

SYLLABUS

Introduction to cognitive sciences

University year 2025

1. Information regarding the programme

1.1. Higher education institution	Babeş-Bolyai University
1.2. Faculty	Faculty of Psychology and Educational Sciences
1.3. Department	Department of Clinical Psychology and Psychotherapy
1.4. Field of study	Psychology - Cognitive Sciences
1.5. Study cycle	Bachelor level
1.6. Study programme/Qualification	Psychologist
1.7. Form of education	Full-time

2. Information regarding the discipline

2.1. Name of the discipline	Introduction to cognitive sciences			Discipline code	PLE1102		
2.2. Course coordinator	Radu Şoflău, Ph.D.						
2.3. Seminar coordinator	Radu Şoflău, Ph.D.						
2.4. Year of study	1	2.5. Semester	2	2.6. Type of evaluation	E	2.7. Discipline regime	DS

3. Total estimated time (hours/semester of didactic activities)

3.1. Hours per week	4	of which: 3.2 course	2	3.3 seminar/laboratory	2
3.4. Total hours in the curriculum	56	of which: 3.5 course	28	3.6 seminar/laborator	28
Time allotment for individual study (ID) and self-study activities (SA)					hours
Learning using manual, course support, bibliography, course notes (SA)					56
Additional documentation (in libraries, on electronic platforms, field documentation)					22
Preparation for seminars/labs, homework, papers, portfolios and essays					20
Tutorship					4
Evaluations					2
Other activities:					1
3.7. Total individual study hours					98
3.8. Total hours per semester					150
3.9. Number of ECTS credits					6

4. Prerequisites (if necessary)

4.1. curriculum	<ul style="list-style-type: none">• Introduction to psychology• Experimental psychology
4.2. competencies	-

5. Conditions (if necessary)

5.1. for the course	<ul style="list-style-type: none">• Classroom with at least 80 seats, computer and video projector
5.2. for the seminar /lab activities	<ul style="list-style-type: none">• Room with at least 50 seats, computer and video projector

6.1. Specific competencies acquired ¹

¹ One can choose either competences or learning outcomes, or both. If only one option is chosen, the row related to the other option will be deleted, and the kept one will be numbered 6.

Professional/essential competencies	<p>Knowledge and understanding</p> <ul style="list-style-type: none"> • Understanding the place and role of cognitive sciences in the current science world. • Knowledge of fundamental aspects and the role of cognitive sciences in human mind. • Characterization of the main study paradigms of cognitive sciences. • Understanding the role of cognitive sciences on various classical aspects of human mind. • Familiarization with the principles of fundamental research in cognitive sciences. <p>Explanation and interpretation</p> <ul style="list-style-type: none"> • Arguing the importance of the cognitive sciences in approaching human mind. • Interpretation of human mind from a cognitive sciences perspective. • Carrying out comparative analyses of the main study paradigms of cognitive sciences. • Explaining and arguing the experimental approach of human mind. <p>Instrumental - applicative</p> <ul style="list-style-type: none"> • Learning the main techniques for investigating human mind processes in the cognitive sciences. • Develops skills to conduct a research project. <p>Attitude</p> <ul style="list-style-type: none"> • Manifestation of a positive and responsible attitude towards the scientific field. • Cultivating a responsible attitude towards the research activity in the field. • Interest in personal development in the field.
Transversal competencies	<ul style="list-style-type: none"> • Written and oral communication skills. • Relationship and teamwork skills. • Competences regarding the management of material and time resources. • Competences in using scientific terminology in the field of cognitive science. • Competences for interdisciplinary use of knowledge and terminology in the fields of psychology and cognitive sciences.

6.2. Learning outcomes

Knowledge	<p>The student knows:</p> <ul style="list-style-type: none"> • The fundamental concepts, theories, and paradigms of cognitive sciences and their relation to the study of the human mind. • The historical development and interdisciplinary nature of cognitive sciences, including their connections to psychology, neuroscience, artificial intelligence, and philosophy. • The main methodological approaches and research techniques used in the investigation of cognitive processes. • The role of cognitive sciences in explaining classical psychological phenomena such as learning, memory, language, decision making, and emotions. • The fundamental models of cognitive architectures and their computational principles.
Skills	<p>The student is able to:</p> <ul style="list-style-type: none"> • Identify and explain the key paradigms, models, and theoretical frameworks in cognitive sciences. • Critically analyze and compare various approaches to studying cognition, both classical and connectionist. • Interpret cognitive and psychological phenomena through the lens of cognitive science theories. • Apply basic techniques for exploring cognitive processes and designing cognitive research. • Use scientific terminology and reasoning to communicate effectively in written and oral formats. • Collaborate effectively in team-based research or analytical discussions within interdisciplinary contexts.
Responsibility and autonomy:	<p>The student has the ability to work independently to obtain, integrate, and apply knowledge from cognitive sciences in understanding the human mind and behavior.</p> <ul style="list-style-type: none"> • Demonstrates autonomy in identifying relevant scientific sources and synthesizing information. • Shows responsibility in applying scientific and ethical standards in research and interpretation. • Engages in continuous professional and personal development through critical reflection and independent study. • Displays initiative in exploring interdisciplinary perspectives and formulating informed, evidence-based arguments within the field of cognitive sciences.

