

Worldwide energy supply issues

Subject Information	
Code	UE4 S2
Credits (ECTS)	7
Semester	1 (mid-September – mid-January)
Time Allocation (Lec. / Prac. / Lab/ Project)	32 h / 28 h / 0 / 0
Lecturer	Dr Didier Haillot + other lecturers
Assessment	Final exam

Lec. : Lectures

Prac. : Practical works ("small classes")

Lab. : Laboratories

Subject Description	
Introduction	<p>The purpose of this course is to provide information on all global energy problems: energy supply, resource-dependent industries, macroeconomic implications of energy demand, geopolitical issues, and specifics of the situation in developing countries.</p> <p>This course is also devoted to cycle life analysis of any given process, and in particular to carbon balance</p>
Learning outcomes	<p>After this course the students should be able to:</p> <ul style="list-style-type: none"> - consider energy issues from a technical, economic and geopolitical point of view; - explain the links between economic development and energy consumption, between energy prices and energy demand; - explain how energy policies are set up. - master basic principles of cycle life analysis. - know how to perform such an analysis, especially the carbon balance.
Content	<ol style="list-style-type: none"> 1. Main sources of energy Oil, Natural gas, Coal Non-conventional fuels Nuclear energy Renewable energies 2. International context Environmental, Economic, Policy 3. Market and energy conservation Major global stakeholders Pricing and taxation of energy 4. Concept of sustainable development (Didier Haillot) Carbon accounting, Life Cycle Analysis
Literature	<p><i>Introduction to Global Energy Issues</i>. Renaud Gicquel, May Gicquel, August 6, 2013 by CRC Press.</p>