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## ENERGY ECONOMICS, ENVIRONMENT AND POLICY

2 credits (Spring)

資源経済・環境と政策 2 単位 (春学期)

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### Course Description:

Non-PCP students can also register for this class.

The course is broad in scope, and has an essentially interdisciplinary nature. The vision for the class is to create a participatory learning process that will combine your active involvement in lectures with a group project that will provide an opportunity for in-depth exploration of an energy issue. The class consists of lectures with examples of the real time energy issues at the local, national and global levels. This class will mainly focus on the policy side of energy with associated environmental impacts. The aim is to make students more familiar with the various topics of energy economics, including the pricing mechanism, economic impacts of energy shocks, and importance of energy carriers in emerging and developed economies. Moreover, this course aims to familiarize students with renewable energy and sustainable economic growth using these resources.

### Textbooks:

N. Yoshino, F. Taghizadeh-Hesary (Eds.)

Book title: Monetary Policy and the Oil Market

Publisher: Springer: Tokyo

Publishing date: 2016

### Reference Books:

Articles:

1. Taghizadeh-Hesary, F., N. Yoshino, M. M. H. Abadi, and R. Farboudmanesh. (2016). the Response of Macro Variables of Emerging and Developed Oil Importers to Oil Price Movements. *Journal of the Asia Pacific Economy*. DOI: 10.1080/13547860.2015.1057955.
2. N. Yoshino and F. Taghizadeh-Hesary (2015) "Effectiveness of the Easing of Monetary Policy in the Japanese Economy, Incorporating Energy Prices". *Journal of Comparative Asian Development*. 14(2): 1-22. DOI:10.1080/15339114.2015.1059059
3. Yoshino, N. and Taghizadeh Hesary, F. (2014), 'Monetary Policies and Oil Price Fluctuations Following the Subprime Mortgage Crisis'. *Int. J. Monetary Economics and Finance*, 7(3): 157-174, DOI: 10.1504/IJMEF.2014.066482
4. Taghizadeh Hesary, F. and Yoshino, N. (2014), 'Monetary Policies and Oil Price Determination: An Empirical Analysis', *OPEC Energy Review*, 38 (1): 1-20  
Available: <http://onlinelibrary.wiley.com/doi/10.1111/opec.12021/abstract>
5. Taghizadeh Hesary F., Yoshino, N., Abdoli, G. and Farzinvas, A. (2013), 'An Estimation of the Impact of Oil Shocks on Crude Oil Exporting Economies and their Trade Partners', *Frontiers of Economics in China*, 8(4): 571-591
6. Taghizadeh Hesary, F. and Yoshino, N., (2013), 'Which Side of the Economy Is Affected More by Oil Prices: Supply or Demand?' United States Association for Energy Economics (USAEE) Research Paper No. 13-139. Available: [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2333991](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2333991)

### Course Plan:

- 1 Introduction and Background
- 2 Energy Demand - Session 1
- 3 Energy Demand - Session 2
- 4 Energy Supply and the Economics of Depletable Resources - Session 1
- 5 Energy Supply and the Economics of Depletable Resources - Session 2
- 6 Energy Pricing - Session 1
- 7 Mid-Term Review
- 8 Energy Pricing - Session 2

- 9 Energy Pricing - Session 3
  - 10 Energy Price Shocks  
Macroeconomic Impacts of Energy Price Shocks
  - 11 CO2 Emission and the Environmental Impacts of non-Renewable Energy Resources (Oil, Gas, Coal)
  - 12 Renewable Energy Resources
  - 13 Review of all Sessions
  - 14 Conclusion and the Final Exam
- Other Coursework and Assignments

### Lecturer's Comments to Students:

In This course you will learn about:

- 1- The potential role of various renewable and non-renewable energy sources in fulfilling our energy demands, and the associated environmental impacts.
- 2- The operation of energy markets. How is the pricing mechanism for non-renewable energy carriers (oil, gas, coal)?
- 3- What are the impacts of higher energy prices on various economies, including emerging and developed economies?
- 4- What are the impacts of economic factors on energy prices?
- 5- What are renewable energy resources? And how can we achieve sustainable economic growth using these resources?

### Method of Evaluation:

COURSE ASSIGNMENTS:

Midterm exam

There will be a take-home midterm exam. The purpose of the exam is to provide an opportunity for reflection on readings and lecture materials, and to facilitate integration of the concepts explained in class. Students are welcome to use the course readings and lecture notes to complete the exam but MUST work independently.

Final exam

There will be a final exam, and the references for questions in the final exam are lecture materials of the class. Students are welcome to use the course readings and lecture notes to complete the exam but MUST work independently.

Class participation

Active participation in class is mandatory. All students will write a summary of the class lectures and will submit it at the end of each session. The last 15 minutes of each class will be allocated for this purpose. In addition to the summary, students must write the answer to one question given in each class. This question will be mainly a general one and the purpose is to assess the analytical ability of the students.

### GRADING

Midterm Exam	10%
Class participation	50%
Final Exam	40%

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Total	100%
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