7. Objectives of the discipline (outcome of the acquired competencies)

7.1 General objective of the discipline	<ul style="list-style-type: none"> Familiarizing students with cognitive sciences.
7.2 Specific objective of the discipline	<ul style="list-style-type: none"> Presentation of the cognitive sciences and their impact on studying human mind. Analysis of the place and role of cognitive sciences in the current science system. Discussion of the main research paradigms of cognitive sciences. Cognitive sciences approach to the human mind.

8. Content

8.1 Course	Teaching methods	Remarks
History of cognitive sciences Keywords: History of science, Cognitive sciences, Philosophy of science	Lecture, demonstrative example, synthesis of knowledge, guided discovery	
Fundamentals of cognitive sciences I Keywords: Psychology, Neuroscience, Artificial intelligence, Philosophy of mind	Lecture, demonstrative example, synthesis of knowledge, guided discovery	
Fundamentals of cognitive sciences II Keywords: Psychology, Neuroscience, Artificial intelligence, Philosophy of mind	Lecture, demonstrative example, synthesis of knowledge, guided discovery	
Fundamentals of representational theories Keywords: Cognitive sciences, Representational mind, Computation	Lecture, demonstrative example, synthesis of knowledge, guided discovery	
Fundamentals of cognitive architectures Keywords: Cognitive sciences, Mind architecture, Computation	Lecture, demonstrative example, synthesis of knowledge, guided discovery	
Classical computational cognitiverrepresentations and architectures Keywords: Cognitive architecture, Computation	Lecture, demonstrative example, synthesis of knowledge, guided discovery	
Connectionist cognitive architectures cognitive representation and architecture Keywords: Cognitive architecture, Connectionism	Lecture, demonstrative example, synthesis of knowledge, guided discovery	
Cognitive sciences and classical problems in psychology: Concepts and Meaning Keywords: Cognitive sciences, Concepts and Meaning	Lecture, demonstrative example, synthesis of knowledge, guided discovery	
Cognitive sciences and classical problems in psychology: Learning and Memory Keywords: Cognitive sciences, Learning and Memory	Lecture, demonstrative example, synthesis of knowledge, guided discovery	

Cognitive sciences and classical problems in psychology: Consciousness Keywords: Cognitive sciences, Consciousness	Lecture, demonstrative example, synthesis of knowledge, guided discovery	
Cognitive sciences and classical problems in psychology: Decision making & Problem solving Keywords: Cognitive sciences, Decision making, Problem solving	Lecture, demonstrative example, synthesis of knowledge, guided discovery	
Cognitive sciences and classical problems in psychology: Languages Keywords: Cognitive sciences, Language	Lecture, demonstrative example, synthesis of knowledge, guided discovery	
Cognitive sciences and classical problems in psychology: Emotions Keywords: Cognitive sciences, Emotions	Lecture, demonstrative example, synthesis of knowledge, guided discovery	
Cognitive sciences and classical problems in psychology: Psychopathology Keywords: Cognitive sciences, Psychopathology	Lecture, demonstrative example, synthesis of knowledge, guided discovery	
<p>Bibliography</p> <p>Mandatory references: Chipman, S. E. F. (ed.). (2017). The Oxford handbook of cognitive science. Oxford University Press. Keith Frankish and William Ramsey (eds.), (2012). The Cambridge Handbook of Cognitive Science, Cambridge University Press.</p> <p>!!! Note: from the works mentioned above, only the chapters related to the topics taught in the course and seminar are mandatory. Specific (new/classical) articles/chapters might be suggested for each topic.</p> <p>Optional references: Keating, D. P. (2011) (Ed.) Nature and Nurture in Early Child Development. New York, NY: Cambridge University Press. Johnson, M. H., & de Haan, M. (2015). Developmental Cognitive Neuroscience: An Introduction. (4th ed.). West Sussex, UK: Wiley Blackwell. Posner, M. I., & Rothbart, M. K. (2007). Educating the Human Brain. Washington, DC: American Psychological Association. Wilson, R.A., & Frank, C., K (eds.) (1999). Mit Encyclopedia of the Cognitive Sciences (Mitecs). MIT Press. Wittgenstein. "Philosophical Investigations." Chap. 6 in Concepts: Core Readings (edited by E. Margulis & S. Laurence. Cambridge, 1999, MA: MIT Press, 1999. (Excerpt)).</p>		
8.2 Seminar / laboratory	Teaching methods	Remarks
Introduction and organizational remarks	Exposure, conversation	
Fundamentals of cognitive sciences - practical applications I	Presentation, knowledge synthesis, conceptual clarification, group activities, guided discovery, practical activities	
Fundamentals of cognitive sciences - practical applications II	Presentation, knowledge synthesis, conceptual clarification, group activities, guided discovery, practical activities	
Fundamentals of cognitive architectures - practical applications	Presentation, knowledge synthesis, conceptual clarification, group activities, guided discovery, practical activities	
Classical computational cognitive representations and architectures - practical	Presentation, knowledge synthesis, conceptual clarification, group activities,	

