# LBARC1121

2016-2017

# Spatial geometry : exploration of descriptive drawing

| 3.0 credits | 15.0 h + 22.5 h | 2q |
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| Teacher(s) : | Delcommune Thierry ; Malevez Jerome ; |
| Language : | Français |
| Place of the course | Bruxelles |
| Aims : | *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".* |
| 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. The evaluation of the material on perspective will be based on a graded exercise that will be handed in upon completion of the practical assignments and at the end of the quadrimester by the examination. |
| Teaching methods : | Theoretical notions will be presented and then explored in increasing depth by resolving problems that arise in the course of practical assignments.<br>The students assimilate the general notions in order to constitute a synthetic vision of the material. They will be called on in class in order to encourage active learning. Then, students test their knowledge by attempting to find essentially graphic solutions to problems that arise in the course of practical assignments. Students will constantly have occasion for self-evaluation, particularly through the publication on Moodle of their solutions to assigned exercises. |
| Content : | MONGE II<br>--<br>Definition of planes and representations of volumes in space<br>--<br>Manipulation of planes and volumes by the techniques of rabattement and projection<br>--<br>Section and interpenetration of volumes<br>--<br>Development of the concepts of the intersection of planes and of points of intersection<br>SOLAR GEOMETRY<br>--<br>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.<br>--<br>Study the sunshine of a building by its own shadow and scope depending on its location and for a given date.<br>--<br>Development of solar mask of a building for a given site.<br>PERSPECTIVE<br>--<br>Definition of the constitutive elements of conic projection and of their peculiarities.<br>--<br>Choice and positioning of the image and of the spectator.<br>--<br>Resolution of an image in perspective with or without accessible vanishing points.<br>--<br>Constitution of a method for resolving the problems of representing three dimensions that arise in the course of the architecture project.<br>--<br>Construction of the perspective of a complex volume and its shadow. |
| Bibliography : | De Sloovere H. Cours de Géométrie Descriptive : Méthode de Monge. Bruxelles : édition De Boeck, 1991<br>JUNGMANN, J-P. Ombres et lumières : un manuel de tracé et de rendu. Paris : édition de la Vilette, 1995<br>Aubert J. Cours de dessin d'architecture à partir de la géométrie descriptive. Paris : édition de la Vilette, 1980<br>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<br>Durant, J-P. La représentation du projet : Approche pratique et critique. Paris : édition de la Vilette, 2003<br>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 / formations proposant cette unité d'enseignement (UE) | | | | |
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| Intitulé du programme | Sigle | Credits | Prerequis | Acquis d'apprentissage |
| Bachelor in architecture (Bruxelles) | ARCB1BA | 3 | - | |