


5.00 credits

30.0 h + 30.0 h

Q2

Teacher(s)	Contino Francesco ;Jeanmart Hervé ;
Language :	English
Place of the course	Louvain-la-Neuve
Main themes	<ul style="list-style-type: none"> • Experimental characterization of energy conversion technologies • Introduction to the metrology specific to the energy systems • Application of uncertainty analysis to energy systems • Introduction to the safety aspects of lab work
Learning outcomes	<p>At the end of this learning unit, the student is able to :</p> <p>Contribution of the course to the program objectives (N°)</p> <ul style="list-style-type: none"> • AA1.1, AA1.2, AA1.3 • AA3.1, AA3.2 • AA5.3, AA5.4, AA.5.5, AA5.6 • AA6.1, AA.6.3 <p>¹ Specific learning outcomes of the course</p> <ul style="list-style-type: none"> • Identify the different components of energy conversion technologies • Operate machines in laboratory • Collect and report experimental data • Analyze, interpret and appraise experimental results including their uncertainty analysis • Compare theoretical and actual performances of energy conversion technologies
Evaluation methods	<p>Suggested evaluation methods :</p> <ul style="list-style-type: none"> • Continuous assessment during the labs • Oral examination based on the lab reports
Teaching methods	<ul style="list-style-type: none"> • Laboratory activities • Formal lectures
Content	<p>Suggested energy conversion technologies:</p> <ul style="list-style-type: none"> • IC engines (CHP units) • Gas turbines • Wind turbines • PV panels • Heat pump • Compressor • Solar thermal • Cooling technologies • Batteries • Fuel cell
Faculty or entity in charge	ELME

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Learning outcomes
Master [120] in Mechanical Engineering	MECA2M	5		
Master [120] in Electro-mechanical Engineering	ELME2M	5		