

**Translation from Romanian**  
**SYLLABUS**

**1. Data about the program of study**

1.1	Institution	The Technical University of Cluj-Napoca
1.2	Faculty	Faculty of Civil Engineering
1.3	Department	Civil Engineering and Management
1.4	Field of study	Civil Engineering and Building Services
1.5	Cycle of study	Master's Degree
1.6	Program of study/Qualification	<b>Green Buildings / Master's Studies</b>
1.7	Form of education	Full time
1.8	Subject code	5

**2. Data about the subject**

2.1	Subject name				Entrepreneurship for Sustainable Development						
2.2	Subject area				Civil Engineering and Building Services						
2.3	Course responsible/lecturer				Assoc. Prof. Eng. Ioan Aşchilean, Ph.D.						
2.4	Teachers in charge of seminars				Assoc. Prof. Eng. Ioan Aşchilean, Ph.D. (Aşchileanioan@gmail.com)						
2.5	Year of study	1 <sup>st</sup>	2.6	Semester	1 <sup>st</sup>	2.7	Assessment	C	2.8	Subject category	DS/DI

**3. Estimated total time**

3.1	Number of hours per week	2	3.2	of which, course:	1	3.3	applications:	1
3.4	Total hours in the curriculum	28	3.5	of which, course:	14	3.6	applications:	14
Individual study								hours
Manual, lecture material and notes, bibliography								20
Supplementary study in the library, online and in the field								10
Preparation for seminars/laboratory works, homework, reports, portfolios, essays								15
Tutoring								7
Exams and tests								20
Other activities								-
3.7	Total hours of individual study	72						
3.8	Total hours per semester	104						
3.9	Number of credit points	4						

**4. Pre-requisites (where appropriate)**

4.1	Curriculum	-
4.2	Competence	Specific to the Bachelor's Degree in the field of materials engineering or other specializations in the field of law, economic sciences, environmental engineering, architecture, etc.

## 5. Requirements (where appropriate)

5.1	For the course	Cluj-Napoca, Faculty of Civil Engineering
5.2	For the applications	Cluj-Napoca, Faculty of Civil Engineering

## 6. Specific competences

Professional competences	<p>Appreciation of the processes of globalization and of the European issue of development of ecological (green) civil engineering. The problem of Romania's development from the point of view of achieving sustainable public infrastructure. People's behaviour and actions in the globalized world from a sustainable development perspective. Data on the eco-responsible economy. Definition of eco-entrepreneurship. The activities of building contractors. Analysis of the entrepreneurial capacity. Entrepreneurial education. Entrepreneurial tools and strategies. Types of building contractors. Business plan. Sources of financing. Business development management in the field of ecological civil engineering. The ending of the business from an entrepreneurial point of view.</p> <p>After completing the subject themes, the students will be able:</p> <ul style="list-style-type: none"> <li>- to analyse from an entrepreneurial point of view the developments that accompany the processes of globalization, the processes that take place at the level of the European Union and at the level of Romania from the perspective of sustainable development;</li> <li>- to manage the opportunities that arise and the active classification in the patterns that develop on the principle centre - environment - periphery, from the perspective of sustainable development;</li> <li>- to transpose ideas and opportunities within a business plan at the level of sustainable development activities;</li> <li>- to materialize the business plan from an entrepreneurial point of view at the level of the ecological civil engineering in spaces that observe the requirements of the sustainable development.</li> </ul> <p>After completing the subject themes, the students will be able:</p> <ul style="list-style-type: none"> <li>- to analyse the activity of building contractors in the field of sustainable civil engineering;</li> <li>- to analyse the entrepreneurial activities specific to sustainable development;</li> <li>- to choose and determine the potential of an opportunity in the field of "green house" civil engineering;</li> <li>- to develop a business plan in the field of ecological civil engineering;</li> <li>- to provide the financing sources for ensuring the implementation of the business plan in the field of the spaces specific to sustainable urbanization;</li> </ul>
Cross competences	<p>Self-control of the learning process, diagnosis of training needs, and reflective analysis of one's own professional activity. Assumption of roles / positions of management of the activity of professional groups or institutions. Execution of complex professional tasks, under conditions of autonomy and professional independence</p>

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

7.1	General objective	Knowledge and application of tools for use at the market level of activities specific to the field of ecological civil engineering
7.2	Specific objectives	<p>Appropriation of the activities specific to an entrepreneurial approach in the field of sustainable urbanization;</p> <p>Use in a given entrepreneurial context of specific activities in the field of green civil engineering;</p> <p>Identification of project management activities aimed at finding solutions in the field of urbanization and sustainable civil engineering.</p>

