

Strategies for Sustainable Energy
ENG2110-01
Spring Semester, 2011

Course Syllabus

Instructor Information:

Instructor: Prof. David J. Keffer
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Class Meeting Information:

Location: First Engineering Building Room A320
Time: 4:00 PM – 6:50 PM Thursday

Course Description:

ENG2110-01 is a three credit team-taught course. This syllabus covers the last two-thirds of the course.

The purpose of this course is to provide an understanding of three elements important to a strategy for sustainable energy. First, we investigate current patterns of energy consumption. Second, we investigate the potential for energy production via sustainable methods. Third, we examine potential strategies for plans in which the production of energy via sustainable methods is equal to the consumption of energy necessary to maintain a given standard of living.

Textbook:

This course has a required textbook:

Sustainable Energy without the Hot Air by David J.C. MacKay, UIT, Cambridge England, 2009.

The complete text of this book can be downloaded free of charge at
<http://www.withouthotair.com/>.

Grade Distribution:

For this two-thirds of the course, the grade distribution is as follows.

Attendance:	20%
Homework Assignments:	40%
Final Exam:	40%

At the end of the semester, the grades from both parts of the course will be averaged for the total course grade.

Schedule

#	Date	Lecture Topic	Reading Assignment	Homework Assignment
1	04/07/11	Organization & Introduction	Chapters 1 & 2	Assign HW 1
2	04/14/11	Motivation & the Balance Sheet	Chapter 3 & 5	
-	04/21/11	Midterm Exam Week – No Class		
3	04/28/11	Consumption: Cars & Planes	Chapters 7, 9, 11, 13	Collect HW 1 Assign HW 2
4	05/05/11	Consumption: Heating, Cooling, Light, Gadgets, Food & Farming	Chapters 4, 6	
5	05/12/11	Production: Wind & Solar	Chapters 8, 10, 12, 14, 16,	Collect HW 2 Assign HW 3
6	05/19/11	Production: Hydroelectricity & Offshore Wind, Wave, Tide & Geothermal	Chapters 19, 20	
7	05/26/11	Strategies: General Plans	Chapter 25, 26, 27	Collect HW 3 Assign HW 4
8	06/09/10	Strategies: Specific Plans I	Chapters 28, 29	
9	06/16/10	Strategies: Specific Plans II	-	Collect HW 4
10	06/23/10	Final Exam	-	

The reading assignments are to be completed before the following class.
The homework assignments are collected at the beginning of class.