- Faculté des sciences économiques
- www.unine.ch/seco

Energy Economics (5ER2032)

Filières concernées	Nombre d'heures	Validation	Crédits ECTS
Master en économie appliquée	**Cours: 2 ph**	**Voir ci-dessous**	3
Master en sciences économiques, orientation politique économique	**Cours: 2 ph**	**Voir ci-dessous**	3
Master of Law en innovation	**Cours: 2 ph**	**Voir ci-dessous**	3
Master of Science en innovation, orientation Management de la R&D	**Cours: 2 ph**	**Voir ci-dessous**	3

ph=période hebdomadaire, pg=période globale, j=jour, dj=demi-jour, h=heure, min=minute

Période d'enseignement:

- Semestre Printemps

Equipe enseignante:

Prof. Mehdi Farsi
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CH-2000 Neuchâtel
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Email: mehdi.farsi@unine.ch

Objectifs:

This course provides students with an introduction to the principles of energy economics and related policy applications. The main objective is to learn how to apply Microeconomic concepts and Econometric methods to various problems in energy demand and supply. Through these applications, the course will introduce students to how analytical and empirical models can be drawn from theory. An emphasis will be given to economic perspectives and theories that consider energy principles and biophysical aspects of economic systems. The rationales for policy intervention and regulation of energy markets and the role of economic analysis in designing such policies will be explored. The course will also cover the economics of exhaustible resources and energy efficiency as well as energy innovations and their diffusion mechanisms. An ancillary objective of the course is to introduce students to the use of analytical tools and empirical models drawn on Microeconomic theory.

Contenu:

The course consists of a diverse range of topics revolving around the following lines:
- Energy and economic systems
- Energy innovations, history and policy challenges
- Economic models of energy demand
- Economics of energy efficiency
- Economics of exhaustible resources
- Empirical modeling of energy demand

Forme de l'évaluation:

Final grade is based on a 90 minute written midterm exam (50%) and a 90 minute written exam during the last lecture of the semester (50%). Assignments and participation in class activities are rewarded by a bonus of up to 20% of the final grade. Students who miss more than 4 hours lecture do not qualify for the bonus.
Retake: 2-hour written exam during the exam session (100%) without bonus.
With the exception of a simple calculator no documents or connected objects are allowed during the exams. Any violation of these rules will be considered as fraud, leading to the withdrawal of unauthorized items and possibly exam failure.

Documentation:

The fundamental part of the course is based on Schwarz's new textbook:
- Energy Economics, Peter M. Schwarz, 2018.
The course will also draw on selected readings from the following books and a series of journal articles that will be made available during the semester.
- International Energy Markets: Understanding Pricing, Policies and Profits. Dahl, C.A. 2004.
- Energy Economics - Theory and Applications. Zweifel, P., Praktiknjo, A. and Erdmann, Georg, 2017.
- Microeconomics and Behavior, Robert H. Frank, 2015, 9th edition.
- International Handbook on the Economics of Energy. Hunt, L. and Evans, J. (editors). 2008.
- Energy Efficiency and Sustainable Consumption: The Rebound Effect. Herring, H. and Sorrell, S. (editors), 2009.

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Forme de l'enseignement:

Lecture: 2 hours per week
Office hours: upon request by e-mail