

4.0 credits	60.0 h	1+2q
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Teacher(s) :	Van Moeseke Geoffrey ;
Language :	Français
Place of the course	Bruxelles Saint-Gilles
Aims :	<p>The need for technical installations in buildings is established. they allow fluids and energy to flow through the building in order to satisfy requirements related to physical conditions, security, activities and hygiene.</p> <p>The rising number of technical installations and their increasing complexity is a fact. Their integration in the building is challenging for the architect and asks for a specific concern.</p> <p>All buildings, whatever its size or program, include a network dedicated to fluids and energy. This network is constituted of cavities gathering elements of various technical installations. Those cavities may inspire architectural organisations and expressions straightening the architectural design.</p> <p>Moreover, today's focus on energy efficiency of buildings requires a specific attention for HVAC and lighting techniques on behalf of architects.</p> <p>Mastering the integration of technical installations in buildings implies that the architect, alone or with the help of engineers, is able to define :</p> <ul style="list-style-type: none"> -- The installations fulfilling specific requirements -- Specific elements of those installations and the cavities needed in the building to insert those elements -- The logical organisation of the fluids and energy networks in a building <p><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></p>
Evaluation methods :	<p>1st semester :</p> <p>Written exam (theory and practice).</p> <p>During the semester, the student is asked to make an exercise of integration of technical installations in the building he designed in the former year studio.</p> <p>2nd semester :</p> <p>No exam.</p> <p>The student is asked to produce a report describing the integration of technical installations in the building he is currently designing in the studio. The final evaluation for this course is made during the jury of the studio on the basis of architectural documents.</p>
Content :	<p>In the first semester, this course discusses strategic principes and sizing methods for heating, ventilation and cooling installations. In the second semester, the course discusses discusses sizing methods for the technical installations related to water conveyance, sewage disposal, natural and artificial lighting and acoustical correction. The technical installations of various types of buildings are also examined, including :</p> <ul style="list-style-type: none"> -- Single family housing -- Apartment housing -- Offices -- Auditoriums -- Sport facilities <p>Those buildings are studied with a design approach including the definition of :</p> <ul style="list-style-type: none"> -- Fluids and energy needs, including legal requirements (air quality requirements, temperature and humidity levels, electrical power, ...) -- Description, shemes and spatial needs of the technical installations -- Their integration in technical cavities organised in the building -- Sizing of the technical installation and those cavities -- Design opportunities generated by those cavities <p>One visit is organised allowing students to examine technical installations of a building in use.</p>
Cycle and year of study :	> Master [120] in Architecture (Bruxelles)
Faculty or entity in charge:	LOCI