

# Syllabus for SMGT 320 Renewable Energy for Sustainable Management

**NOTE:** This syllabus document contains the basic information about this course. The most current syllabus is available in the course.

## Course Description

In this course we will discuss the issue of sustainability as it relates to the world's increasing use of energy, considering the potential harm done via carbon (plus methane and other greenhouse gases) released from burning fossil fuels and the prospects for large-scale implementation of more benign sources such as the sun, Earth, wind, and water. You will learn about basic engineering principles and applications for existing and emerging energy technologies, energy production, consumption, and environmental impact, and explore the ways in which these principles relate to sustainable management. Topics cover a wide range of energy systems, including nuclear, fossil fuels, wind, solar, biofuels, and biomass.

## Prerequisite(s)

College Math

## Course Outcomes

Upon completing this course, you will be able to do the following:

- Recognize and use the basic terminology and units of measurement for energy systems.
- Discuss the science behind the impact of energy systems on climate change and global warming.
- Compare the mechanics of energy generation and distribution for fossil fuels, geothermal, nuclear, hydro, wind, solar, and biofuel power.
- Illustrate the steps in the application of a systems approach via life-cycle analysis of the various energy generation processes.
- Evaluate the sustainability of traditional and emerging power sources.

## Course Requirements/Components

### Quizzes

The quizzes are intended to keep you current with the material. Their structure will vary from objective assessment (multiple choice) to subjective assessment (short or long

answers). The time limit for each quiz will vary based on the nature and number of the questions.

### Discussions

Throughout the semester, there will be opportunities to earn points by submitting answers to problems, discussion comments, or short videos that will ask you to apply your knowledge.

### Assignments

The weekly assignments are designed to assist you in gathering data related to the final paper.

### Final Paper

The final paper will require you to synthesize much of what you've learned throughout the course.

### Grading

Grades will be determined as a percentage of total points:

Quizzes (10-20 points each)	110 points
Discussions (9 at 10 points each)	90 points
Assignments (10-30 points each)	240 points
Final Paper	50 points
<b>Total Points</b>	<b>490 points</b>

**Late assignments** will be downgraded 20% of their value each class day they are overdue, unless a prior arrangement is made with the instructor.

Percent	Letter Grade
>93%	A
91-93%	A-
88-90%	B+
85-87%	B
82-84%	B-
79-81%	C+
76-78%	C
73-75%	C-
70-72%	D+

67-69%	D
65-66%	D-
<60%	F