

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	Power Systems and Management
1.4	Field of study	Energy Engineering
1.5	Cycle of study	Master of Science
1.6	Program of study/ Qualification	Modern Power Systems
1.7	Form of education	Full time
1.8	Subject code	205.20

2. Data about the subject

2.1	Subject name	Metacognitive Education			
2.2	Course responsible/ lecturer	Assoc. Prof. Monica Maier, PhD			
2.3	Teachers in charge of Seminars/ Laboratory/ Project	Assoc. Prof. Monica Maier, PhD			
2.4 Year of study	II	2.5 Semester	1	2.6 Type of assessment (<i>E – exam, C – colloquium, V – verification</i>)	E
2.7 Subject category	<i>DF – fundamental, DD – in the field, DS – specialty, DC – complementary</i>				DC
	<i>DI – compulsory, DO – elective, Dfac – optional</i>				DFac

3. Estimated total time

3.1 Number of hours per week:	3	of which	3.2 Course	1	3.3 Seminar	2	3.3 Laboratory	-	3.3 Project	
3.2 Total hours per semester	42	of which	3.5 Course	14	3.6 Seminar	28	3.6 Laboratory	-	3.6 Project	
3.7 Individual study:										
(a) Manual, lecture material and notes, bibliography										20
(b) Supplementary study in the library, online and in the field										20
(c) Preparation for seminars/laboratory works, homework, reports, portfolios, essays										10
(d) Tutoring										10
(e) Exams and tests										23
(f) Other activities										
3.8 Total hours of individual study [<i>sum (3.7(a) to 3.7(f))</i>]					83					
3.9 Total hours per semester [<i>sum of 3.4 and 3.8</i>]					125					
3.10 Number of credit points					5					

4. Prerequisites (where applicable)

4.1	Curriculum	The study of the subjects: Educational Psychology, Theory and Methodology of Instruction, Theory and Methodology of Evaluation.
4.2	Competences	Computer operation at beginner level (user): a. Using Office (Microsoft Word, Open Office, Libre Office) b. Internet browsing

5. Requirements (where appropriate)

5.1	For the course	5.1.1. Online teaching: installation and use of KB platform, CISCO WEBEX, ZOOM; internet access. 5.1.2. Onsite teaching: Classroom, projector, computer, flip chart.
5.2	For the applications	5.2.1. Online teaching: installation and use of the KB platform, CISCO WEBEX, ZOOM; internet access. 5.2.2. Onsite teaching: Classroom, projector, computer, flip chart.

6. Specific competences

Professional competences	C1. Knowledge and understanding of the basic concepts, theories, and methods of the field and area of specialization; appropriate use of them in professional communication. C2. Use of basic knowledge to explain and interpret various types of concepts, situations, processes, projects, etc., associated with the field. C3. Application of basic principles and methods to solve well-defined problems/situations typical of the field under qualified assistance. C4. Appropriate use of standard criteria and evaluation methods to assess the quality, merits, and limitations of processes, programs, projects, concepts, methods, and theories. C5. Developing professional projects using established principles and methods in the field.
Cross competences	CT1. Applying the principles and norms of professional ethics, based on explicit value choices specific to the education sciences specialist; CT2. Efficient cooperation in professional, interdisciplinary work teams, specific to the development of projects and programs in the field of educational sciences; CT3. Using effective lifelong learning methods and techniques for continuous professional training and development.

7. Expected learning outcomes

On completion of the discipline, the student will be able to demonstrate:

Knowledge	Knows the fundamental principles and concepts of educational theory and practice applicable to pre-university education. Critically understands modern methodologies of teaching, assessment and educational management.
Skills	Designs and implements teaching activities adapted to the specific characteristics of the student group. Uses appropriate methods and techniques for assessing competences in diverse educational contexts.
Responsibility and autonomy	Demonstrates autonomy in designing the teaching approach and in taking educational decisions. Shows responsibility towards continuous professional development and promotes ethical values in teaching activity.

8. Discipline objectives (based on specific competencies acquired)

8.1 General objective	Understanding the specific concepts of the discipline and their use in different educational contexts.
8.2 Specific objectives	- O1. Development of specialized language and correct use of concepts specific to metacognitive education; - O2. Analysis of the cognition-metacognition relationship; - O3. Identification of self-awareness and objective self-assessment strategies; - O4. Identification of cognitive self-control strategies in different learning situations; - O5. Creation of metacognitive development games for children and adolescents; - O6. Application of metacognitive development exercises and games within a group.

