

Syllabus

New & Renewable Energy Engineering

Course Name	Course type (credit/hours)		전선(3/3)			Course code	
	Target students Division/major/grade		/			Opening semester	
	Class time and classroom		월5(전109) 월6(전109) 월7(전109)(전109)				
Reference to this course	Related basic courses						
	Recommended concurrent courses						
	Related advanced courses						
Instructor	Name (title/division)						
	Office Room Number		Office phone Number	2695	e-mail	jjung@ajou.ac.kr	
	Office hours		Homepage address				
Teaching Assistant	Name (title/division)						
	Office Room Number		Office phone Number		e-mail		

1. Introduction

Recently, renewable energy has become increasingly important as a way of reducing a much lower environmental impact than conventional energy technologies. The course focus on the power system issues associated with integration of renewable energy resources into the electric grid, including Photovoltaic System, Wind Power System, Combined Heat and Power (CHP), Concentrating Solar Power (CSP), Biomass, Hydropower, Fuel Cells.

2. Course Objectives

3. Class types and activities

4. Teaching Method

Lecture (ppt) and discussion

5. Knowledge and ability required for taking this course

6. Method of Evaluation

Evaluation Item	The Number of Times	Evaluation Proportion	Remarks
Attendance		20%	
midterm exam			
final exam		50%	
quiz			
presentation			
discussion			
homework		30%	
etc			

Term Project (30%)
Homework and Attendance (20%)
Final exam (50%)

7. Textbooks

Main/Sub	Title	Writer	Publisher	Publication year
주교재	Renewable and Efficient Electric Power Systems	Gilbert M. Masters	Wiley	2013

8. Lecture Schedule

Week	Lecture contents	Lesson type	Remark
1	Introduction of renewable energy generation	Lecture	
2	Solar energy ? The Solar Resource	Lecture	
3	Solar energy ? Photovoltaic Materials and Electrical Characteristics	Lecture	
4	Solar energy ? Photovoltaic System	Lecture	
5	Solar energy ? Photovoltaic System	Lecture	
6	Solar energy ? Photovoltaic System	Lecture	
7	Solar energy ? Photovoltaic System	Lecture	
8	Term Project	Exam or Seminar	
9	Other Distributed Generation ? Combined Heat and Power (CHP), Concentrating Solar Power (CSP)	Lecture	
10	Other Distributed Generation ? Biomass, Micro-Hydropower, Fuel Cells	Lecture	
11	Wind Power Systems ? Wind Turbines	Lecture	
12	Wind Power Systems ? Power in the Wind	Lecture	
13	Wind Power Systems ? Average Power in the Wind	Lecture	
14	Wind Power Systems ? Wind Turbine Economics	Lecture	
15	Wind Power Systems	Lecture	
16	Final Exam	Exam	

9. Others