

3.0 credits

30.0 h

2q

Teacher(s) :	Jeanmart Hervé ; Bartosiewicz Yann ;
Language :	Français
Place of the course	Louvain-la-Neuve
Inline resources:	http://icampus.uclouvain.be/claroline/course/index.php?cid=MECA2420_001
Prerequisites :	-- MECA 2150 (Cycles thermiques) -- MECA 2855 (Thermodynamique et énergétique)
Main themes :	- Advanced technologies for the transformation of primary energy. - Elements for a technological and prospective in energy. - Impact of environmental constraints.
Aims :	- Introduce to the most recent developments in the field of energy systems. - Give access to the students to the present technical literature in the field. - Show the impact of the environmental constraints of the evolution of the energy technologies. - Motivate the students for their active participation in a course which concludes a sequence of courses in thermodynamics and energy systems. <i>The contribution of this Teaching Unit to the development and command of the skills and learning outcomes of the programme(s) can be accessed at the end of this sheet, in the section entitled "Programmes/courses offering this Teaching Unit".</i>
Evaluation methods :	The exam consists in the evaluation of the report.
Content :	The selected themes consist in topical questions. For example, let us mention: estimation of the cost of the kWh produced in a fossil fuel or nuclear power plant, combined production of heat and electricity, district heating, combined steam - gas power plants, gasification of solids, fuel cells, wind energy, plant repowering, the distribution of electricity through the grid, and nuclear fusion reactors. The different themes are presented by practitioners or researchers. The students prepare the reports based on the presentations and on their own readings. These reports are then examined by the teachers and a detailed discussion takes place with the students. After correction, the final version of the reports is uploaded in the web site of the course.
Cycle and year of study :	> Master [120] in Electro-mechanical Engineering > Master [120] in Mechanical Engineering
Faculty or entity in charge:	MECA