

**DEPARTMENT OF PHYSICS
USU 1360
INTEGRATED PHYSICAL SCIENCE
ENERGY**

FALL 2004

Course Information

Textbook: ENERGY AND THE ENVIRONMENT, Ristenen and
Kraushaar, John Wiley & Sons, Inc., 1999

Instructor Tonya Triplett, SER 234, 797-8308, Caldwell@cc.usu.edu

Classroom EC 106

Time 1:30 – 2:45 Tuesday and Thursday

Office hours By appointment – T/H mornings, on-line M/W

Website Use USU's WebCT program

Course Goals

The purpose of the course is to educate you on aspects of energy management for the benefit of mankind on a national/global basis. By energy management I mean the discovery, extraction, conversion, distribution and utilization of energy resources historically, now and in the future. This involves considerations of science, engineering, economics, social science and politics. It is clearly a subject with great breadth and depth. In the time available in one semester it is only possible to provide a broad overview of events leading to the present energy situation and prospects for energy management in the future. The course is not intended to be a physics or engineering course, but it will be necessary to address some of the basic physics and practical engineering considerations which play a role in energy management.

My goal as far as you are concerned is that you will emerge from the course with enough background knowledge to give you a better understanding of the many issues involving the utilization of energy for the benefit of humanity. This topic will continue to be discussed in State legislatures, Congress, the United Nations and other international meetings and consequently will obtain significant media exposure.

I hope that you will leave the class with a better understanding of the importance of energy to our civilization, and will become a more thoughtful user of this precious resource, essential to the maintenance and improvement of many aspects of our standard of living.

Tests

There will be four tests given as listed in the calendar. The tests will have multiple choice answers, and will be answered on scantron forms. Each test will be worth 100 points.

The department will provide the scantron forms for all tests. It is your responsibility to bring a number 2 pencil to the class on test days. The scantron system will e-mail your test score to you as soon as it is processed by computer services. It is therefore very important that you establish an e-mail account with USU computer services as soon as possible for communication with me and your group. The provision of the USU e-mail account is included in your fees. Accounts can be set up at the Computer Services Help desk in SER 108.

On-Line Quizzes/Homework

Quizzes are based on homework questions in the text. In order to have your work graded, use WebCT. Each quiz will be worth 20 points and you may accumulate a maximum of 200 points in this manner. More than 10 quizzes will be offered, so I would expect that most students would get 200 points in this area. WebCT is available from the USU home page. Your login name is composed of the first two letters of your first name, all of your last name and the last two digits of your social security number. Your password is your social security number. All assignments and due dates are available on WebCT.

Group Project

In order to address several of the pedagogy guidelines for a University Studies Integrated Science course, a group project will be used to complete the final grade computation. On the third day of class, you will be assigned to a group. Each group will produce a project providing you with valuable experience in working collaboratively and experience in writing and research all of which are goals of the University Studies program.

In the first group meeting, each group should select a spokesperson. This spokesperson will be the link to me in matters connected with the project. The prime method of communication will be e-mail. You will also select a topic for the project and discuss what each group member will contribute to the project.

I will only grade one project for each group, and each group member who contributes to the project will receive the same score for the common elements of the project which are an accurate and complete cover page and table of contents and the general content and format of the project. These common scores will be given to each group member whose name appears on the cover page. Each individual contribution to the project will also gain additional points, so the individual group member names must be clearly shown on their contributions.

The group spokesperson will be responsible for contacting the group and organizing meetings. The group spokesperson will also assemble the final document for submission at the end of the semester. He or she will gain extra credit of 5% when a complete, acceptable group project document is handed in.

The project should include parts that are written, illustrations with written descriptions, graphical/tabular with written descriptions, quantitative calculations with written descriptions, references and any other media that is appropriate to the topic of the project. The material should be organized in a logical manner to provide the reader with a clear view of the background, issues and future prospects involving the topic chosen. A more detailed description of the project and suggested topics will be distributed later. There is no need for elaborate binding – a collection of

the items in a manilla folder will be adequate.

Composition of Final Grade

Exams	50%	400 points
On-line quizzes/homework	25%	200 points
Project - group contribution	5%	40 points
Project - individual contribution	20%	160 points

The assignment of letter grades will be as shown in the table below:

Letter grade	A	A-	B+	B	B-	C+	C	C-	D+	D
% Score	94	90	87	84	80	77	74	70	67	60

The scores represent the lower bound for the adjacent letter grades. Marks of 59% and below will be graded F.

Supplemental Instruction (SI)

This class is scheduled to have a Supplemental Instructor (SI) to assist individuals or groups. I will let you know the times for these meetings as soon as they are available.

Materials for Persons with Disabilities

In cooperation with the Disability Resource Center, reasonable accommodation will be provided for students with disabilities. Please meet with the instructor during the first week of class to make arrangements. Alternative format print materials, large print, audio, diskette or Braille will be available through the Disability Resource Center.