9. Contents

9.1. Course (Lectures)		Number of hours	Teaching methods	Additional remarks
1	Cognition and Metacognition. Conceptual Delimitations and Connections at the Level of Learning Behavior.	2	The Lecture Expunerea cu oponent: The	All teaching activities are

2	Mediation of Learning and Metacognitive Development (Reuven Feuerstein's Theory)	4	Presentation with Opponent	conducted online.
3	The INTIME model and the development of metacognitive behavior	4	The Heuristic Conversation	
4	Metacognitive structures in students' learning behavior.	2	The Debate	
5	Methods of Metacognitive Development. Self-awareness Games	2	The Case Study	

Bibliography

Dunn, R., Dunn, K., Learning style inventory, Lawrence, KS: Price Systems, 1989.
 2. Gardner, H., Multiple intelligences: The theory in practice, New York: Basic Books, 1993.
 3. Maier, M., Dezvoltarea comportamentului metacognitiv, Edit. Universității de Nord, Baia Mare, 2010.
 4. Maier, M., Exerciții de dezvoltare metacognitivă, Edit. Universității de Nord, Baia Mare, 2010.
 5. Maier, M., Cunoașterea, metacunoașterea și acțiunea educativă, Edit. Risoprint, Cluj-Napoca, 2015.
 6. Marine, C., Escribe, C., Huet, D., Metacognition and competence on statistical problems, Psychological Reports, 1994.
 7. Phillips, D. (1997). How, why, what, when, and where: Perspectives on constructivism and education. Issues in Education: Contributions from Educational Psychology, 3, 151-194.
 8. Schurr, S.L. (1994) Dynamite in the classroom: A how-to handbook for teachers. Columbus, OH: NMSA.
 Woolfolk, A. (2001). Educational psychology (8th ed.). Needham Heights, MA: Allyn & Bacon.
 9. Salome, J., Dacă-m-aș asculta m-aș înțelege, Ed. Curtea veche, București, 2009.
 10. Salome, J., Curajul de a fi în suțu, Ed. Curtea veche, București, 2008.
 11. Programul de Cercetare Cognitivă al Universității din Witwatersrand, Eficiența învățării imediate în clasă și în afara acesteia, coord. Reuven Feuerstein, traducere realizată de Asociația de Științe Cognitive din România, 2002

9.2. Applications - Seminar /Laboratory/Project		Number of hours	Teaching methods	Additional remarks
1	Criteria for mediating learning. Identifying errors in learning at the levels of Input, Processing, and Output. Applications.	4	Case study Metacognitive game Metacognitive exercise	All teaching activities are conducted online.
2	Self-assessment exercises of learning style. Applications.	10		
3	Metacognitive Games. Applications	11		
Bibliography				

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

The content of the course is aligned with the expectations of the teaching community, so that students can acquire knowledge in the field of pedagogy as well as develop the skills necessary for conducting teaching activities.

11. Assessment

Activity type	10.1 Assessment criteria	10.2 Assessment methods	11.3 Weight in the final grade (%)
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11.4 Course	- Interpretation of theories regarding the development of metacognitive behavior. - Identification of strategies for cognitive and metacognitive development.	Oral assessment (online)	50%
11.5 Laboratory	Application of metacognitive development methods in the learning group.	Oral assessment (online)	50%
10.5 Project			
11.6 Minimum standard of performance: To recognize 30% of the pedagogical concepts proposed (multiple-choice tests) • Satisfactory seminar activity			

Date of completion	Lecturers	Title/ Surname/ Name:	Signature
September 2024	Course	Assoc. Prof. Monica Maier, PhD	
	Applications Seminar/	Assoc. Prof. Monica Maier, PhD	
	Laboratory/ Project		

Date of approval in the council of the Department of Power Engineering and Management September 2024	Head of Department: Assoc. Prof. Eng. Horia G. BELEIU, PhD
Date of approval in the Faculty of Electrical Engineering Council September 2024	Dean: Assoc. Prof. Eng. Andrei C. CZIKER, PhD