

Course Syllabus

COURSE INFORMATION

Spring 2017

Introduction to Renewable Energy, 5 credits

Section N1 / Item 1665

Online

INSTRUCTOR INFORMATION

Instructor: Louise Petruzzella

Email: lpetruzzella2@shoreline.edu & Canvas

Office hours: Thursday 2:00-3:30PM #1409

Course Description

Survey course on Renewable Energy Systems. This course is in the Clean Technology Program. It will be used as a basic introduction to renewable energy including solar, wind, geothermal, and water. This course fulfills the need for a basic understanding of electricity, conservation, and entropy. It includes measuring energy, OHM's Law, and renewable fuel. It targets students seeking employment in the utility, construction, design, and solar energy industries as well as people seeking to apply renewable energy for personal use.

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Learning Outcomes

- Use 1st and 2nd law of thermodynamics in assessing solar radiation potential
- Identify different forms of kinetic and potential energy
- Convert energy units from one unit system to another
- Apply OHM's Law to solve electric current problems
- Identify major components of solar technology, wind generation, renewable fuel, and geothermal systems

Textbook

Required Text: *Renewable Energy: Power for A Sustainable Future* Oxford University Press
Third Edition Edited by Godfrey Boyle

Course Outline

The course covers these topics:

1. Introducing Renewable Energy

1. Solar Thermal Energy
2. Solar Photovoltaics
3. Bioenergy
4. Hydroelectricity
5. Tidal Power
6. Wind Energy
7. Wave Energy
8. Geothermal Energy
9. 10. Integration

COURSE POLICIES

Academic Integrity: All forms of education assume a high level of trust between the instructor and students. You will be expected to communicate with class members and the instructor in a professional and respectful manner. I trust that all work is the product of your own efforts and that if you are referencing outside sources, site those sources in your work.

Link to Shoreline Community College Student Code of Conduct

<http://intranet.shoreline.edu/policies/documents/5000/5030.pdf> (Links to an external site.)

Sex/Gender Discrimination

Shoreline Community College is committed to providing all students with a learning environment that is safe, supportive, and free from discrimination. Any form of sexual discrimination: sexual harassment, sexual assault, relationship violence, and gender-based stalking is a violation of Title IX, and it must be reported. Title IX makes it clear that violence and harassment based on sex and gender is a Civil Rights offense subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories such as race, national origin, etc. As your instructor, I have a mandatory reporting responsibility, and I am required by law to share information with the College regarding sexual discrimination. For more information about Title IX, you can go to [SCC Title IX website \(Links to an external site.\)](#) (Links to an external site.). You can also contact the Title IX Deputy Coordinator (206) 546-4559 or the Dean of Students (206) 546-4641. If you would like to talk with someone in a confidential setting, please contact Counseling Services (206-546-4559) and make an appointment to speak with a counselor.

Discussion Board Guidelines

There are **two** components to these assignments: (1) YOUR *Post* answering the topic the instructor provides from the week in which the assignment is due (by *Friday* 11:59PM) AND (2) TWO Responses to other students' *Posts* by the *Monday* 11:59PM deadline.

Discussion Posts MUST:

- (1) be submitted by 11:59 p.m. each Friday;
- (2) be of sufficient length (at least 2 to 3 paragraphs); No longer than 3 paragraphs, please!
- (3) be RELEVANT to the assigned topic for the week in which the discussion is due;

- (4) provide an ENGLISH language NON-subscription LINK to an article, case or any source material used;
- (5) provide a SUMMARY of the article/case/event in the student's OWN WORDS; and provide ANALYSIS of the article/case/event in the student's OWN WORDS.

Discussion Responses MUST:

- (1) be submitted by 11:59 p.m. each Monday;
- (2) consist of at least TWO Responses to other students' Posts;
- (3) be of sufficient length (at least 2-3 paragraphs each);
- (4) be written with sufficient clarity that it is apparent that the student read the Post being responded to and the related link and/or course material;
- (5) NOT simply state: "I agree" or "Me, too!" You may, of course, state that you agree or disagree with another student's Post but you MUST substantiate that agreement or disagreement with your own thoughts and valid reasoning.

ALL Discussion Posts AND Responses MUST:

- (1) be intelligible and use proper grammar and spelling in order to get full credit;
- (2) be submitted by the due dates;
- (3) NOT include Plagiarized material. Plagiarism in any Post or Response will result in a ZERO grade for the assignment for that week and could lead to failure of the course, denial of registration, expulsion from the College, and even loss of financial aid.

