

Universitatea Tehnică de Construcții București



Facultatea de Inginerie în Limbi Străine
Faculty of Engineering in Foreign Languages
Faculté d'Ingénierie en Langues Etrangères

Master

Structural Engineering

Code: U02.07.ICV.IZ.M26

Study plan

1st Semester

No.	Course name	Course Code	C	S	L	P	IS	TH	CR	Type of examination
Compulsory subjects										
1.	Numerical analysis	1.DF.OB01	2		1		3	6	3	Co
2.	Random processes: applications in structural engineering	1.DD.OB02	2	1			4	7	6	E
3.	Stability and dynamics of structures	1.DD.OB03	2		2		3	7	6	E
4.	Soil-Structure Interaction	1.DD.OB04	2		2		3	7	6	E
5.	Prestressed and composite steel-concrete structures	1.DD.OB05	2	1	1		3	7	6	E
Elective subjects										
6.	(i) New structural materials (ii) Experimental methods in structural engineering	1.DD.OP01 1.DD.OP02	2		1		3	6	3	Co
Total			12	2	7		20	40	30	4E + 2Co

2nd Semester

No.	Course name	Course Code	C	S	L	P	IS	TH	CR	Type of examination
Compulsory subjects										
7.	Advanced theory of elasticity, plates and shells	2.DD.OB06	2		1		2	5	3	Co
8.	Engineering seismology and earthquake engineering	2.DD.OB07	2		1		4	7	6	E
9.	Nonlinear analysis of structures	2.DD.OB08	2		1		2	5	3	Co
10.	Stability of steel structures	2.DS.OB09	2		1		4	7	6	E
Elective subjects										
11.	i) Structures for hydraulic facilities and for water storage ii) Hydraulic steel structures	2.DS.OP03 2.DS.OP04	2				1	3	3	E
12.	i) Structures for hydraulic facilities and for water storage ii) Hydraulic steel structures	2.DS.OP05 2.DS.OP06				2	3	5	3	Pr
13.	i) Special reinforced concrete and steel structures ii) Structures (concrete and steel) for transport infrastructure	2.DS.OP07 2.DS.OP08	2				1	3	3	E
14.	i) Special reinforced concrete and steel structures ii) Structures (concrete and steel) for transport infrastructure	2.DS.OP09 2.DS.OP10				2	3	5	3	Pr
Total			12	0	4	4	20	40	30	4E+2Co+2Pr

3rd Semester

No.	Course name	Course Code	C	S	L	P	IS	TH	CR	Type of examination
Compulsory subjects										
15.	Vulnerability and risk produced by natural hazards	3.DS.OB10	2		2		4	8	6	E
16.	Masonry and wooden structures	3.DS.OB11	2				2	4	4	E
17.	Masonry and wooden structures	3.DS.OB12				2	3	5	3	Pr
18.	Rehabilitation of structures (concrete, steel and masonry and wooden structures)	3.DS.OB13	2				2	4	4	E
19.	Rehabilitation of structures (concrete, steel and masonry and wooden structures)	3.DS.OB14				2	3	5	3	Pr
Elective subjects										
20.	i) Tall Buildings Structures ii) Large span bridges and viaducts	3.DS.OP11 3.DS.OP12	2		2		4	8	6	E
21.	i) Technology for civil and special buildings ii) Technology for transport infrastructure iii) Technology for hydrotechnical constructions	3.DS.OP13 3.DS.OP14 3.DS.OP15	2		2		2	6	4	Co
Total			10		6	4	20	40	30	4E+1Co+2Pr

4th Semester

No.	Course name	Course Code	C	S	L	P	IS	TH	CR	Type of examination
Elective subjects										
22.	Design and research activities (i) RC structures (ii) Steel structures (iii) Masonry and wood structures (iv) other structures, other subjects	4.DS.OP16				4	16	20	15	Co
Compulsory subject										
23.	Elaboration of the master thesis	4.DS.OB15	-	-	-	4	16	20	15	Co
Total			-	-	-	8	32	40	30	2 Co
Master thesis defence									10	E

Facultative subjects

No.	Course name	Course Code	C	S	L	P	IS	TH	CR	Type of examination
1.	Specialized communication skills in foreign language	1.DC.FC01		2			1	3	2	Co
2.	Applied finite elements method	1.DF.FC02	2	2			3	7	4	Co
3.	Specialized communication skills in foreign language	2.DC.FC03		2			1	3	2	Co
4.	Free surface flow	2.DS.FC04	2		2		3	7	4	Co
5.	Lightweight structures made of cold-formed thin gauge shapes	2.DS.FC05	2		2		3	7	4	Co

Notations:

- C – course (number of hours)
- S – seminar (number of hours)
- L – laboratory (number of hours)
- Pr – project (number of hours)
- IS – individual study (number of hours)
- TO – total (number of hours)
- CR – number de credits (ECTS)
- Co – colloquium
- E – exam
- Pr – project

Notes:

Mandatory, the students have to select one of the available courses for each of the elective subjects. These courses will be held if the University criterion of minimum number of students is fulfilled.

The facultative courses are proposed in order to supplement the study plan, and their afferent ECTS are given outside the total of 120 credits corresponding to the master study program. As in the case of the elective courses, the criterion of minimum number of students decides if the course will be held.