


This learning unit is not open to incoming exchange students!

Language :	English > French-friendly
Place of the course	Louvain-la-Neuve
Main themes	<p>The Master thesis is</p> <ul style="list-style-type: none"> - the opportunity to acquire transversal competencies not yet or only partially developed previously, - a project aiming at solving a complex engineering problem by applying competencies previously acquired. <p>The Master thesis may have a major 'research' or 'technological development' component. These components are however not exclusive; some theses may involve both dimensions.</p> <p>The transversal competencies (referring to LO's) developed during the Master thesis are mainly: writing, communication, planning and argumentation, openness to the societal aspects of the project.</p> <p>Information about master theses can be found on the dedicated Moodle web site https://moodleucl.uclouvain.be/course/view.php?id=11582</p>
Learning outcomes	<p>At the end of this learning unit, the student is able to :</p> <p>LO1 to demonstrate he/she masters a body of knowledge and basic skills in science and/or engineering sciences, bound about his/her thesis;</p> <p>LO2 to lead to completion a major, in amplitude and spent time, engineering approach applied to the development of a product, service or facility referred to the thesis (<i>applies to theses with a major technological development component</i>) ;</p> <p>LO3 to lead to completion a major, in amplitude and spent time, research work aiming at the understanding and the contribution to the resolution of an original scientific question of theoretical or physical type (<i>applies to theses with a major research component. They are however not exclusive; some theses may involve both dimensions, research and development</i>) ;</p> <p>LO4 to organise and plan the master thesis work on the basis of allocated resources and time constraints, of security (if applicable) and of available competencies ;</p> <p>LO5 to efficiently communicate both orally and in writing (in French and/or in English) to realise the master thesis ;</p> <p>LO6 to take into account the societal impact of his/her master thesis (possible economical recovery and/or ethical impact and/or environmental and/or social impact).</p> <p>Specific learning outcomes are defined on the Moodle web site.</p>
Evaluation methods	<p>Three grids (referring to LO's) define criteria to evaluate the year's work, the manuscript and the oral defense.</p> <p>The program commission may eventually add additional criteria.</p> <p>The criteria are evaluated by a letter (A: excellent, B: very good, C: good, D: satisfactory, E: sufficient, F: failed, NA: not applicable).</p> <p>A final note is then attributed.</p>
Teaching methods	<p>The student is responsible for the organisation of regular meetings with his/her director(s).</p> <p>The student first prepare and hand in a thesis plan (roadmap) to his/her director(s) (and to program commission if requested) (deadline : 1 or 2 months after the beginning of the project).</p> <p>The plan contains the following items (not necessarily all of them):</p> <ul style="list-style-type: none"> • clear statement of the objective(s), • list of targeted LO's (especially specific ones), • context (application domain, societal impacts, ...), • proposed methods (theory, experimental tools, developments, simulation, ...), • list of available technical (equipments, codes, ...) and human <p>(supervisors, and resource persons for technical aspects) resources,</p> <ul style="list-style-type: none"> • first bibliographical research, including technical manuals, • first schedule of tasks with deliverables.

Content	<p>The Master thesis may have a major “research” or “technological development” component. These components are however not exclusive; some theses may involve both dimensions, “research” and “technological development”.</p> <p>The Master thesis may also be done in collaboration with industry.</p>
Inline resources	<p>Rules and guidelines, important dates, templates and other information about master theses can be found on the dedicated Moodle web site https://moodleucl.uclouvain.be/course/view.php?id=11582</p>
Faculty or entity in charge	EPL

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Learning outcomes
Master [120] in Data Science Engineering	DATE2M	25		