NOTE: LATE, Inadequate or Partial Posts and/or Responses will result in a ZERO Grade for Discussion Board for that week-- NO PARTIAL CREDIT will be awarded for LATE or Partial submission.

THE DISCUSSION BOARD IS SCORED ON AN "ALL OR NOTHING" BASIS. TO ALLOW PARTIAL CREDIT DEFEATS THE PURPOSE OF HAVING A DISCUSSION BOARD!

GRADING

The following will make up the course grade:

Item / Assignment	Points	Comments
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See the information below, and the Course Schedule for instructions and due-dates

Quizzes

10 Quizzes @ 10 points each 100 points Chapter material

10 **Homework** @ 10 points each 100 points Supplementary material

Discussion Board

5 Posts/Replies @ 20 points each 100 points Related materials

Final Paper 50 points

Student- Determined Topic

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Total 350 points

Grading Scale:

Per SCC catalog -

Grades will be assigned from 4.0 to 1.0 and the grade of 0.0. Numerical grades may be considered equivalent to letter grades as follows:

- 4.0 - 3.9 A
- 3.8 - 3.5 A-
- 3.4 - 3.2 B+
- 3.1 - 2.9 B
- 2.8 - 2.5 B-
- 2.4 - 2.2 C+
- 2.1 - 1.9 C
- 1.8 - 1.5 C-
- 1.4 - 1.2 D+
- 1.1 - 1.0 D

Course Schedule

Week One

Introduction

Syllabus Review

Chapter 1

DB 1 Post due 4/7 11:59PM

DB 1 Replies due 4/10 11:59PM

HW 1 due 4/12 11:59PM

Quiz 1 due 4/15 11:59PM

Week Two

Chapter 2

HW 2 due 4/19

DB Post due 4/21

Quiz 2 due 4/22

Week Three

Chapter 3

DB Replies due 4/24

HW 3 due 4/26

Quiz 3 due 4/29

Week Four

Chapter 4

HW 4 due 5/3

DB Post due 5/5

Quiz 4 due 5/6

Week Five

Chapter 5

DB Replies due 5/8

HW 5 due 5/10

Quiz 5 due 5/13

Week Six

Chapter 6

HW 6 due 5/17

DB Post due 5/19

Quiz 6 due 5/20

Week Seven

Chapter 7

DB Replies due 5/22

HW 7 due 5/24

Quiz 7 due 5/27

Week Eight

Chapter 8

HW 8 due 5/31

DB Post due 6/2

Quiz 8 due 6/3

Week Nine

Chapter 9

DB Replies due 6/5

HW 9 due 6/7

Quiz 9 due 6/10

Week Ten

Chapter 10

HW 10 due 6/14

Final Paper due 6/16

Quiz 10 due 6/17

Course Summary:

Date	Details	
Fri Apr 7, 2017	Discussion Board One	due by 11:59p
Wed Apr 12, 2017	Homework One	due by 11:59p
Sat Apr 15, 2017	Quiz One	due by 11:59p
Wed Apr 19, 2017	Homework Two	due by 11:59p
Fri Apr 21, 2017	Discussion Board Two	due by 11:59p
Sat Apr 22, 2017	Quiz Two	due by 11:59p
Wed Apr 26, 2017	Homework Three	due by 11:59p
Sat Apr 29, 2017	Quiz Three	due by 11:59p
Wed May 3, 2017	Homework Four	due by 11:59p
Fri May 5, 2017	Discussion Board Three	due by 11:59p
Sat May 6, 2017	Quiz Four	due by 11:59p
Wed May 10, 2017	Homework Five	due by 11:59p
Sat May 13, 2017	Quiz Five	due by 11:59p
Wed May 17, 2017	Homework Six	due by 11:59p
Fri May 19, 2017	Course Evaluation	2:01am to 4:59p
	Discussion Board Four	due by 11:59p
Sat May 20, 2017	Quiz Six	due by 11:59p
Wed May 24, 2017	Homework Seven	due by 11:59p

Date	Details	
Thu May 25, 2017	Course Evaluation	2:02am to 3:59
Sat May 27, 2017	Quiz Seven	due by 11:59
Wed May 31, 2017	Homework Eight	due by 11:59
Fri Jun 2, 2017	Discussion Board Five	due by 11:59
Sat Jun 3, 2017	Quiz Eight	due by 11:59
Wed Jun 7, 2017	Homework Nine	due by 11:59
Sat Jun 10, 2017	Quiz Nine	due by 11:59
Wed Jun 14, 2017	Homework Ten	due by 11:59
Fri Jun 16, 2017	Final Paper	due by 11:59
Sat Jun 17, 2017	Quiz Ten	due by 11:59