Department:	Economics and Finance

Course Name:	Economics of Energy and Oil	Course No.:	ECON 637
Prerequisite:	N/A	Credit Hours:	3

Brief Description:

This course is an energy and oil economics course not a general energy policy course. It will cover a variety of theoretical and empirical topics related to energy and oil demand, energy and oil supply, energy and oil prices, environmental consequences of energy and oil consumption and production, and various public policies affecting energy and oil demand, supply, prices, and environmental effects. In this course, a effort will be made to discuss the issues within the 3-E framework (Energy-Economy-Environment) using the tools of economic analysis

Course Objectives:

After completion of this course the student will be able to:

- Demonstrate a critical understanding of the subject.
- Analyze Energy Economics as a unique filed of economics and related economic policies.
- Analyze the Market Failure and nature of Public goods
- Evaluate theoretical aspects of the subject and its relation with the its practical state.
- Compare Economics of Energy and other branches of Economics
- Measure the strength and weaknesses of the major development in the economics of energy and oil.

Course Topics:

- Introduction and Background
- Review of the Basics of Supply, Demand and Price Formation in Competitive Markets
- Energy Demand: Short Run and Long Run Price and Income Elasticities
- Energy Supply and the Economics of Depletable Resources
- World Oil Markets and Energy Security
- Natural Gas Price Regulation, Deregulation and Markets
- Electricity
- Risk Management, Futures Markets and Derivatives
- Energy and Climate Change
- Internalizing Environmental Externalities with a Focus on CO2 Emissions Cap and Trade Mechanisms
- Coal
- Nuclear Power
- Energy Efficiency Policies
- Renewable Energy Policies
- Special Topics
    - Curbing pollution: How far and how fast?
    - Green Paradox: Can environmental policy lead to more pollution?

Text Book:

- Peter Schwarz (2017) Energy Economics,Oxfordshire, UK: Routledge.
- Ferdinand E Banks (2015), Energy and Economic Theory, Singapore: World Scientific.

Additional References:

Pindyck, R., and D. Rubinfeld (2017) . Microeconomics. 6th ed. NJ, USA: Prentice Hall.
Thomas Homer-Dixon and Nick Garrison (2009) Carbon shift: how the twin crises of oil depletion and climate change will define the future, (ed.), Toronto, Canada: Random House.

Online Resources:

- http://www.eia.doe.gov
- www.iea.org/newsroom/events/publication-world-energy-outlook-2019.html

Measurement & Assessment Tools:

Objectives			Obj 1.1 &1.2	Obj 2.2	Obj 3.1
Assessment tools	Grade	Week (Time period)	1	2	3
Midterm test	25	9th	✖		
Class work	10	12th			✖
Assignments	15	15th		✖	
Final exam	50	As Dated	✖		
Total	100				
Extra credit					
Not Required					

Tentative Course Outline:			
Week	Hours	Topics	Readings
1	3	Introduction and Background	
2	3	Review of the Basics of Supply, Demand and Price Formation in Competitive Markets	
3	3	Energy Demand: Short Run and Long Run Price and Income Elasticities	
4	3	Energy Supply and the Economics of Depletable Resources	
5	3	World Oil Markets and Energy Security	
6	3	Natural Gas Price Regulation, Deregulation and Markets	
7	3	Electricity: How much should we pay for demand response?	
8	3	Risk Management, Futures Markets and Derivatives	
9	3	Energy and Climate Change	
10	3	Internalizing Environmental Externalities with a Focus on CO2 Emissions Cap and Trade Mechanisms	
11	3	Coal and Nuclear Power	
12	3	Energy Efficiency Policies	
13	3	Renewable Energy Policies	
14	3	Curbing pollution: How far and how fast?	
15	3	Green Paradox: Can environmental policy lead to more pollution?	
16	3	Revision	

Approved by Dept. Chair: ----------

Date of Approval: ----------

Extra Information: *(Updated every semester and filled by course instructor)*

Course Instructor: Dr
Office No:
Extension:
Email:
Office Hours: