

The version you're consulting is not final. This course description may change. The final version will be published on 1st June.


3.00 credits	22.5 h	Q2
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This biannual learning unit is not being organized in 2025-2026 !

Language :	French
Place of the course	Louvain-la-Neuve
Main themes	Starting from the principles and frameworks related to sustainable development, the module investigates the ways in which scientific research and design practice in architecture and engineering can adequately respond to current and prospected challenges – e.g. climate change, energy crises, demands for comfort, satisfaction, health and well-being in buildings – within a resilient and circular approach to architectural design.
Learning outcomes	<p>At the end of this learning unit, the student is able to :</p> <p>Part A - Architecture and sustainable development - critical analysis of architecture in the sustainable development context, using written texts and examples</p> <p>¹ Part B - Advanced special techniques: energetic design of technical installations in relation to energetic design of buildings</p>
Evaluation methods	Preparation of a synthesis article (5000-8000 words), providing a critical and prospective review of the literature and the state of the art in a field of research relevant to the course (1-2 people).
Teaching methods	The course is based on ex-cathedra lectures, workshops, seminars and fieldwork.
Content	<p>The course is articulated on the following contents:</p> <ul style="list-style-type: none"> • From sustainability to resilience and circularity • Environmental labels and energy certificates • Green buildings vs. healthy buildings • Comfort, satisfaction, health and well-being in buildings • Physics vs Psychophysics: boundaries of tolerance • Methods and tools for environmental design and analysis • Research by design vs Design by research

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Faculty or entity in charge	LOCI

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Learning outcomes
Master [120] in Civil Engineering	GCE2M	3		
Master [120] in Architecture and Engineering	ARCH2M	3		