

# SYLLABUS

## Embodied Cognition

University year 2024-2025

### 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 Psychology
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	

### 2. Information regarding the discipline

2.1. Name of the discipline	Embodied Cognition			Discipline code			
2.2. Course coordinator				Assoc. prof. Thea Ionescu			
2.3. Seminar coordinator				PhD student Alexandru Bibire			
2.4. Year of study	3	2.5. Semester	6	2.6. Type of evaluation	E	2.7. Discipline regime	Optional

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

3.1. Hours per week	3	of which: 3.2 course	2	3.3 seminar/laboratory	1
3.4. Total hours in the curriculum	42	of which: 3.5 course	28	3.6 seminar/laborator	14
<b>Time allotment for individual study (ID) and self-study activities (SA)</b>					
Learning using manual, course support, bibliography, course notes (SA)					30
Additional documentation (in libraries, on electronic platforms, field documentation)					12
Preparation for seminars/labs, homework, papers, portfolios and essays					10
Tutorship					4
Evaluations					2
Other activities:					
<b>3.7. Total individual study hours</b>	<b>58</b>				
<b>3.8. Total hours per semester</b>	<b>100</b>				
<b>3.9. Number of ECTS credits</b>	<b>4</b>				

### 4. Prerequisites (if necessary)

4.1. curriculum	Cognitive Psychology; Philosophy of Mind
4.2. competencies	Critical thinking

### 5. Conditions (if necessary)

5.1. for the course	<ul style="list-style-type: none"><li>Classroom with computer and video projector/Online course conducted through the MS Teams platform.</li></ul>
5.2. for the seminar /lab activities	<ul style="list-style-type: none"><li>Room with computer and video projector/Online seminar conducted through the MS Teams platform.</li></ul>

## 6. Specific competencies acquired

<b>Professional/essential competencies</b>	<p><b>Knowledge and understanding</b></p> <ul style="list-style-type: none"> <li>Understand post-cognivist approaches in Cognitive Sciences, in particular Embodied Cognition and Grounded Cognition</li> </ul> <p><b>Explanation and interpretation</b></p> <ul style="list-style-type: none"> <li>Explain the human mind through the lens of Embodied Cognition</li> <li>Critically reflect on the unity of mind-body-context in explaining the human mind</li> </ul> <p><b>Instrumental - applicative</b></p> <ul style="list-style-type: none"> <li>Identify the challenges of this approach for research on the human mind</li> </ul> <p><b>Attitude</b></p> <ul style="list-style-type: none"> <li>Embrace contemporary paradigms in the study of human mind</li> </ul>
<b>Transversal competencies</b>	<ul style="list-style-type: none"> <li>Critical thinking with regard to scientific data</li> <li>Challenging known facts to push research beyond them</li> </ul>

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

<b>7.1 General objective of the discipline</b>	To know post-cognivist approaches (i.e., Embodied Cognition and Grounded Cognition) and to understand the human mind as derived from the unity of mind-body-context.
<b>7.2 Specific objective of the discipline</b>	<p>Understanding the essential role of the body and the context in shaping the human mind</p> <p>Acknowledging the challenges in contemporary research about the human mind</p> <p>Critically analyzing the implications of Embodied Cognition for research about the human mind and for psychological interventions</p>

## 8. Content

<b>8.1 Course</b>	<b>Teaching methods</b>	<b>Remarks</b>
Cognitivism and post-cognitivism	Lecture, demonstrative example, synthesis of knowledge, guided discovery	
Embodied cognition: The role of the body in shaping cognition	Lecture, demonstrative example, guided discovery	Case study: Development
Situating cognition	Demonstrative example, synthesis of knowledge, guided discovery	
The perception - thought - action continuum	Synthesis of knowledge, guided discovery	Traditional cognitivism vs contemporary cognitivism
Gestures as knowledge repository	Lecture, demonstrative example, synthesis of knowledge, guided discovery	
Embodiment of complex abilities: Embodied mathematics	Lecture, demonstrative example, synthesis of knowledge, guided discovery	
Embodied learning	Lecture, demonstrative example	

Embodied emotions	Lecture, demonstrative example	
Social grounding	Synthesis of knowledge, guided discovery	
Challenges for contemporary research in Cognitive Sciences	Lecture, demonstrative example, synthesis of knowledge, guided discovery	
Implications for psychological interventions: Therapy, counseling, and education	Synthesis of knowledge	
Cognitivism and post-cognitivism: Which way forward?	Synthesis of knowledge	

### **Bibliography - mandatory:**

Barrett, L. F., Wilson-Mendenhall, C. D., & Barsalou, L. W. (2014). A psychological construction account of emotion regulation and dysregulation: The role of situated conceptualizations. In J. J. Gross (Ed.), *The Handbook of Emotion Regulation* (2nd ed.) (pp. 447-465). Guilford.

Barsalou, L. W. (2008). Grounded Cognition. *Annual Review of Psychology*, 59, 617-645.

Cook, S. W. (2011). Abstract thinking in space and time: Using gesture to learn math. *Cognition, Brain, Behavior. An Interdisciplinary Journal (Special Issue on Embodiment and Development)*, XV, 553-570.

Crollen, V., Dormal, D., Seron, X., Lepore, F., & Collignon, O. (2013). Embodied numbers: The role of vision in the development of number-space interactions. *Cortex*, 49, 276-283.

