


In view of the health context linked to the spread of the coronavirus, the methods of organisation and evaluation of the learning units could be adapted in different situations; these possible new methods have been - or will be - communicated by the teachers to the students.

3 credits

20.0 h

Q2

Teacher(s)	Vassart Olivier ;
Language :	English
Place of the course	Louvain-la-Neuve
Main themes	The course concerns exceptional accidental actions by fire that can affect the structures. The themes are: <ul style="list-style-type: none"> - The characteristics of the action (fire); - The structural responses in thermal terms; - The principles of fire protection; The main lines of the Eurocodes prescriptions taking into account fire
Aims	With reference to the AA reference system of the "Master of Civil Engineering" program, this course contributes to the development, acquisition and evaluation of the following learning outcomes: AA1.1, AA1.2, AA1.3., AA5.5 and AA5.6 More specifically, at the end of this course, the student will be able to: <p>Fire problematic:</p> <ul style="list-style-type: none"> ' Describe the thermal actions associated with the development of a fire; ' Know the different possible approaches for calculating and characterizing a fire; 1 ' Describe the different parameters influencing the thermal behavior of materials (steel, concrete, wood) and the link with the modification of their mechanical behavior; ' Describe the membrane behavior of composite steel-concrete structures in a fire situation; ' Describe the steps involved in performing a fire engineering calculation on a typical building; ' Know the advantages and disadvantages of the different types of fireproof design (coating, intumescent paints, Promat type materials, oversizing, etc.). <p>-----</p> <p><i>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".</i></p>
Inline resources	MoodleUCL website including the slides of the courses and several useful documents
Bibliography	Transparents du cours.
Faculty or entity in charge	GC

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Aims
Master [120] in Civil Engineering	GCE2M	3		
Master [120] in Architecture and Engineering	ARCH2M	3		