

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	Constructii civile si management
1.4	Field of study	Civil Engineering
1.5	Cycle of study	Bachelor of Science
1.6	Program of study/Qualification	Civil, Industrial and Agricultural Buildings /Engineer (English language)
1.7	Form of education	Full time
1.8	Subject code	61.0

2. Data about the subject

2.1	Subject name				Management in constructii II						
2.2	Course responsible/lecturer				Conf.Dr.Ing. Anastasiu Livia-Livia.Anastasiu@ccm.utcluj.ro						
2.3	Teachers in charge of seminars				Asist.Dr.Ing. Istoan Raluca-Raluca.ISTOAN@ccm.utcluj.ro						
2.4	Year of study	4	2.5	Semester	2	2.6	Assessment	E	2.7	Subject category	DID/DI

3. Estimated total time

3.1	Number of hours per week	3	3.2	of which, course:	1	3.3	applications:	
3.4	Total hours in the curriculum	42	3.5	of which, course:	14	3.6	applications:	
Individual study								hours
Manual, lecture material and notes, bibliography								14
Supplementary study in the library, online and in the field								16
Preparation for seminars/laboratory works, homework, reports, portfolios, essays								16
Tutoring								10
Exams and tests								2
Other activities								0
3.7	Total hours of individual study	58						
3.8	Total hours per semester	100						
3.9	Number of credit points	4						

4. Pre-requisites (where appropriate)

4.1	Curriculum	Curriculum
4.2	Competence	Competence

5. Requirements (where appropriate)

5.1	For the course	For the course
5.2	For the applications	For the applications

6. Specific competences

Professional competences	<p>C2.2. Using the basic knowledge to explain concepts regarding the interpretation, development and implementation of tasks, specific processes of Engineering and Management, integrated with the computer.</p> <ul style="list-style-type: none"> -- Knowing the importance of project management in constructions; -- Knowing the importance of the methods and techniques of strategical planning. <p>C3.2. Using the basic knowledge in planning, scheduling and leading the manufacturing processes, specific for Engineering and Management area.</p> <ul style="list-style-type: none"> -- Knowledge of the methodology of calculating the duration of the construction works; -- Knowledge of the techniques of optimizing the duration of the construction works. <p>C3.3. Applying the principles and basic methods for planning, scheduling and managing the organizations under qualified assistance.</p> <ul style="list-style-type: none"> -- Applying the formulas for computing the duration of the construction works; -- Designing the Gantt Chart. <p>C3.4. Appropriate using of criteria and standardised methods for the evaluation of the quality of some processes regarding the planning, scheduling and managing the organizations and the associated logistic networks.</p> <ul style="list-style-type: none"> -- Optimizing the teams required for the achievement of the construction project; -- Comparative analysis of scheduling the construction works, by using methods as PERT, Critical Path or Flowline. <p>C6.2. Identification, extraction, and synthesis of basic knowledge in management of construction organizations, as well as scheduling the execution of the construction works, for explaining and implementing some situations, processes and projects specific to the area.</p> <ul style="list-style-type: none"> -- Knowledge of the elaboration of the documents needed for the planning of the construction works; -- Knowledge of the methods of sizing the facilities of the site organization; -- Knowledge of the techniques to design the site organization project. <p>C6.3. Application of the basic principles and methods specific for the management of the construction organizations, the site organization, the scheduling of the execution of the construction works, the specific technical-economic documentation in conditions of qualified assistance.</p> <ul style="list-style-type: none"> -- Optimizing the duration of achievement the construction works by using the professional software Microsoft Project; -- Determining the Critical Path for a complex construction project. <p>C6.4. Adequate using of the criteria and standard evaluation methods in order to estimate the advantages and quality of management methods specific for construction tasks.</p> <ul style="list-style-type: none"> -- Optimizing the schedule of the construction works; -- Optimizing the site organization project. <p>C6.5. Developing professional projects specific for construction organizations regarding the management of these systems.</p> <ul style="list-style-type: none"> -- Optimizing the use of available space for construction; -- Drawing up the site organization project.
Cross competences	<p>CT1. Applying the responsible principles, norms and professional ethic values in achieving the professional tasks, and identifying the objectives to be achieved, the available resources, the working phases, the duration of tasks, the delivery deadlines and the related risks.</p> <p>CT2. Identifying the roles and responsibilities in a multi-task team, and applying the techniques of effective teamwork.</p>

	CT3. Identifying the opportunities for life-long learning and efficiency for self-development, informational sources, communication resources and assisted training (Internet portals, software applications, data bases, on-line courses, etc.), both in Romanian and in an international language.
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7. Discipline objectives (as results from the *key competences gained*)

7.1	General objective	General objective
7.2	Specific objectives	Specific objectives

8. Contents

8.1. Lecture (syllabus)	Teaching methods	Notes
1) Integrated management of construction projects	-	-
2) Methods of planning the construction works: Gantt, Critical Path, Flowline, PERT		
3) Estimation of time for construction works		
4) Designing Gantt diagram		
5) Critical Path method		
6) Flowline schedule, PERT		
7) Designing the site organization project		
Bibliography In UTC-N library 1) Anastasiu, L.: Management of Construction Works (II) – Course notes, Ed. UTPRES 2018 In other libraries: 1) Belker, L., McCormick J., Topchik G. : The First Time-Manager, 6th Edition, AMACOM, 2012 2) Newitt, J. : Construction Scheduling : Principles and Practices, 2nd Edition, PEARSON, 2008 3) Berkun, S.: Making Things Happen: Mastering Project Management (Theory and Practice), Revised Edition, REILLY, 2008		
8.2. Applications/Seminars		
1) Presentation of estimation norms		
2) Design of the estimation norms		
3. Design of the unit prices		
4. Calculus of the costs of material transportation		
5. Optimizing the costs of the task estimation		
Bibliography 6. Presentation of the estimation software INTEL SOFT		
8.2. Applications/Seminars	Teaching methods	Notes
8. Calculus of the number of workers for each task of the project	-	-
9. Optimization of the teams of workers		
10. Calculus of the duration for the project tasks		
11. Presentation of the software Microsoft Project		
12. Scheduling the project duration by using Microsoft Project		
13. Calculus of the facilities for the project's site organization		
Bibliography		

2) Design of the estimation norms		
Bibliography		

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

The acquired competences will serve the employees who will work in design or manufacturing companies in constructions (site or supply).

10. Evaluation

Activity type	10.1 Assessment criteria	10.2 Assessment methods	10.3 Weight in the final grade
10.4 Course	Solving two subjects of theory. Solving a Critical Path problem. The attendance of the students at the courses is mandatory. Each absence will draw penalty of 0.5 points of the mark.	Solving two subjects of theory. Solving a Critical Path problem. The attendance of the students at the courses is mandatory. Each absence will draw penalty of 0.5 points of the mark.	Written test (theory): 1.5 ore Written test (Critical Path): 0.5 ore
10.5 Applications	Delivery of the project.	Delivery of the project.	Project evaluation
10.6 Minimum standard of performance			
-- Project evaluation: Evaluation of the project has to be minimum 6. -- Solving two subjects of theory for minimum 5; solving the problem for minimum 6. -- Attendance to minimum 4 courses and minimum 11 applications.			

Date of filling in:		Title Surname Name	Signature
	Lecturer	Conf.Dr.Ing. Anastasiu Livia	
	Teachers in charge of application	Asist.Dr.Ing. Istvan Raluca	

Date of approval in the department

20/06/2025

Head of department
conf.dr.ing. Caludiu ACIU

Date of approval in the faculty

25/06/2025

Dean
prof.dr.ing Daniela MANEA