date: Fall 1996
2. COURSE FORMAT: Lectures (faculty) and discussion (graduate assistant). Average lecture size: 150; average discussion section: 15.
3. STUDENT LEARNING OBJECTIVES: Students will be able to: (a) find information related to specific energy topics using appropriate resources such as the internet and the library; (b) evaluate energy-related issues in terms of economic, environmental, political, sociological, and technical criteria; (c) understand complexity of technology development; (d) identify and describe energy issues; and (e) appreciate and use the mathematical concept of exponents in accessing energy needs and solutions.
4. DETAILED COURSE DESCRIPTION: The Role of Energy in Society is specifically directed at the non-technical student, with extra effort given to provide examples of the technological impact of energy systems in as many facets of life as possible. When discussing the historical, present-day and future potential of the particular energy source, special effort will be given to highlighting the interrelationships of many disciplines fields such as chemistry, physics, mathematics, engineering, behavioral science, political science, and economics. The course strives to develop an understanding of current energy policy issues, expose students to factors which determine implementation of specific energy sources and cove limitations of various energy sources.
5. REQUIRED READING: Hendrichs and Kleinbach, *Energy: Its Use and the Environment* (3rd edition).
6. COURSE REQUIREMENTS AND GRADING:
 - Test 1 (25%)
 - Test 2 (25%)
 - Essay (20%)
 - Team Project (20%)
 - Discussion: homework, participation, extra credit (10%)
7. ADVANCED UCC COURSE(S): None

1/18/05