

Syllabus

Special Topics in Energy I

Course Name	Course type (credit/hours)		전공(3/3)			Course code	
	Target students Division/major/grade		/			Opening semester	
	Class time and classroom						
Reference to this course	Related basic courses						
	Recommended concurrent courses						
	Related advanced courses						
Instructor	Name (title/division)						
	Office Room Number		Office phone Number	2689	e-mail	suduk@ajou.ac.kr	
	Office hours				Homepage address		
Teaching Assistant	Name (title/division)						
	Office Room Number		Office phone Number		e-mail		

1. Introduction

This course is specially designed for the members in EML (Energy Modeling Lab.) by Prof. Suduk Kim and Power System Engineering Lab. by Prof. Jaesung Jung.

This collaborative class will focus on the review of the current energy system modeling in both lab. and try to combine their work with Dr. Jung's specialty on petro-chemical industry including refinery process. This combined effort would produce a physical collaborative study among the members and provide the founding understanding on the industry modeling of transformation sector.

2. Course Objectives

3. Class types and activities

4. Teaching Method

5. Knowledge and ability required for taking this course

6. Method of Evaluation

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

7. Textbooks

Main/Sub	Title	Writer	Publisher	Publication year
No Data				

8. Lecture Schedule

Week	Lecture contents	Lesson type	Remark
1	Updated Modeling work in EML		Suduk
2	Updated Modeling work in Power Sector Modeling		Jaesung
3	What is crude? A brief history of Development		Dr. Jung
4	Classification of crudes in accordance with physical and institutional standards		Dr. Jung
5	Production of Crude: conventional		Dr. Jung
6	Production of Crude: non-conventional: Permit, Rig movement, and Spud		Dr. Jung
7	Modeling Pland for petroleum Sector: Available Information and further requirement		Suduk
8	Industry Sector Modeling Example Using GCAM		Suduk
9	Refining: non-technical account		Dr. Jung
10	Gas Processing: non-technical account		Dr. Jung
11	Basics in Petrochemical Processing		Dr. Jung
12	Petrochemical Products		Dr. Jung
13	The Basic Theory of Power System		Jaesung
14	Power Transmission and Distribution System		Jaesung
15	Power System Operation and Control		Jaesung
16	Exercise Modeling work of Petrochemical Sector		Suduk

9. Others