SYLLABUS

1. Data about the program of study

1.1	Institution	The Technical University of Cluj-Napoca
1.2	Faculty	of Civil Engineering
1.3	Department	Buildings and Management
1.4	Field of study	Engineering and Management
1.5	Cycle of study	Master's degree (research)
1.6	Program of study/Qualification	MPEP – Project Management and Property Evaluation
1.7	Form of education	Full time
1.8	Subject code	9.00

2. Data about the subject

2.1	Subject name			Waste Management and Environmental Protection			
2.2	Subject area			Project Management and Property Evaluation			
2.3	Course responsible/lecturer			Prof.Eng. Domșa Julietta PhD Julietta.Domsa@ccm.utcluj.ro			
2 1	Teachers in charge of seminars			Senior Lecturer Eng. Mircea Andreea PhD			
2.4				andreea.mircea@ccm.utcluj.ro			
2.5 Year of study I 2.6 Semester 2			2.7 Assessment	С	2.8 Subject category	DS, DI	

3. Estimated total time

3.1 Number of hours per week	3	3.2 of w	nich, course:	1	3.3 applications:	2
3.4 Total hours in the curriculum	42	3.5 of w	hich, course:	14	3.6 applications:	28
Individual study						
Manual, lecture material and no	tes, bibliogra	aphy				22
Supplementary study in the library, online and in the field					10	
Preparation for seminars/laboratory works, homework, reports, portfolios, essays						23
Tutoring						
Exams and tests					3	
Other activities						
3.7 Total hours of individual s	tudy	58				

5.7	Total hours of mulvidual study	50
3.8	Total hours per semester	100
3.9	Number of credit points	4

4. Pre-requisites (where appropriate)

4.1	Curriculum	
4.2	Competence	-

5. Requirements (where appropriate)

	For the course	Classroom equipped with video projector and laptop or PC;
F 1		Students will not attend lectures with open cell phones. There will
5.1		be no tolerated telephone calls during the course, not will the
		students leave the classroom in order to take personal telephone

		calls; It is forbidden to film/photograph during class hours
5.2	For the applications	The deadline for the submission of papers is established by the
		holder of applications in agreement with the master's students.

6. Specific competences

Professional competences	 After completing the discipline students will know: How to choose the building materials according to the environment; Methods of demolition of constructions; How to recycle waste from the building materials industry and construction materials, waste separation methods; Post-use construction; How to approach the problems of environmental protection in the field of constructions; Methods for evaluating the company's strategy for environmental protection; Environmental management systems, ecological audit; The environmental agreement and the environmental authorization. After completing the discipline students will be able to: Know how to prepare the technical documentation for the post-use of construction; Know how to prepare the documentation for obtaining the environmental agreement and the environmental authorization; After completing the discipline students will be able: To prepare case studies and technical reports based on the collection data from companies, regarding the waste management and ecological policy/environmental protection on the construction sites; To elaborate the technical documentation necessary to obtain the environmental agreement argreement, the environmental authorization and the post-use of the constructions.
Cross competences	CT1 Application of effective responsible work strategies, punctuality, seriousness and personal responsibility, based on the principles, norms and values of professional ethics. Drafting and presenting technical reports and case studies in compliance with specific regulation. CT2 Applying efficient teamwork techniques, on various hierarchical levels. Carrying out projects and technical documentation in a team with respect for the technical-scientific content.

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

	General objective	Skills development regarding waste management, post-use of a
7 1		construction, environmental protection, environmental
/.1		management, systems of environmental management and
		environmental agreement and authorization.
	Specific objectives	Specific knowledge regarding the post-use of a construction, the
7.2		environmental management and the elaboration of technical
		documentation for them.

