

Teacher(s)	Delcommune Thierry ;Malevez Jerome ;
Language :	French
Place of the course	Bruxelles Saint-Gilles
Main themes	<p>This teaching unit is designed to provide the necessary mental flexibility to see in space and understand the representation of three dimensional objects. Moreover, the care required in making working drawings brings necessary rigour for strong graphic expression.</p> <p>Monge 2 :</p> <ul style="list-style-type: none"> • Fold lines • Rotation • Pierce point • Volume <p>Perspective Amount of sunshine</p>
Learning outcomes	<p>At the end of this learning unit, the student is able to :</p> <p>Specific learning outcomes:</p> <p>While developing vision in three dimensional space and graphic thinking, by the end of the course students will be able to</p> <ul style="list-style-type: none"> • carry out operations to manipulate plane and lines in Monge's theory (Monge 2) • use axonometry and perspective • manipulate complex surfaces through an understanding of their geometric properties 1 • describe a work of architecture in terms of light and shade using a theoretical or real source <p>Contribution to the learning outcome reference framework:</p> <p>Express an architectural procedure</p> <ul style="list-style-type: none"> • Be familiar with, understand and use the codes for representing space, in three dimensions. • Test and use relevant means of communication in relation to the target objectives • Express ideas clearly in oral, graphic and written form
Evaluation methods	Students will sit a written examination on the material pertaining to Monge II in the May-June session, at the end of the quadrimester.
Teaching methods	Same as in LBARC1120.
Content	<p>MONGE II</p> <ol style="list-style-type: none"> 1. Definition of planes and representations of volumes in space. 2. Manipulation of planes and volumes by the techniques of rabattement and projection. 3. Section and interpenetration of volumes; 4. Development of the concepts of the intersection of planes and of points of intersection. <p>SOLAR GEOMETRY</p> <ol style="list-style-type: none"> 1. Drawing of theoretical shade in natural and artificial light to a point, a line segment, surface and volume and its application to the field of representation of the architectural project. 2. Study the sunshine of a building by its own shadow and scope depending on its location and for a given date. 3. Development of solar mask of a building for a given site. <p>PERSPECTIVE</p> <ol style="list-style-type: none"> 1. Definition of the constitutive elements of conic projection and of their peculiarities. 2. Choice and positioning of the image and of the spectator. 3. Resolution of an image in perspective with or without accessible vanishing points. 4. Constitution of a method for resolving the problems of representing three dimensions that arise in the course of the architecture project. 5. Construction of the perspective of a complex volume and its shadow.

<p>Bibliography</p>	<p>Guion, A. <i>Cours de géométrie Descriptive : Tome 2, Méthode des plans cotés</i>. Bruxelles : édition De Boeck, 1969 De Sloovere H. <i>Cours de Géométrie Descriptive : Méthode de Monge</i>. Bruxelles : édition De Boeck, 1991 JUNGSMANN, J-P. <i>Ombres et lumières : un manuel de tracé et de rendu</i>. Paris : édition de la Vilette, 1995 Aubert J. <i>Cours de dessin d'architecture à partir de la géométrie descriptive</i>. Paris : édition de la Vilette, 1980 De Herde A., Gracia E. et Le Paige M. <i>Guide d'aide à la conception bioclimatique</i>. Louvain-La-Neuve : Ed. C.R.A., Architecture et Climat, 1986 Carlo Argan, Carlo. <i>Perspective et histoire au Quattrocento</i>. Chatillon-sous-Bagneux : édition de la passion, 1990 Durant, J-P. <i>La représentation du projet : Approche pratique et critique</i>. Paris : édition de la Vilette, 2003 Savignat, J-M. <i>Dessin et architecture du Moyen-âge au XVIIIème siècle</i>. Paris : Ecole Nationale Supérieure des Beaux-arts, 1980 Ludi, Jean-Claude. <i>La perspective pas à pas : Manuel de construction graphique de l'espace et tracé des ombres</i>. Paris : Dunod, 2009 (3ème édition)</p>
<p>Faculty or entity in charge</p>	<p>LOCI</p>

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Learning outcomes
Bachelor in Architecture (Bruxelles)	ARCB1BA	3		