



TECHNICAL UNIVERSITY
OF CLUJ-NAPOCA, ROMANIA

SYLLABUS

1. Program data

1.1	Higher education institution	Technical University of Cluj - Napoca
1.2	Faculty	Civil Engineering
1.3	Department	Buildings 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
1.7	Form of education	IF – Full time
1.8	Subject code	17.00

2. Course data

2.1	Course title	Building Technology I												
2.2	Subject area	Civil Engineering												
2.3	Course responsible / Lecturer	Lecturer Dorin MAIER PhD eng. PhD ec.												
2.4	Course titular	Lecturer Dorin MAIER PhD eng. PhD ec.												
2.5	Year of study	III	2.6	Semester	2	2.7	Assessment	Colloquium	2.8	Course regime	DS/ DOB			

3. Estimated total time

Year/ Sem.	Course title	Nb. of weeks	Course			Applications			Course			Application s			Ind. Stud	TOTAL	Credits
			[h/weeks]			[h/sem.]			[h/sem.]								
			S	L	P	S	L	P	S	L	P						
III/2	Building Technology I	14	1		1		14		14		24	52	2				

3.1	Number of hours / week	2	3.2	From which: course	1	3.3	applications	1
3.4	Total hours in the curriculum	52	3.5	From which: course	14	3.6	applications	14
Individual study								Hours
Study by manual, course support, bibliography and notes								8
Additional documentation in the library, on electronic platforms and on the field								6
Training seminars / laboratories, themes, papers, portfolios, essays								5
Tutoring								3
Assessment								2
Other activities								-
3.7	Total hours of individual study	24						
3.8	Total hours on semester	52						
3.9	Number of credits	2						

4. Preconditions (where applicable)

4.1	From curriculum	Not applicable
4.2	Competence	Not applicable

5. Conditions (where applicable)

5.1	For the course	Not applicable
5.2	For the applications	Not applicable



6. Specific competences

Professional competences	Theoretical knowledge, (What they need to know)	<ul style="list-style-type: none"> - to understand the importance of technology in constructions - to understand the importance of the methods and techniques in technology - to understand the importance of preparatory works in constructions
	Achieved Skills: (What they can do)	<p>After studying the discipline, the students will be able:</p> <ul style="list-style-type: none"> - to determine the work quantities for a certain activity - to determine the plan of digging - to estimate the quantities for earthworks - to calculate the number of vehicles for digging
	Skilled skills: (What tools they can handle)	<p>After studying the discipline, the students will be able:</p> <ul style="list-style-type: none"> - to determine the quantities for earthworks - to use modern methods for construction technology - to be familiarized with the work regulation for earthworks
Transversal competences		

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

7.1	General objective	Developing the competencies regarding the technologies for earthworks in constructions.
7.2	Specific objective	Accomplishing theoretical knowledges concerning the technologies of construction works.



8. Contents

8.1. Course (syllabus)		Teaching methods	Observations
1	Types and mechanized methods for earthworks	Power Point presentation	Video-projector;
2	Preparatory and auxiliary works	Power Point presentation	Video-projector;
3	Digging excavation with excavators	Power Point presentation	Video-projector;
4	Soil compaction and stabilization	Power Point presentation	Video-projector;
5	Grading sites with bulldozers and graders	Power Point presentation	Video-projector;
6	Concrete mix preparation	Power Point presentation	Video-projector;
7	Concrete mix preparation	Power Point presentation	Video-projector;
8.2. Applications (seminar/works/project)		Teaching methods	Observations
1	<i>Plan of digging – part 1</i>	Presentations and applications	Typical infrastructure technologies
2	Plan of digging – part 2	Presentations and applications	
3	Estimating quantities of earthwork – part 1	Presentations and applications	
4	Estimating quantities of earthwork – part 2	Presentations and applications	
5	Excavation and vehicle calculation – part 1	Presentations and applications	Catalogues with technical means for infrastructure
6	Excavation and vehicle calculation – part 2	Presentations and applications	Catalogues with technical means for infrastructure
7	Working instruction	Presentations and applications	
References			
1. Domșa, J., Ionescu, A. – Utilaje, echipamente tehnologice și procedee performante de betonare, Editura OID.ICM, București, ISBN 973-9187-11-0, 1994 2. Domșa, J., Vescan, V., Moga, A. – Tehnologia lucrărilor de construcții și tehnologii speciale, vol.I, Institutul Politehnic Cluj-Napoca, 1988 3. Dinescu, T., Rădulescu, C. – Tehnica cofrajelor glisante, Editura Tehnică, București, 1981. 4. Trelea, A., Popa, R., Giușcă, N., Domșa, J., Gheorghită, S., ș.a. – Tehnologia construcțiilor, vol.I, Editura Dacia, Cluj-Napoca, ISBN 973-35-0603-6, 1997 5. Chudley, R., Greeno, R., – Construction Technology, Pearson, 2005 6. Blankenbaker, E., – Construction and Building Technology, Tech Lab Workbook, 2012			



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9. Corroborating the contents of the discipline with the expectations of the epistemic community representatives, associations, professionals and employers in the field related to the program

The acquired competences will help the employees who work in design or execution companies (site works or supplying).

10. Assessment

Activity type	10.1	Assessment criteria	10.2	Method of Assessment	10.3	The share of the final grade
Course		Written test		Written part		70%
Applications		Assessment of the applications		Oral part		30%
10.4 Minimum performance standard						
The written part assessment is conditioned by a minimum presence on the course during the semester and by presenting and passing the applications works						

Completion date
Sept. 2017

Course titular
Lect. Dorin MAIER PhD eng. PhD ec.

The course teacher
Lect. Dorin MAIER PhD eng. PhD ec.

Department endorsement date
Sept. 2017

Head of the Department
Associate Prof. Claudiu ACIU PhD eng.