



Paris de la cons

Date:

April 30, 1990

Subject:

PY 101 Energy and the Environment

To:

Liberal Studies Committee

From:

John Fox, Kenneth Hershman and Richard Roberts

In response to your inquiry:

a) The question of a "book length" reading is addressed as follows.

The text, "Energy and Problems of a Technical Society" is a non-traditional text that addresses a number of issues concerning energy, its sources, the limitation of those

## IJBERAL\_STUDIES COUBSE APPROVA

#### Part I. Basic Information

- A. We are proposing PY 101 for the Natural Science non-laboratory and the Liberal Studies Elective categories.
- B. We are requesting regular approval for this course.
- C. During the transition from General Education to Liberal Studies, PY 101 should be listed as an elective course. It does not fulfill any General Education requirement.

Part II. Which Liberal Studies goals will your course meet?

	5. Primary goal. Scientific inquiry. This course, taught by a physicist, will enable the student to follow the thought processes of a coinstict as he ottake a			
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	our use of energy on these societies. Questions of the future concerning placement of remote energy sources and the impact of that placement upon small isolated communities will be discussed. Questions of these sections and the impact of the placement of the pl			
	Small isolated communities will be discussed. Ourotions of how an armicand to			
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### Course Syllabus

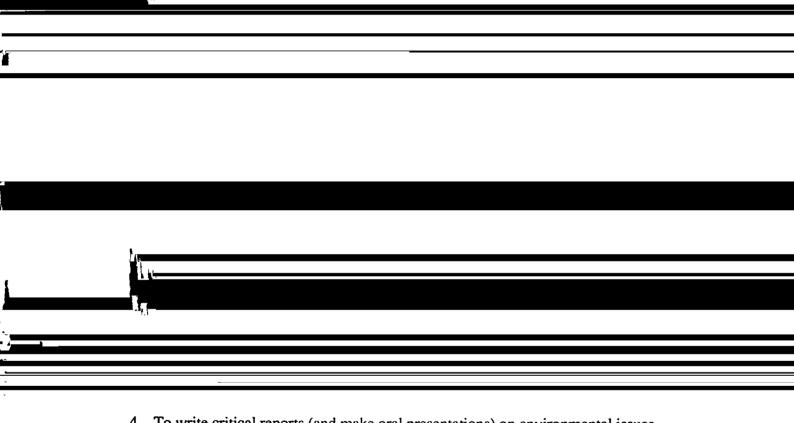
# Physics and our Environment

I. An overview of the areas of energy, transportation and pollution. These topics are approached via the relevant concepts of physical science and physics. 3c - 01 - 3sh

## II. Course Objectives

- 1. To gain a knowledge of environmental issues.
- 2. To gain an understanding of the principles and concepts of physics involved in environmental issues.

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- 4. To write critical reports (and make oral presentations) on environmental issues, episodes and accidents.
- 5. To make educated projections on the outcome of environmental issues under various assumed scenarios.

E. Environmental Issues / Safety (5 hours)1. Radioactivity / Health Science 2. TMI 3. Chernobyl 4. Waste Storage 5. Coal Fired Power Plants F. Alternative Energy Sources (5 hours) 1. Solar a. domestic applications b. large systems / electricity 2. Hydroelectric 3. Wind 4. Ocean / Tides 5. Geothermal 6. Storage of Energy G. Energy Conservation (4 hours) 1. Space Heating / Insulation 2. Efficiency of Appliances 3. Waste Heat Recovery 4. Recycling / Waste Disposal / Incineration H. Plant and Food Production (2 hours) 1. Photosynthesis 2. Feeding the World's Population 3. Fuel from Biomass I. Transportation (4 hours)

Grades will be awarded on the basis of:

89%		A	١
78%	• • • • • •	E	3
67%			
56%			

## V. Current Text

Kraushaar, J.J. & Ristinen, R.A.

Energy and Problems of a Technological Society
Revised edition, 1988, Wiley

Required reading D. H. Meadows, D. L. Meadows, J. Randers, and W. Behrens *The Limits to Growth* Universe Books, 1972