applications	guided discovery, practical activities	
Connectionist cognitive Architectures - practical applications	Presentation, knowledge synthesis, conceptual clarification, group activities, guided discovery, practical activities	
Cognitive sciences and classical problems in psychology: Concepts and Meaning - practical applications	Presentation, knowledge synthesis, conceptual clarification, group activities, guided discovery, practical activities	
Cognitive sciences and classical problems in psychology: Learning and Memory - practical applications	Presentation, knowledge synthesis, conceptual clarification, group activities, guided discovery, practical activities	
Cognitive sciences and classical problems in psychology: Consciousness - practical applications	Presentation, knowledge synthesis, conceptual clarification, group activities, guided discovery, practical activities	
Cognitive sciences and classical problems in psychology: Decision making & Problem solving - practical applications	Presentation, knowledge synthesis, conceptual clarification, group activities, guided discovery, practical activities	
Cognitive sciences and classical problems in psychology: Languages - practical applications	Presentation, knowledge synthesis, conceptual clarification, group activities, guided discovery, practical activities	
Cognitive sciences and classical problems in psychology: Emotions - practical applications	Presentation, knowledge synthesis, conceptual clarification, group activities, guided discovery, practical activities	
Cognitive sciences and classical problems in psychology: Psychopathology - practical applications	Presentation, knowledge synthesis, conceptual clarification, group activities, guided discovery, practical activities	

Bibliography

Mandatory references:

Chipman, S. E. F. (ed.). (2017). The Oxford handbook of cognitive science. Oxford University Press.

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Optional references:

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Wittgenstein. "Philosophical Investigations." Chap. 6 in Concepts: Core Readings (edited by E. Margulis & S. Laurence. Cambridge, 1999, MA: MIT Press, 1999. (Excerpt)).




9. Corroborating the content of the discipline with the expectations of the epistemic community, professional associations and representative employers within the field of the program

The proposed course and seminar topics are central topics in fundamental and applied research in the fields of cognitive sciences and their approach is based on the most recent results from the literature and consistent with other internationally relevant academic programs and key handbooks in the field. The course also offers state of the art research skills that are transferable to any scientific and applied field of knowledge.

10. Evaluation

Activity type	10.1 Evaluation criteria	10.2 Evaluation methods	10.3 Percentage of final grade
10.4 Course		Written exam	60%
10.5 Seminar/laboratory		Written exam	40%
10.6 Minimum standard of performance			
<ul style="list-style-type: none"> • The final evaluation will be based on a written exam conducted during the session at the end of the semester. • The conditions for passing the Introduction to Cognitive Sciences exam are as follows: <ul style="list-style-type: none"> ○ a minimum of 5 points on the written exam 			

11. Labels ODD (Sustainable Development Goals)²

	General label for Sustainable Development								
									

² Keep only the labels that, according to the [Procedure for applying ODD labels in the academic process](#), suit the discipline and delete the others, including the general one for *Sustainable Development* – if not applicable. If no label describes the discipline, delete them all and write „*Not applicable.*”.

Date:
24.09.2025

Signature of course coordinator

Lector univ. dr. Radu Șoflău

Signature of seminar coordinator

Lector univ. dr. Radu Șoflău

Date of approval:
24.09.2025

Signature of the head of department

Prof. univ. dr. Anca DOBREAN