

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	Structural Mechanics
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	14.0

2. Data about the subject

2.1	Subject name				Desen tehnic si infografica I						
2.2	Course responsible/lecturer				Sl.Dr.Ing. Nerisanu Raluca-Diana-Raluca.Nerisanu@cfdp.utcluj.ro						
2.3	Teachers in charge of seminars										
2.4	Year of study	1	2.5	Semester	2	2.6	Assessment	C	2.7	Subject category	DF/DI

3. Estimated total time

3.1	Number of hours per week	3	3.2	of which, course:	-	3.3	applications:	
3.4	Total hours in the curriculum	42	3.5	of which, course:	-	3.6	applications:	
Individual study								hours
Manual, lecture material and notes, bibliography								20
Supplementary study in the library, online and in the field								14
Preparation for seminars/laboratory works, homework, reports, portfolios, essays								20
Tutoring								2
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	"Descriptive Geometry" classes passed.
4.2	Competence	- to visualise the object or the assembly of objects in space (3D), based on plan representation (2D);- to "read" different kinds (systems) of representations."

5. Requirements (where appropriate)

5.1	For the course	N/A
5.2	For the applications	Cluj-Napoca, Observatorului Street No. 72-74 – Classrooms equipped with drawing tables: O207, O208

6. Specific competences

Professional competences	To know the fundamentals (basic elements) on the representation of the objects: the arrangement of the views, sections, dimensioning, representation scales, conventional signs used in civil engineering technical drawing."After completing the discipline, the students will be able to:- represent the volumes from the 3D space through 2D projections, complying with the norms for the arrangement of the views;- cut the solids and the construction elements; to place correctly this sections on the assembly drawing;- dimension the projections of the solids;- use the reduction and the magnifying scales;- use the conventional signs for the building materials;- represent the different construction elements.""After completing the discipline, the students will be able to:- draw freehand (sketches) for views and sections for objects having different degrees of difficulty, construction elements and simple structural subassemblies;- draw with drawing tools, at scale, the different construction elements."
Cross competences	achieving of some correct graphical works, considering the representation norms in effect;drafting and presenting a portfolio of drawings;discussing about the applications with the teacher who leads the classes and with the colleagueus; disseminate the results;applying effective strategies and responsible work, punctuality, responsibility and personal accountability based on principles, norms and values of professional ethics;acquainting with specific roles and teamwork activities.

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
	-	-
Bibliography		
8.2. Applications/Seminars	Teaching methods	Notes
Presenting the main provisions of the standards relating to: formats, lines used in civil engineering drawing, information	Conventional lect ure graphical, int	-

boxes, scales, the conventional representation of materials, dimensioning, the arrangement of the views.	eractive solution o f applications	
Layout of orthographic projections. Views. Solids having various degrees of difficulty. The arrangement of the views for solids with low difficulty level.		
Presenting the main provisions of the standards relating to the sections and their placement on the drawing.		
Layout of orthographic projections. Views. Sections. Solids having various degrees of difficulty. Solids with medium difficulty level.		
Representation and dimensioning of the masonry constructions.		
Representation and dimensioning of wooden elements and constructions. Timber roof structure.		
Representation and dimensioning of wooden elements and constructions. Timber roof structure. Sections.		
Representation and dimensioning of wooden elements and constructions. Timber roof structure. Joint details.		
Representation and dimensioning of concrete elements and constructions. Slab reinforcement and formwork plan.		
Representation and dimensioning of concrete elements and constructions. Beam reinforcement. Drafting the list of reinforcement.		
Representation and dimensioning of steel constructions. Welded joint. Joint detail metal girder. Sections.		
Examination (Synthesis)		
Final Exam.		
Bibliography		
"Bibliography: In the TUC-N library:		
1. Delia Drăgan, Raluca Nerișanu, Adrian Tudoreanu: Civil Engineering Graphics-Grafică inginerască pentru Construcții, 3rd Edition, bilingual edition, Publisher U.T.Press Cluj-Napoca, 2019.		
2. Delia Drăgan, Raluca Nerișanu, Adrian Tudoreanu: Civil Engineering Graphics-Grafică inginerască pentru Construcții, 2nd Edition, bilingual edition, Publisher U.T.Press Cluj-Napoca, 2017.		
3. Delia Drăgan, Raluca Nerișanu: Civil Engineering Graphics-Grafică inginerască pentru Construcții, bilingual edition, Publisher U.T.Press Cluj-Napoca, 2014.		
4. Delia Drăgan, Radu Dardai, Dorin Bărbîntă, Claudia Alb, Raluca Nerișanu: Desen Tehnic și Infografică pentru Construcții, Civil Engineering Technical Drawing and Infographics, bilingual edition, Publisher U.T. Press Cluj-Napoca, 2011.		
5. Vasile Iancău, Elena Zetea, ș.a.: Reprezentări geometrice și desen tehnic, București E.D.P., 1982.		
6. *** Current Standards."		

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

Acquired skills will be required for employees who will work in design offices and for those who will work in execution.

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	The drawings made during the semester are collected in a portfolio of drawings. Final exam consists in solving some applications closely related with the topics tackled during the semester (C)	The drawings made during the semester are collected in a portfolio of drawings. Final exam consists in solving some applications closely related with the topics tackled during the semester (C)	50% 50%
10.6 Minimum standard of performance			
<p>NOTES: 1. The evaluation will be done onsite; 2. The teacher who is in charge with the workshop may decide that the written examinations / exams be followed by an oral presentation. Those who do not participate at the oral presentations lose their right to appeal.</p> <p>"(a) The eligibility conditions for taking part to the exam: *The grade for the workshops (written in the electronic classbook): WS: min. 5 (five) ** It is required to make a portfolio of drawings and a sketchbook. The grade for the exam: E: min. 5 (five)" The formula for obtaining the grade (G) $G = [1(E) + 1(WS)] / 2$ Condition for obtaining the credits: $G \geq 5$, if $WS \geq 5$ and $E \geq 5$."</p>			

Date of filling in:		Title Surname Name	Signature
	Lecturer	Sl.Dr.Ing. Nerisanu Raluca-Diana	
	Teachers in charge of application		

Date of approval in the department	Head of department conf.dr.ing. Anca-Gabriela POPA
19/06/2025	
Date of approval in the faculty	Dean prof.dr.ing Daniela MANEA
25/06/2025	