

Teacher(s)	Gobbo Emilie ;
Language :	French
Place of the course	Tournai
Main themes	<p>This teaching unit is designed to develop transferable and practical skills in the fields of Construction, Materials and Facilities.</p> <p>In particular, it is designed to develop extensive familiarity with the documentation of technical, scientific and regulatory references and professional communication tools (specifications and graphic material).</p> <p>It also aims to develop a global overview of materials and techniques involved in the process of building.</p>
Learning outcomes	<p>At the end of this learning unit, the student is able to :</p> <p>This teaching unit particularly focuses on three axes in the profile of the holder of a Master's degree in Architecture: giving concrete expression to a technical dimension, making use of other disciplines and adopting a professional approach.</p> <p>Specific learning outcomes:</p> <p>By the end of this course, students will be able to</p> <ul style="list-style-type: none"> • make use of technical, scientific and regulatory documentation relating to building materials and techniques and HVAC systems. • develop and comprehensive proposal for construction systems and facilities which is appropriate for the properties of a site and an architectural project. • manage complex construction projects (details), using the interface of different techniques. • produce documents conveying an architectural proposal to professionals (specifications, drawings, etc.). <p>Contribution to the learning outcomes reference network:</p> <p>1 Use the technical dimension</p> <ul style="list-style-type: none"> • Be familiar with and interpret the main technical principles of construction • Observe and assess the main construction principles that give architecture a formal, material and temporal dimension • Be able to apply the various basic technical principles in producing a work of architecture • Acquire an instinctive understanding of structures to use in producing a creative and/or innovative work of architecture <p>Express an architectural procedure</p> <ul style="list-style-type: none"> • Express ideas clearly in oral, graphic and written form <p>Adopt a professional attitude</p> <ul style="list-style-type: none"> • Organise, plan, develop and bring together the different strands of individual or collective work • Test and observe the framework of professional practice and to architectural knowledge through independent involvement
Evaluation methods	<p>• ASSESSMENT AND ITS CRITERIA:</p> <p>Oral and written assessment (group): a referential study carried out in a group of 2 to 3 people, to be submitted in an examination session with an oral presentation.</p> <p>Continuous assessment (individual): research and details notebook, which must include at least 2 elements</p> <ul style="list-style-type: none"> - a report on personal observations and research carried out as part of the referential study, illustrating the proportion of individual work in the group work. - sketches and notes taken during site visits and case studies presented during the session, which must be recorded in the same notebook with references. <p>ASSESSMENT CRITERIA :</p> <ul style="list-style-type: none"> - Ability to analyse and use the tools provided, critical view of the analysis in relation to the issues set out, graphic and communicative quality of the referential study. - Quality of the research and drawing of your personal detail notebook.

Teaching methods	<p>The teaching method used in this course is based on:</p> <ul style="list-style-type: none"> -Theoretical presentations -Case studies <p>-Site visits, where the designer and/or builder will present the challenges of the project, the construction choices made, and the relationships between the various parties involved in the project,</p> <p>The course combines a theoretical and practical approach, incorporating exchanges of experience with professionals, site visits, and theoretical content. The latter addresses the main challenges currently facing designers, particularly the management of a normative, regulatory, and performance framework while integrating architectural and sustainability considerations.</p>
Content	<p>The teaching unit is a continuation of the themes covered in the 2nd and 3rd annual blocks of the BAC.</p> <p>Two main themes will be covered in this course: the structure and the envelope.</p> <p>The envelope through an exploration of expected performance and functions:</p> <p>The focus will be on the façade as an element of the envelope and will be apprehended according to</p> <ol style="list-style-type: none"> 1. Its load-bearing role (unicity with the structure) or not (structural dissociation and articulation with the building's load-bearing structure - detail and constructive node) 2. Its materiality (constituent materials) and materialization (composition, functional layers, assembly systems, and implementation in relation to architectural intentions and the notion of technical reversibility). 3. Its technical characteristics: compliance with the standards, technical and performance framework. <p>The structure's ability to meet current and future needs: programmatic and normative evolution (notion of spatial reversibility).</p>
Inline resources	<p>All slideshows and documents will be posted online on Moodle.</p>
Bibliography	<ul style="list-style-type: none"> • Outil GRO et outil checklist Réversibilité • NIT, Buildwise • CCTB • Andrea Deplazes, <i>Construire l'architecture</i>, Birkhäuser, 2013, Bâle • Alexander Reichel, Kerstin Schultz, <i>Support I Materialise</i>, Birkhäuser, 2013, Bâle • Bert Bielefeld, <i>Basics building construction</i>, Birkhäuser, 2015, Bâle • Kenneth Frampton, <i>Studies in Tectonic Culture</i>, MIT Press, Cambridge, London, 1996. • Edward R. Ford <i>The details of modern architecture</i>. MIT Press Cambridge, London, 1994. • Peter Rice, <i>Mémoire d'un ingénieur</i>, Le Moniteur, Paris, 1998. • Cecil Balmond, <i>Informal</i>, Prestel, 2002 • STAIB, DÖRRHÖFER, ROSENTHAL, <i>Components and Systems</i> • <i>Modular Construction Edition Detail</i> Birkhäuser 2008 • <i>Le Petit DICOBAT : Dictionnaire général du bâtiment</i>, Jean de VIGAN, Edition ARCATURE, Paris Construire l'architecture ' du matériau brut à l'édifice, A.Deplazs & Coll., 2008, Birkhauser, Bâle. • <i>Construire des façades</i>, Th Herzog & Coll., 2004, Edition DETAIL & Presses polytechnique et universitaires romandes, Lausanne. • <i>Guide pratique des règles de l'art</i>, M.Proces, O.Haenecour & Th.Loeth, 2016, Edition Larcier, Bruxelles
Faculty or entity in charge	<p>LOCI</p>

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Learning outcomes
Master [120] in Architecture (Tournai)	ARCT2M	3		