8. Contents

3. Quality technical conditions

8.1. Lecture (svllabus)		Teaching	Notes
0.1. 200		methods	Notes
1.	European and national legislation on construction and		
	demolition waste management;		
	Waste collection, transport, storage, processing and recovery.		
	Types of waste.		
2.	Waste from construction and demolition;		
	Construction and demolition waste management plans.		
3.	The waste hierarchy;]	
	Demolition methods.		
4.	Recycling of waste from the building materials industry;		
	Recycling of waste from construction materials, separation		
	methods.		
5.	Post-use of constructions;	Exposure.	
	Environmental management system;	discussion,	Video projector
	Environmental impact and monitoring, ecological audit.	Power point	and laptop or
6.	Environmental Agreement and Authorization;	presentation	PC
	Environmental protection policies at enterprises level.		
7.	Ecological houses, passive houses.		
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Dibligg	ranhu .		
	apily Domsa I coordonator Tahnologii noi si managamant actual în	constructii Editu	wa Casa Cărtii da
1.	Stiință, ISBN 973-686-097-3, Cluj, 2000;	construcții, Luitu	ira Casa Carga ac
2.	Hossu, T., Alexe, N., Hossu, C., Blaga, P. Managementul firmelor de	construcții, Edit	tura Casa Cărții de
3.	ştunța, ISBN 973-686-217-8, Cluj, 2001; Rusu, T. Protectia mediului industrial. Editura Minerva, ISBN 973-9	358-81-0. Clui-N	ароса, 2002.
In other	r libraries:	000 01 0, 000 <u>,</u> 10	
4.	Băloiu, L.,M. Managementul inovației, Editura Eficient, ISBN 973-9	7064-2-8, Bucure	şti, 1995;
5. 6.	<i>qaran, N., Managementul inovației, Editura Amarcora, ISBN 975-9</i> <i>GE 022-1997 Ghid privind executia lucrărilor de demolare a elen</i>	vost-s-4, timişou nentelor de const	ructii din beton si
_	beton armat;		, , ,
7.	Legea 211/2011 privind regimul deșeurilor.		
		Tooching	
8.2. Ap	8.2. Applications/Seminars		Notes
1	A 1 Dropportion of the technical desurportation for the rest		
1.	A.1 Preparation of the constructions		
	use stage of the constructions	Exposure,	
2.	Placement plan	Applications	

4.	Phases of activities and works	
5.	Technical solutions for demolition and dismantling of buildings	
6.	Risk assessment when carrying out demolition works	
7.	Machinery and technological equipment used	
8.	Recommendations regarding the reconditioning of the	
	recovered products and construction elements	
9.	Disposal and transport of unused and non-recyclable waste	
10	. Environmental protection in the area of demolition and waste	
	disposal	
11	.12 A.2 Preparation of the documentation for obtaining the	
enviro	nmental agreement	
13	3.14 Preparation of the documentation for obtaining the	
enviro	nmental authorization.	
Bibliog	raphy	
1.	Legea nr.10/1995 privind calitatea în construcții;	
2.	Legea nr.50/1991 privind autorizarea executării lucrărilor de construcții:	
3.	ISO 14000 de management de mediu;	
4.	OUG nr.195/2005 privind protecția mediului;	
5.	Kegulamentul 305/2011 Cerințele fundamentale aplicabile construcțiilor.	

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

The competences proposed are necessary for the employees who carry out their activity in the field of construction.

10. Evaluation

	10.1 Accossmont critoria	10.2 Assessment methods	10.3 Weight in the		
Activity type	10.1 Assessment citteria	10.2 Assessment methous	final grade		
10.4 Courso	Solving two theory tonics	Written test – duration of	75 %		
10.4 Course		evaluation 2 hours	7.5 78		
10 E Applications	Submission of applications	Presentation of applications	25.9/		
10.5 Applications	Submission of applications	Oral test: 1 hour	25 %		
10.6 Minimum standa	ard of performance				
Note to the papers (is	included in the electronic cat	alog) (A): min. five (5)			
Note to theory (T): mi	n. five (5)				
Note calculation form	ula: E = 0,75 (T) + 0,25 (A)				
Condition of promotion/obtaining of credits: $E \ge 5$, if $T \ge 5$ (in both topics), $A \ge 5$.					
Remarks: when establishing the final note, the frequency of the student during the semester will also be					
taken into account.					

Date of filling in: 09.2019		Title Surname Name	Signature	
	Lecturer	Prof.dr.ing. Julietta DOMŞA		
	Teachers in charge of application	Ş.l.dr.ing. Andreea MIRCEA		
Date of approval in th	ne denartment	Head of departs	ment	
		Conf.dr.ing. Cla	Conf.dr.ing. Claudiu ACIU	

Date of approval in the faculty

Dean Conf.dr.ing. Nicolae CHIRA