SYLLABUS

1. Data about the program of study

1.1	Institution	Technical University of Cluj-Napoca
1.2	Faculty	Faculty of Electrical Engineering
1.3	Department	Electrotechnics and Measurements
1.4	Field of study	Electrical Engineering
1.5	Cycle of study	Bachelor of Science
1.6	Program of study/ Qualification	Electrical System Cluj-Napoca in English language
1.7	Form of education	Full time
1.8	Subject code	60.00

2. Data about the subject

2.1	Subject name			Graduation Project	
2.2	Course responsible/ lecturer			All teaching staff involved in the program – Prof. Dr. Eng. Dan Doru Micu, Dan.Micu@ethm.utcluj.ro	
2.3	Teachers in charge of Seminars/ Laboratory/ Project			All teaching staff involved in the program – Prof. Dr. Eng. Dan Doru Micu, Dan.Micu@ethm.utcluj.ro	
2.4 Year of study	IV	2.5 Semester	2	2.6 Type of assessment *(E – exam, C – colloquium, V – verification)*	V
2.7 Subject category	*DF – fundamental, DD – in the field, DS – specialty, DC – complementary*				DS
	DI – compulsory, DO – elective, Dfac – optional				DI

3. Estimated total time

3.1 Number of hours per week:	4	of which	3.2 Course		3.3 Seminar		3.3 Laboratory		3.3 Project	4
3.2 Total hours per semester	56	of which	3.5 Course		3.6 Seminar		3.6 Laboratory		3.6 Project	56
3.7 Individual study:										
(a) Manual, lecture material and notes, bibliography										
(b) Supplementary study in the library, online and in the field										
(c) Preparation for seminars/laboratory works, homework, reports, portfolios, essays										
(d) Tutoring										
(e) Exams and tests										
(f) Other activities										

3.8 Total hours of individual study *[sum (3.7(a) to 3.7(f))]*	44
3.9 Total hours per semester *[sum of 3.4 and 3.8]*	100
3.10 Number of credit points	4

4. Prerequisites (where applicable)

4.1	Curriculum	Courses from the university curriculum
4.2	Competences	Computer operation skills

5. Requirements (where appropriate)

5.1	For the course	Weekly attendance online / on-site
5.2	For the applications	Weekly attendance online / on-site

6. Specific competences

Professional competences	Ability to apply acquired knowledge about power systems, their operation and maintenance, for the purpose of designing medium-complexity power systems, using modern principles for system optimization. Ability to use necessary resources to achieve comprehensive documentation on the bachelor thesis topic. Ability to use the latest solutions and equipment. Ability to use software tools to achieve the objectives of the thesis.
Cross competences	Applying the values and ethics of the engineering profession and responsibly carrying out professional tasks under limited autonomy and qualified supervision. Promoting logical, convergent and divergent reasoning, practical applicability, evaluation and self-evaluation in decision-making. Objectively self-assessing the need for continuous professional development for labor market integration, adapting to its evolving demands, and for personal and professional growth. Efficient use of language skills and knowledge of information and communication technologies. Carrying out activities and fulfilling roles specific to teamwork at different hierarchical levels. Promoting initiative, dialogue, cooperation, a positive attitude, respect for others, diversity, and multiculturalism, and continuous improvement of one's own activity.

7. Discipline objectives (based on specific competencies acquired)

7.1	General objective	Synthetic and in-depth documentation on the bachelor's thesis topic and completion of its applied component.
7.2	Specific objectives	Synthesizing the documentation related to the bachelor's thesis Establishing the research objectives and carrying out the research plan Completing the bachelor's thesis

8. Contents

8.1. Course (Lectures)		Number of hours	Teaching methods	Additional remarks
1	Not applicable			
2				
3				
4				
5				
6				

Bibliography
Bibliografia indicată de coordonatorul de lucrare, împreună cu referințele bibliografice găsite de absolvent

8.2. Applications - Seminar /Laboratory/Project		Number of hours	Teaching methods	Additional remarks
1	Defining the research objectives to be pursued in the bachelor's thesis			
2	Establishing the theoretical and experimental research program to be conducted in the bachelor's thesis		Lecture, discussions Involvement in practical activity	A medium-complexity project is carried out
3	Presentation of the completed project			

Bibliography
Se stabilește de îndrumător, în colaborare cu absolventul

9. Alignment of course content with expectations of the epistemic community, professional associations, and representative employers in the field

During the practical sessions, the requirements and expectations of the business environment are taken into account: well-known companies in the field, collaborators from industrial and economic sectors, and colleagues from other university centers.

10. Assessment

Activity type	10.1 Assessment criteria	10.2 Assessment methods	10.3 Weight in the final grade (%)
10.4 Course	Knowledge of the theoretical aspects related to the thesis topic		50%
10.5 Laboratory			
10.5 Project	Implicarea în cadrul activității practice		50%
10.6 Minimum standard of performance: Minimum performance standard: Completion of the synthesis report on the activities carried out Grade calculation formula: N = Passed / Failed			

Date of completion	Lecturers	Title/ Surname/ Name:	Signature
16.09.2024	Course	All teaching staff	
	Applications Seminar/ Laboratory/ Project		
		All teaching staff	

Date of approval in the ETHM Department Council

September 2024

Head of Department:
Prof. Eng. MICU Dan Doru, PhD

Date of approval in the Faculty of Electrical Engineering Council

September 2024

Dean:
Assoc. Prof. Eng. CZIKER Andrei, PhD