

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 Engineering 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	203.20

2. Data about the subject

2.1	Subject name			Educational Research Methodology	
2.2	Course responsible/ lecturer			Lect.univ.dr.Achim Florina – achimflorina432@gmail.com	
2.3	Teachers in charge of Seminars/ Laboratory/ Project			Lect.univ.dr.Achim Florina – achimflorina432@gmail.com	
2.4 Year of study	II	2.5 Semester	II	2.6 Type of assessment (E – exam, C – colloquium, V – verification)	E
2.7 Subject category		DF – fundamental, DD – in the field, DS – specialty, DC – complementary			DC
		DI – compulsory, DO – elective, Dfac – optional			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									28	
(b) Supplementary study in the library, online and in the field									21	
(c) Preparation for seminars/laboratory works, homework, reports, portfolios, essays									14	
(d) Tutoring									14	
(e) Exams and tests									4	
(f) Other activities									2	
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	Fundamentals of pedagogy, Theory and methodology of instruction, Theory and methodology of assessment
4.2	Competences	

5. Requirements (where appropriate)

5.1	For the course	Video projector
5.2	For the applications	PC, video projector, materials for applications, etc.

6. Specific competences

Professional competences	- Designing training or educational programs adapted for various levels of age/training and various target groups; - Realization of activities specific to the instructional-educational process in primary education and pre-school; - The managerial approach of the group of preschoolers / small schoolchildren, of the educational process and of learning/social integration activities specific to the age of the target group; - Self-evaluation and continuous improvement of professional practices and career development.
Cross competences	- The use of effective lifelong learning methods and techniques, in view of training and continuous professional development; - Effective cooperation in professional, interdisciplinary, implementation-specific work teams projects and programs in the field of education sciences; - Application of the principles and rules of professional ethics, based on value options explicit, specific to the specialist in education sciences.

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	Training the necessary skills to design and conduct a pedagogic research.
8.2 Specific objectives	The course aims to: - develop the capacities to use the concepts found in the area of pedagogical research; - operating with strategies specific to pedagogical research; - the efficient design, for primary and preschool education, of some pedagogical research activities.

9. Contents

9.1. Course (Lectures)		Number of hours	Teaching methods	Additional remarks
1	Pedagogical research. Generalities.	2	lecture, lecture-debate, problematization, conversation, demonstration	
2	Fundamental types of research in the sciences Education.	2		
3	Research activity design. The definition in the terms of a research of a problem of investigated, formulating questions / hypotheses, definition and operationalization of variables.	2		
4	Qualitative and quantitative in education research. Methods used in the research activity.	2		
5	Statistical data processing techniques.	2		
6	Elaboration of the research report.	2		
7	Ethical aspects of educational research	2		
Bibliography				
[1]. Bocoş, M. (2003). Teoria şi practica cercetării pedagogice, Ed. Casa Cărţii de Ştiinţă, Cluj-Napoca;				
[2]. Chelcea, S. (2004). Metodologia cercetării sociologice, metode cantitative şi calitative, Bucureşti: Editura Economică.				

- [3]. Chelcea, S. (2005). Cum să redactăm o lucrare de licență, o teză de doctorat, un articol științific în domeniul științelor socioumane, București: Comunicare.ro.
- [4]. Chelcea, S. (coord.) (2008). Psihosociologie. Teorie, cercetări, aplicații, Ed. Polirom, Iași.
- [5]. Culic, I. (2004). Metode avansate în cercetarea socială, Iași: Polirom.
- [6]. Clocotici, V. și Stan, A. (2000). Statistică aplicată în psihologie, Iași: Polirom. .
- [7]. Enăchescu, C. (2005). Tratat de teoria cercetării științifice, Iași: Polirom.
- [8]. Howitt, D. și Cramer, D. (2006). Introducere în SPSS pentru psihologie, Iași: Polirom
- [9]. King, Ronald (2005). Strategia cercetării. Treisprezece cursuri despre elementele științelor sociale, Iași: Polirom.
- [10]. Krueger, R., Casey, M. A. (2005). Metoda focus – grup. Ghid practica pentru cercetarea aplicată, ed. Polirom, Iași.
- [11]. Labăr, V. A. (2008). SPSS pentru Științele Educației, Ed Polirom: Iași.
- [12]. Marinescu, V. (2005). Metode de studiu în comunicare, București: Niculescu
- [13]. Nicola, I. și Farcaș D. (1990). Teoria educației și noțiuni de cercetare pedagogică, manual pentru cls a-XI-a – școli normale, E.D.P., București.
- [14]. Popa, M. (2008). Statistică pentru psihologie. Teorie și aplicații pentru SPSS, Ed Polirom: Iași.
- [15]. Popa, N. L., Antonesei, L. & Labăr A. V. (2009) Ghid *pentru cercetarea educației. Un "Abecedar" pentru studenți, masteranzi, profesori*, Ed. Polirom, Iași.

