1q

## Université catholique de Louvain

## Design and realisation of structure

4.0 credits

LAUCE2182

2013-2014

30.0 h + 15.0 h

5.0 h

| Teacher(s) :                 | Vassart Olivier ; Doneux Catherine ;                                                                                                                                                                                                                                                                                                                                                            |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Language :                   | Français                                                                                                                                                                                                                                                                                                                                                                                        |
| Place of the course          | Louvain-la-Neuve                                                                                                                                                                                                                                                                                                                                                                                |
| Main themes :                | From the basic knowledge of mechanics, structure, computer material and design, develop the methods of analysis of steel, composite structures.                                                                                                                                                                                                                                                 |
| Aims :                       | Provide further knowledge as to the specific technology of each structure (steel, concrete), especially for joints and design of elements.<br>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". |
| Content :                    | Part 1 : Design of steel and composite structures.         Materials - Sizing of elements - Joint design - Composite structures.         Part 2 : Design of steel and composite structures.         Fatigue - Fire resistance of steel structures - Design of building frames - Shells - Beams of bridge cranes - Hollow sections.                                                              |
| Other infos :                | Fundamentals of statics - Mechanics of solids and materials - Structural analysis - Fundamentals of reinforced concrete.         Available only in French.         Evaluation of the exercises done during the semester. At the end of the semester, oral examination devoted to practical applications and theoritical aspects.         Contact : elischmit@skynet.be                          |
| Cycle and year of study :    | Master [120] in Architecture and Engineering Master [120] in Civil Engineering                                                                                                                                                                                                                                                                                                                  |
| Faculty or entity in charge: | GC                                                                                                                                                                                                                                                                                                                                                                                              |