

OIECOX02 - Energy and climate change economics

Professor: Patrice Geoffron
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Department: International affairs
Semester: 1

Course level: L3 undergraduate
Domain: Economics
Teaching language: English
Number of in-class hours: 36
Number of course sessions: 11 + Exam
ECTS: 6

Course description and objectives

Climate change is mainly linked to an energy model historically based on fossil fuels (coal, oil and natural gas) since the first industrial revolution. Limiting the main effects of climate change (extreme weather events, air pollution, sea level growth, ...) and their economic costs imply to deploy low carbon energy means (wind power, solar power, ...), to improve energy efficient and, mode widely, to transform the organisation of our societies. The course addresses the main economic challenges related these transformations.

The objectives of the course is to understand the economic issues related to energy and climate change and the main principles of the economics tools and regulations for the management.

Prerequisites

None

Learning outcomes

Climate change issues have received increasing attention over the last years, with a huge impact on the energy systems.

In this context, the course examines:

- Economic theory, empirical perspectives, and political economy of energy supply and demand, both for fossil fuel and renewable sources of energy.
- Public policies affecting energy markets including taxation, price regulation and deregulation, energy efficiency, and control of emissions.
- A specific attention will be given to economic policies such as carbon taxes and tradable emission permits and to the problems of displacing fossil fuels with new energy technologies.

Assignments and grading

Group presentations (50%) + final exam (50%)

The numerical grade distribution will dictate the final grade. The passing grade for a course is 10/20.

Class participation: Active class participation – this is what makes classes lively and instructive. Come on time and prepared. Class participation is based on quality of comments, not quantity.

Exam policy: In the exam, students will not be allowed to bring any document (except if allowed by the lecturer). Unexcused absences from exams or failure to submit cases will result in zero grades in the calculation of numerical averages. Exams are collected at the end of examination periods.

Course structure

Session	Topic
1	Introduction : what do we mean by « energy transition » (1/2)
2	Introduction : what do we mean by « energy transition » (2/2)
3	Climate change economics : topics and tools (1/3)
4	Climate change economics : topics and tools (2/3)
5	Climate change economics : topics and tools (3/3)
6	Implementing the Paris-Agreement : principles and challenges (1/3)
7	Implementing the Paris-Agreement : principles and challenges (2/3)
8	Implementing the Paris-Agreement : principles and challenges (3/3)
9	World Energy Outlook 2019 : analyses and long term scenarios (1/3)
10	World Energy Outlook 2019 : analyses and long term scenarios (2/3)
11	World Energy Outlook 2019 : analyses and long term scenarios (3/3)
12	Final exam

Bibliography

Reading list and documents will be given in class and proposed online, on My Course, as well as course presentations. No specific textbook is required.

MyCourse

This course is on MyCourse: **Yes**

Academic integrity

Be aware of the rules in Université Paris Dauphine about plagiarism and cheating during exams. All work turned in for this course must be your own work, or that of your own group. Working as part of a group implies that you are an active participant and fully contributed to the output produced by that group.

Academic calendar

Dates (Monday/Sunday)		
02/09/19	09/08/19	Welcome Week + French seminar
09/09/19	15/09/19	1
16/09/19	22/09/19	2
23/09/19	29/09/19	3
30/09/19	06/10/19	4
07/10/19	13/10/19	5
14/10/19	20/10/19	6
21/10/19	27/10/19	7
28/10/19	03/11/19	Holidays
04/11/19	10/11/19	8
11/11/19	17/11/19	9
18/11/19	24/11/19	10
25/11/19	01/12/19	11
02/12/19	08/12/19	Review w.
09/12/19	15/12/19	Exams
16/12/19	22/12/19	
23/12/19	29/12/19	Holidays
30/12/19	05/01/20	
06/01/20	12/01/20	