

5.00 credits

30.0 h

Q2

Teacher(s)	Contino Francesco ;De Jaeger Emmanuel ;Jeanmart Hervé ;
Language :	English > French-friendly
Place of the course	Louvain-la-Neuve
Learning outcomes	<p>At the end of this learning unit, the student is able to : Referring to the LO of the Master in Energy engineering, the course focuses on:</p> <ul style="list-style-type: none"> • AA1.1, AA1.2, AA1.3 • AA2.1, AA2.2, AA2.4 • AA3.1, AA3.3 • AA4.1, AA4.2, AA4.4 • AA5.3, AA5.4, AA5.5, AA5.6 • AA6.2, AA6.4
Evaluation methods	<p>Except in exceptional cases, the evaluation concerns the group's services. The following elements will be taken into account:</p> <ul style="list-style-type: none"> - the work of the group during the year; - interim reports and presentations; - the final report; - presentations and answers to end-of-term/final questions: in front of professionals and/or public. <p>Note: The use of generative AI software such as chatGPT is permitted only for assistance in writing of the reports requested in this course. In this instance, however, an appendix will be required detailing, for each of the sections concerned, how the AI was used (information search, drafting and/or correction of the text, ...). Furthermore, external sources of information must be systematically cited in compliance with bibliographic referencing standards.</p>
Teaching methods	<p>a. <u>Goals</u></p> <p>The objective of the project is to develop a solution for the energy supply of an island or an isolated community, based exclusively on the use of renewable energies.</p> <p>At the start of the semester, students freely form groups of 4 to 6 people.</p> <p>The steps generally followed are:</p> <ul style="list-style-type: none"> - the collection of information and methods for quantifying the renewable resources available on the island studied as well as possible energy storage technologies - first static design of a solution - static design optimization - dynamic design <p>b. <u>Support</u></p> <p>Throughout the semester, students are accompanied by an academic tutor whom they meet regularly. In addition, resource people (student instructors, assistants, technical staff) are available to handle specific questions.</p> <p>Bibliographic references and software resources are made available to students by the teaching team.</p> <p>According to the opportunities and practical availability, the course can be completed by a technical visit and / or seminars given by experts from industry</p>
Content	<p>The implementation of renewable energy sources is the key element of the energy transition.</p> <p>This project confronts the participants with several aspects of the implementation of this transition in particular situations such as, for example, the energy supply of an island.</p>
Faculty or entity in charge	ELME

Programmes containing this learning unit (UE)

Program title	Acronym	Credits	Prerequisite	Learning outcomes
Master [120] in Energy Engineering	NRGY2M	5		