## 8. Contents

8.1.Lecture (syllabus)		Teaching methods	Notes
1	Entrepreneurship, development and jobs from the perspective of the functioning of ecological civil engineering		
2	Entrepreneurship in the globalized world and the sustainable development of civil engineering		
3	About the eco-responsible economy in the field of sustainable civil engineering		
4	Definitions of entrepreneurship, building contractor and specifics of the "green house"civil engineering field		
5	Activities of a building contractor in the field of green civil engineering		
6	General and specific entrepreneurial competences in the field of civil engineering		
7	Entrepreneurial tools specific to eco-responsible civil engineering		
Bibliography			
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2.Așchilean Ioan – Reabilitarea si modernizarea sistemelor de alimentare cu apa a localitatilor urbane[Rehabilitation and Modernization of the Water Supply Systems in Urban Areas], RISOPRINT Publishing, Cluj-Napoca, 2014			
3.Giurca I., Așchilean I., Muresan D., Safirescu C.O. - Indrumator de lucrari – Asigurarea calitatii in instalatii [Works Manager - Quality Assurance in Building Services], U.T. Press, Cluj-Napoca, 2014			
4. Drucker P.F., The Essential Drucker. - Selecția din lucrările de management ale lui Peter F. Drucker [Selection from the Management Works by Peter F. Drucker]. Translation by Dan Criste, Meteor Press, 2010, Bucharest, ISBN 978-973/728/488-4.			
5. Ghenea, M. - Antreprenoriat. Drumul de la idei către oportunități și succes în afaceri [Entrepreneurship. The Road from Ideas to Opportunities and Success in Business], Business Collection, S.C. Universul Juridic S.R.L. Publishing, 2011, ISBN 978-973-127-516-1;			
6. Kugler, S. - Principiul lui Alchimedus [Archimedes' Principle], Humanitas Publishing, 2007, ISBN 978-973-50-1525-1;			
7. Lepage, C., Ecoresp 2 – Pour un New Deal Ecologique [For a New Ecological Deal], Atelier de Presse, Paris, 2006, ISBN 2-35310-006-6;			
8. Soporan, V.F., Ciot Gabriela-Melania, Pop, E. - Porți deschise antreprenoriatului [Doors Open to Entrepreneurship]; Casa Cărții de Știință Publishing, 2012, Cluj-Napoca, ISBN 978-606-17-0090-5;			
9. Soporan, V.F., Dan, V., Pop A.L. - Antreprenoriatul ecoresponsabil în documente europene [Eco-Responsible Entrepreneurship in European Documents], Casa Cărții de Știință Publishing, Cluj-Napoca, ISBN 978-606-17-0302-9;			
10. Kocher, J. - Antreprenoriatul între credință și dezvoltare [Entrepreneurship between Faith and Development], Casa Cărții de Știință Publishing, Cluj-Napoca, ISBN 978-606-17-0303-6;			
11. Gabor, Timea -Managementul proiectelor. Fișe applicative [Project Management. Application Booklet], Casa Cărții de Știință Publishing, Cluj-Napoca, 2015;			
12. Rânea, C., Filipoiu, I.D. et al. - Bazele managementului inovării și transferului tehnologic [Basics of Innovation Management and Technology Transfer], Bucharest, 2012.			



9. Soporan, V.F., Dan, V., Pop A.L. - Antreprenoriatul ecoresponsabil în documente europene [Eco-Responsible Entrepreneurship in European Documents], Casa Cărții de Știință Publishing, Cluj-Napoca, ISBN 978-606-17-0302-9;

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11. Gabor, Timea -Managementul proiectelor. Fișe applicative [Project Management. Application Booklet], Casa Cărții de Știință Publishing, Cluj-Napoca, 2015;

12. Rânea, C., Filipoiu, I.D. et al. - Bazele managementului inovării și transferului tehnologic [Basics of Innovation Management and Technology Transfer], Bucharest, 2012.

Visual didactic materials: course presentation from IT materials

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

The acquired competences will be necessary for employees and contractors in establishing sustainable development strategies in the activity of development of the sustainable built fund.

**10. Evaluation**

Activity type	10.1 Assessment criteria	10.2 Assessment methods	10.3 Weight in the final grade
10.4 Course			
10.5 Applications	Accomplishment of the topics specific to the applicative themes (AT1, AT2, AT3, AT4, AT5, AT6)	Grading of the activities related to the applicative themes	AT1/10+AT2/10+AT3/10+AT4/5+AT5/10+AT6/10
10.6 Minimum standard of performance			
* The minimum mark per applicative theme is 5 (grading system from 1 to 10)			

Date of filling in:		Title Surname Name	Signature
26.09.2019	Lecturer	Assoc. Prof. Eng. Ioan Așchilean, Ph.D.	
	Teachers in charge of application	Assoc. Prof. Eng. Ioan Așchilean, Ph.D.	

Date of approval in the Council of the Department of Civil Engineering and Management

Head of Department  
Assoc. Prof. Eng. Claudiu ACIU, Ph.D.

Date of approval in the Council of the Faculty of Civil Engineering

Dean  
Assoc. Prof. Eng. Nicolae CHIRA, Ph.D.