SYLLABUS

1. Data about the program of study

1.1	Institution	The Technical University of Cluj-Napoca
1.2	Faculty	Faculty of Constructions
1.3	Department	Civil Constructions and Management
1.4	Field of study	Civil Engineering
1.5	Cycle of study	Bachelor of Science
1.6	Program of study/Qualification	Civil Engineering (CCIA-eng)
1.7	Form of education	Full time
1.8	Subject code	33.00

2. Data about the subject

2.1	Subject name			Fire safety of constructions			
2.2	Subject area			Civil engineering			
2.3	Course responsible/lecturer			Șef lucr. Dr. ing. MSc Ruxandra M Dârmon ruxandra.darmon@ccm.utcluj.ro			
2.4	Teachers in charge of seminars			-			
2.5 Year of study	2	2.6 Semester	II	2.7 Assessment	C	2.8 Subject category	DD/DI

3. Estimated total time

3.1 Number of hours per week	1	3.2 of which, course:	1	3.3 applications:	-
3.4 Total hours in the curriculum	50	3.5 of which, course:	14	3.6 applications:	-

Time distribution	hours
Manual, lecture material and notes, bibliography	14
Supplementary study in the library, online and in the field	20
Preparation for seminars/laboratory works, homework, reports, portfolios, essays	-
Tutoring	-
Exams and tests	2
Other activities	-

3.7	Total hours of individual study	36
3.8	Total hours per semester	50
3.9	Number of credit points	2

4. Pre-requisites (where appropriate)

4.1	Curriculum	N/A
4.2	Competence	N/A

5. Requirements (where appropriate)

5.1	For the course	N/A
5.2	For the applications	N/A

6. Specific competences

Professional competences	C5.1 The student should be able to identify and to select the appropriate technical methods for fire safety design of civil structures C5.2 The student should be able to understand the specific terms and methods of fire safety engineering in order to design a fire safety strategy for a building. C5.3 The student should be familiar with the fire safety regulations for buildings C5.4The student should be able to elaborate the technical documentation for a building, in line with the fire safety code requirements.
Cross competences	CT1 The application a good working strategy, based on efficiency and responsibility. CT2 Responsibility at the working place and good team work strategy. CT3 Continuous personal development and the ability to adopt new technologies and technical specifications.

7. Discipline objectives (as results from the *key competences gained*)

7.1	General objective	Constructive and functional conformation of buildings concerning fire safety. Qualitative evaluation of constructions fire behaviour
7.2	Specific objectives	The student should be able to apply the fire safety regulations for buildings.

8. Contents

8.1. Lecture (syllabus)	Teaching methods	Notes
1. Introduction. Combustion theory. Empirical correlations for fire plumes.	Presentation, discussion	Projector
2. Stages of an enclosure fire. Flashover criteria.		
3. Fire models according to SR EN 1991-1-2		
4. Material fire behaviour. Fire reaction tests.		
5. Structural fire behaviour. Fire resistance tests.		
6. Romanian fire safety regulations – P118/99		
7. Fire safety strategy according to P118/99		

Bibliography

1. R.Darmon *Introduction to fire safety engineering* – lecture notes.
2. Buchanan, A.,H., Structural Design for Fire Safety, John Wiley & Sons, LTD, Chichester, New York, Weinheim, Brisbane, Singapore, Toronto, 2001
3. http://www.difisek.eu

8.2. Applications/Seminars	Teaching methods	Notes

Bibliography		

9. Bridging course contents with the expectations of the representatives of the community, professional associations and employers in the field

The achieved competences will be a requirement for the employees working for consulting companies and contractors (site and supplying)

10. Evaluation

Activity type	10.1 Assessment criteria	10.2 Assessment methods	10.3 Weight in the final grade
10.4 Course	Theory questions and/or multiple-choice test paper	Written exam: 2 hours	100%
10.5 Applications			
10.6 Minimum standard of performance			
Grade 5			

Date of filling in:		**Title Surname Name**	**Signature**
18.10.2018	Lecturer	Șef lucr. dr ing MSc Ruxandra DÂRMON	
	Teachers in charge of application		

Date of approval in the department …….. _____	Head of department Prof.dr.ing. Conf.dr.ing. Claudiu Aciu
Date of approval in the faculty …… ____20.07.2018_____	Dean Prof.dr.ing. Conf.dr.ing. Nicolae Chira