9.2. Applications - Seminar		Number of hours	Teaching methods	Additional remarks
1	The role of pedagogical research. Debate	4	exercise, conversation, demonstration, debate, exposure, problematization, the project, practical works	
2	The problem of the research theme; examples with existing themes and creating new themes;	4		
3	Exercises to develop some research projects and building research tools (questionnaire, test, interview guide, guide of observation).	6		
4	Data analysis: descriptive statistics - exercises and applications	6		
5	Elaboration of the research report.	8		

Bibliography

- [1]. Bocoș, M. (2003). Teoria și practica cercetării pedagogice, Ed. Casa Cărții de Știință, Cluj-Napoca;
- [2]. Chelcea, S. (2004). Metodologia cercetării sociologice, metode cantitative și calitative, București: Editura Economică.
- [3]. Chelcea, S. (2005). Cum să redactăm o lucrare de licență, o teză de doctorat, un articol științific în domeniul științelor socioumane, București: Comunicare.ro.
- [4]. Chelcea, S. (coord.) (2008). Psihosociologie. Teorie, cercetări, aplicații, Ed. Polirom, Iași.
- [5]. Culic, I. (2004). Metode avansate în cercetarea socială, Iași: Polirom.
- [6]. Clocotici, V. și Stan, A. (2000). Statistică aplicată în psihologie, Iași: Polirom. .
- [7]. Enăchescu, C. (2005). Tratat de teoria cercetării științifice, Iași: Polirom.
- [8]. Howitt, D. și Cramer, D. (2006). Introducere în SPSS pentru psihologie, Iași: Polirom
- [9]. King, Ronald (2005). Strategia cercetării. Treisprezece cursuri despre elementele științelor sociale, Iași: Polirom.
- [10]. Krueger, R., Casey, M. A. (2005). Metoda focus – grup. Ghid practica pentru cercetarea aplicată, ed. Polirom, Iași.
- [11]. Labăr, V. A. (2008). SPSS pentru Științele Educației, Ed Polirom: Iași.

[12]. Marinescu, V. (2005). Metode de studiu în comunicare, București: Niculescu

[13]. Nicola, I. și Farcaș D. (1990). Teoria educației și noțiuni de cercetare pedagogică, manual pentru cls a-XI-a – școli normale, E.D.P., București.

[14]. Popa, M. (2008). Statistică pentru psihologie. Teorie și aplicații pentru SPSS, Ed Polirom: Iași.

[15]. Popa, N. L., Antonesei, L. & Labăr A. V. (2009) Ghid *pentru cercetarea educației. Un "Abecedar" pentru studenți, masteranzi, profesori*, Ed. Polirom, Iași.

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

The contents of the discipline were developed as a result of consulting similar study programs in the country,

11. Assessment

Activity type	10.1 Assessment criteria	10.2 Assessment methods	11.3 Weight in the final grade (%)
11.4 Course	Solving the test tasks	Written test	50
11.5 Seminar	Performing the required materials	portfolio	50
11.6 Minimum standard of performance: building a research project			

Date of completion	Lecturers	Title/ Surname/ Name:	Signature
septembrie 2024	Course	Lect.dr.Achim Florina	
	Applications Seminar	Lect.dr.Achim Florina	

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