

FUNDAMENTALS OF RENEWABLE ENERGY PROCESSES - I

Federal University of Paraná

June 4 - June 13, 2018

Instructor: Juan C. Ordonez	Time: M,Tu,W,Th,F 10:00 – 12:30
Email: jcord18@gmail.com	Place: TBA

Prerequisites: An undergraduate-level understanding of thermodynamics, heat transfer and fluid mechanics. This class will be offered in English.

Description: This is an intensive course introducing the fundamentals of key sustainable power technologies. Due to the condensed presentation, it is expected that you will dedicate about 2hr a day outside class working on homework and reading assignments.

Course Pages:

1. <https://www.coursesites.com/bbcswebdav/courses/Sum2018>
2. <http://energymodules.org>

Tentative Schedule and Topics:

Meeting	Date	Topic	Assignment
# 1	June 4	Energy Overview	HW 1
# 2	June 5	Solar Resources	HW 2
# 3	June 6	Semiconductors and light absorption	HW 3
# 4	June 7	Photovoltaic Converters	HW 4
# 5	June 8	Ocean Energy	HW 5
# 6	June 11	Thermoelectricity	HW 6
# 7	June 12	Wind Energy	HW 7
# 8	June 13	Wind Energy	Exam

Reference:

- Aldo Viera da Rosa, *Fundamentals of Renewable Energy Processes, 3rd edition*, Academic Press, 2013.

Grading Policy: Homework (35%), Quizzes based on HW (35%), Exam (30%)

Grading Scheme:

Homework	35%
Quizzes	35%
Exam	30%

Class Policy:

- Regular attendance is essential and expected.
- Use of cellphone and other devices during class is disruptive to the instructor and others, please restrain from it unless is part of a class activity.
- Homework is due one day after its assignment at the beginning of class. At that point the solution will be made available and no late HW will be accepted.

Academic Honesty: It is understood that the work reported in homework and exams is that of your own.