Remarque
Special schedule. See the MTE website: http://cdm.epfl.ch/mte/study-plan

Summary
This course involves the theoretical and empirical analysis of technology Policy as applied to the issue of energy transition. To address this so-called “Grand Challenge”, the combination of market-based instruments with technology policy seems to be of critical importance.

Content
We present a general framework based on the notions of private and social returns of R&D and innovation and market failures. We examine then the various types of interventions by the State both in terms of environmental policy and technology policy as well as the different types of errors that can be done. We clarify the opposition between horizontal and vertical policy and use smart specialisation as an example. We finally apply all these concepts to the problems of climate change and energy transition.

Keywords
technology policy, private and social returns of R&D, market failures, vertical and horizontal policy, smart specialisation, market-based instruments, climate change

Learning Prerequisites
Recommended courses
Principles of Microeconomics (A. Mack)

Important concepts to start the course
Knowledge externalities
Market failures
Environmental externalities

Learning Outcomes
By the end of the course, the student must be able to:
• Analyze market failures situations
• Argue cases of economic policy
• Compare national policies
• Assess / Evaluate the efficiency of policy solutions

Language
English
Credits
2
Session
Winter
Semester
Fall
Exam
During the semester
Workload
60h
Weeks
14
Hours
2 weekly
Lecture
1.5 weekly
Number of positions

Transversal skills

• Access and evaluate appropriate sources of information.
• Make an oral presentation.
• Plan and carry out activities in a way which makes optimal use of available time and other resources.

Teaching methods

Formal teaching, team work

Expected student activities

Preparation of oral presentation, writing of a document

Assessment methods

Continuous assessment combining:
25% individual work
75% final project

Resources

Bibliography
To be provided at the first session