

## Worldwide energy supply issues

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

*Lec. : Lectures*

*Prac. : Practical works ("small classes")*

*Lab.: Laboratories*

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