

COURSE DESCRIPTION

Name of the Course:		Tall Buildings Structures						
Specialization Code:		U02.07.ICV.IZ.M24.		Course Code:		3.DS.OP09		
Year of study:	2	Semester:	3	Examination form: (E-Exam; Co- Colloquy; P-Project; P/F-Passed/Failed)	E	ECTS credits granted (CR):	E (Co)	6
							P (P/F)	
Course Category: (DF- Fundamental; DD- General engineering; DS-Specialty engineering; DC-Complementary; PR-Practical stage)								DS
Course Type: (OB-Compulsory; OP-Elective; FC-Facultative)								OP
Number of hours per semester: Total of hours per week (TH) x Number of weeks per semester								
TOTAL :	112	Individual study (IS):		56	Contact hours (C + S;L;P):		56	
Academic staff member in charge: (Full name, Academic position and Department)				<i>Radu PASCU, Professor, Reinforced Concrete Structures</i> <i>Bogdan ȘTEFĂNESCU, Associate Professor, Steel Structures</i>				
Faculty	Engineering in foreign languages			Number of contact hours per semester				
	Master study programme			Total	Course	Seminar	Laboratory	Project
Field	Civil Engineering							
Specialization	Structural Engineering			56	28		28	
Course objectives - Description of the main competences: Choice of the structural system, establishing loads, checking of structural members, detailing								
Content description:								
1. COURSE		<ol style="list-style-type: none"> 1. Introduction: structural concepts, examples of outstanding buildings 2. Actions. Specific aspects for tall buildings 3. Efficient reinforced concrete, steel or composite steel-concrete structural systems for tall buildings 4. Specific analysis methods 5. Structural design. Strength, stiffness, ductility, hysteretic stability 6. Special design issues 7. Envelopes. Design of different façade types 8. Infrastructures and foundations 9. Mechanical equipments for tall buildings 10. Technologies for tall buildings 						
2. Seminar / Laboratory / Project / Practical stage		Design of a tall building structure, detailed at the scheme design level. structural material will be chosen between reinforced concrete, steel, composite steel-concrete.						

3. Bibliography	<ol style="list-style-type: none"> Smith, B.S., Coull, A. (1991), Tall Building Structures: Analysis and Design, John Wiley & Sons, New York, 537 p. Taranath, B.S. (1998), Steel, Concrete, & Composite Design of Tall Buildings, McGraw Hill, Boston, 998 p. Chew, Y.L.M (2007), Construction Technology for Tall Buildings, Singapore University Press, Singapore, 417 p. Tall Buildings Initiative. (2010). Guidelines for performance-based seismic design of tall buildings. PEER report 2010/05. http://peer.berkeley.edu/publications/peer_reports/reports_2010/web PEER2010_05 GUIDELINES.pdf Holmes, W., Kircher, C., Petak, W., Youssef, N. (2007). Seismic performance objectives for tall buildings. PEER report 2008/01. http://peer.berkeley.edu/publications/peer_reports/reports_2008/webPEER_801_HO LMES_TBI.pdf
------------------------	--

Criteria to be considered for the final mark	Weight of each criterion in the final mark (%)
1. Exam defence (final examination)	50
2. Appreciation during the entirely semester	
2.1 Seminar activity	25
2.1 Laboratory activity	25
2.2 Project activity (the project has not a distinct final mark)	
3. Periodical examinations	
3.1 Written / oral examination	
3.2 Home works, reports, essays etc.	
4. Other criteria (to be specified)	
Short description of the final evaluation procedure: written exam	

Estimation of the total number of hours per semester requested for the individual study (IS)			
Type of individual activity	No. of hours	Type of individual activity	No. of hours
1. Study of the course notes	14	8. Preparation of the final examination	10
2. Study of the compulsory bibliography	8	9. Advisory class participation	2
3. Study of the supplementary bibliography	6	10. Practical documentation on site	
4. Preparation of specific activities	14	11. Additional documentation on library	2
5. Preparation of home works		12. Internet network documentation	
6. Preparation of periodical written examinations		13. Others (to be specified)	
7. Preparation of periodical oral examinations		TOTAL number of hours	56

Date:
March 2013

Signature of the Academic Staff member in charge:
Radu PASCU
Bogdan ȘTEFĂNESCU