Gallagher, S., & Hutto, D. D. (2024). Embodied Cognition in the Clinic. In A. L. Mishara, M. Moskalewicz, M. A. Schwartz, & A. Kranjec (Eds.), *Phenomenological Neuropsychiatry* (pp. 81-92). Springer.

Kiefer, M., & Trumpp, N. M. (2012). Embodiment theory and education: The foundations of cognition in perception and action. *Trends in Neuroscience and Education*, 1, 15-20.

Narayanan, V. H. (2013). Embodied cognition and the Orwell's problem in cognitive science. *AI & Soc.*, 30, 193-197.

### **Bibliography - optional:**

Calvo P., & Gomila A. (2008). *Handbook of Cognitive Science: An Embodied Approach*. Elsevier.

Ionescu, T. (2011). Abordarea *embodied cognition* și studiul dezvoltării cognitive. *Revista de Psihologie*, 57/4, 326-339.

Ionescu, T. (2022). *Copiii și oamenii mari: Căi pentru optimizarea dezvoltării umane*. Presa Universitară Clujeană, cap. 1 și 3.

Kontra, C., Goldin-Meadow, S., & Beilock, S. L. (2012). Embodied Learning Across the Life Span. *Topics in Cognitive Science*, 4(4), 731-739.

Sullivan, J. V. (2018). Learning and Embodied Cognition: A Review and Proposal. *Psychology Learning & Teaching*, 17(2), 128-143.

<b>8.2 Seminar/laboratory</b>	<b>Teaching methods</b>	<b>Remarks</b>
Cognitivism and post-cognitivism	Guided discovery, conversation	
The 4 Es of cognition: Embodied, embedded, enactive, extended	Conceptual clarification, practical activities	Philosophy and psychology in tandem
The perception - thought - action continuum	Presentation, group activities, guided discovery, practical activities	
The predictive brain	Presentation, knowledge synthesis, conceptual clarification, group activities, guided discovery, practical activities	

Embodied emotions	Conceptual clarification, group activities, guided discovery, practical activities	
Implications of Embodied Cognition for psychological interventions	Presentation, group activities, conversation	
<p><b>Bibliography - mandatory:</b></p> <p>Barrett, L. F., &amp; Lindquist, K. A. (2012). The Embodiment of Emotion. In G. R. Semin (Ed.), <i>Embodied Grounding</i> (pp. 237–262). Cambridge University Press.</p> <p>Barsalou, L. W. (2020). Challenges and Opportunities for Grounding Cognition. <i>Journal of Cognition</i>, 31, 1-24.</p> <p>Clark, A. (2015). Embodied Prediction. In T. Metzinger, &amp; J. M. Windt (Eds), <i>Open MIND</i>. MIND Group.</p> <p>Ionescu, T., &amp; Vasc, D. (2014). Embodied cognition: Challenges for psychology and education. <i>Procedia – Social and Behavioral Sciences</i>, 128, 275-280.</p> <p>Macedonia, M. (2019). Embodied Learning: Why at School the Mind Needs the Body. <i>Frontiers in Psychology</i>, 10, 2098.</p> <p>Morse, A. F., Benitez, V. L., Belpaeme, T., Cangelosi, A., &amp; Smith, L. B. (2015). Posture Affects How Robots and Infants Map Words to Objects. <i>PLOSOne</i>, 10(3), e0116012. doi:10.1371/journal.pone.0116012.</p> <p>Newen, A., Gallagher, S., &amp; De Bruin, L. (2018). 4E Cognition: Historical Roots, Key Concepts, and Central Issues. In A. Newen, L. De Bruin, &amp; S. Gallagher (Eds.), <i>The Oxford Handbook of 4E Cognition</i> (pp. 3-16). Oxford University Press.</p> <p>Tay, D. (2014). Lakoff and the theory of conceptual metaphor. In J. Littlemore, &amp; J. R. Taylor (Eds.), <i>Cognitive Linguistics Companion</i> (pp. 49-59). Bloomsbury.</p> <p><b>Bibliography - optional:</b></p> <p>Gallagher, S. (2014). Phenomenology and embodied cognition. In L. Shapiro (Ed.), <i>Routledge Handbook of Embodied Cognition</i> (pp. 9-18). Routledge.</p> <p>Ionescu, T. (2023). Cognition ancorată, dezvoltare și trasee individuale. In T. Ionescu, <i>Copiii altfel: Trasee specifice de dezvoltare cognitivă. O analiză critică</i> (pp. 85-101). Presa Universitară Clujeană.</p>		

## 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 course on Embodied Cognition centers on contemporary topics in fundamental and applied research in the field of Cognitive Sciences and as such it is essential for better understanding the human mind, both in research and in applied settings. 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	Deep understanding of relevant concepts of embodiment and grounding	Written exam	6p
10.5 Seminar/laboratory	Application of relevant concepts	Research project	3p
	Active involvement in class work	Continuous evaluation	1p
10.6 Minimum standard of performance			
Minimum passing score: 5p			
The final grade consists of:			

- a. score obtained in the written exam in proportion of 60%
- b. research project 30%
- c. active involvement 10%

**11. Labels ODD (Sustainable Development Goals)**

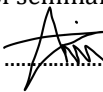
	General label for Sustainable Development							
								
								

Date:  
24.02.2025

Signature of course coordinator

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Signature of seminar coordinator

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Date of approval:

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Signature of the head of department

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