UCLouvain

lbarc1121

2024

Spatial geometry : exploration of descriptive drawing

3.00 credits	15.0 h + 22.5 h	Q2

Teacher(s)	Delcommune Thierry ;Malevez Jerome ;
Language :	French
Place of the course	Bruxelles Saint-Gilles
Main themes	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. Monge 2 : • Fold lines • Rotation • Pierce point • Volume • Perspective • Amount of sunshine
Learning outcomes	
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	**MONGE II** 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. **SOLAR GEOMETRY** 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. **PERSPECTIVE** 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.
Bibliography	Guion, A. *Cours de géométrie Descriptive :Tome 2, Méthode des plans cotés.* Bruxelles : édition De Boeck, 1969 De Sloovere H. *Cours de Géométrie Descriptive : Méthode de Monge.* Bruxelles : édition De Boeck, 1991 JUNGMANN, J-P. *Ombres et lumières : un manuel de tracé et de rendu.* Paris : édition de la Vilette, 1995 Aubert J. *Cours de dessin d'architecture à partir de la géométrie descriptive.* Paris : édition de la Vilette, 1980 De Herde A., Gracia E. et Le Paige M. *Guide d'aide à la conception bioclimatique.* Louvain-La-Neuve : Ed. C.R.A.,Architecture et Climat, 1986 Carlo Argan, Carlo. *Perspective et histoire au Quattrocento.* Chatillon-sous-Bagneux : édition de la passion, 1990 Durant, J-P. *La représentation du projet : Approche pratique et critique.* Paris : édition de la Vilette, 2003 Savignat, J-M. *Dessin et architecture du Moyen-âge au XVIIIème siècle.* Paris : Ecole Nationale Supérieure des Beaux-arts, 1980 Ludi, Jean-Claude. *La perspective pas à pas : Manuel de construction graphique de l'espace et tracé des ombres.* Paris : Dunod, 2009 (3ème édition)

Faculty or entity in charge	LOCI

Programmes containing this learning unit (UE)

Program title	Acronym	Credits	Prerequisite	Learning outcomes
Bachelor in Architecture (Bruxelles)	ARCB1BA	3		🔍