Course Syllabus

Course Information:
EEPE 6359 Renewable Energy and Distributed Power Generation Systems

Professor Contact Information:
Kaushik Rajashekara, 972-883-4531, K.Raja@utdallas.edu;

Course Pre-requisites, Co-requisites, and/or Other Restrictions:
EEPE 6354: Power Electronics

Course Description:
This is a graduate level course on Renewable energy and distributed power generation systems. The topics discussed are: fundamentals of energy and sustainability; energy efficiency; renewable energy sources and availability: hydro, wind, solar, and fuel cell systems; Converters and controllers for integration of renewable energy sources; Smart grid and hybrid power generation systems.

Student Learning Objectives/Outcomes

- Ability to understand the units of energy, energy demand, energy efficiency, and distributed generation concepts.
- Ability to understand architectures of generating electric power and connecting synchronous generators to grid
- Ability to understand the principles and technology of different types of energy sources: fuel cell, Photovoltaics, and wind
- Ability to understand topologies of grid integration of power sources

Textbooks and Materials

1. Electric Energy: An Introduction, Mohamed A. El-Sharkawi , CRC Press
2. Control of Power Inverters in Renewable Energy and Smart Grid Integration by Quing-Chang Zhong, Wiley, IEEE Press
3. All the class room lecture materials will be posted in the eLearning web site

Assignments & Academic Calendar
Will be discussed in the class room.

Grading Policy
Three tests: 20% , 20%, and 30%
Assignments: 10%
Project: 20%

UT Dallas Syllabus Policies and Procedures

The information contained in the following link constitutes the University's policies and procedures segment of the course syllabus.

Please go to http://go.utdallas.edu/syllabus-policies for these policies.

The descriptions and timelines contained in this syllabus are subject to change at the discretion of the Professor.