

## SYLLABUS

### 1. Information about the study program

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 program / Qualification	Psychologist

### 2. Information about the course

2.1 Title of the course	Psychodiagnosis II (Psychometrics of cognitive abilities/intelligence)						
2.2 Teacher in charge of the lecture	Lect. Univ. Dr. Florean Ionuț-Stelian						
2.3 Teacher in charge of the seminar	Lect. Univ. Dr. Florean Ionuț-Stelian						
2.4 Study year	II	2.5 Semester	4	2.6. Examination type	E	2.7 Course type	DD

### 3. Estimated total time (number of hours of teaching activities per semester)

3.1 Number of hours per week	4	out of which: 3.2 lecture	2	3.3 seminar / laboratory	2
3.4 Total number of hours in the curriculum	56	out of which: 3.5 lecture	28	3.6 seminar / laboratory	28
Distribution of the allocated amount of time:					hours
Individual study (textbook, course support, bibliography, and notes)					25
Supplementary documentation at the library using specialized electronic platforms in the field					15
Preparing for seminars / laboratories, homework, papers, portfolios, and essays					25
Tutoring					1
Exams					2
Other activities: research activities					2
3.7 Total number of hours of individual study	70				
3.8 Total number of hours per semester	125				
3.9 Number of credits (ECTS)	5				

### 4. Prerequisites

4.1 Curriculum	Introduction to psychology
----------------	----------------------------

	Quantitative research methods and statistics
4.2 Competencies	Descriptive and Inferential Statistics

## 5. Requirements

5.1 For the lecture	Classroom with at least 60 seats, computer and video projector / Online course conducted through the MS Teams platform.
5.2 For the seminar/laboratory	Room with at least 30 seats, computer and video projector / Online seminar conducted through the MS Teams platform.

## 6. Specific skills acquired

<b>Professional skills</b>	<p><b>Knowledge and understanding</b></p> <p><b>Knowledge and understanding of the core concepts and principles of cognitive abilities evaluation.</b></p> <ul style="list-style-type: none"> <li>• Demonstrate knowledge about the dominating models of intelligence and understanding about the division into general intelligence and specialized cognitive abilities.</li> <li>• Be able to describe the factors that affect intelligence and their relative contributions, specifically in terms of behavioral genetic analyses of shared environment, unique environment, and genetic factors.</li> <li>• Demonstrate an understanding of how intelligence is related to outcomes, such as educational attainment, career success, physical and psychological health, and quality of social relations.</li> <li>• Be able to describe the dominating explanations for both decreasing and increasing intelligence across time and between generations that have been observed.</li> </ul> <p><b>Explanation and interpretation</b></p> <p><b>Learning which methods and techniques are required to investigate the psychometric properties of a cognitive abilities test or questionnaire, when and how these methods and techniques can be applied, and how their results can be interpreted.</b></p> <ul style="list-style-type: none"> <li>• Identify and critically assess the various instruments of intelligence assessment.</li> <li>• Explain the main principles of psychometric assessment.</li> <li>• Evaluate the psychometric properties of assessment instruments.</li> <li>• Critically assess the clinical application and use of psychometric tests.</li> <li>• Identify ethical and multicultural issues pertaining to the psychometric assessment of intelligence.</li> <li>• Perceive possible biases in the use of psychometric tests in a multicultural context.</li> </ul>
----------------------------	---

	<p><b>Instrumental - applicative</b></p> <ul style="list-style-type: none"> <li>• Demonstrate ability to reflect on the meaning of intelligence for relevant societal issues and problems.</li> <li>• Demonstrate ability to interpret results from tests that measure intelligence</li> <li>• Demonstrate awareness about critical perspectives on intelligence both as a concept and as a method for measuring cognitive ability</li> </ul>
<b>Transversal skills</b>	<ul style="list-style-type: none"> <li>• Understand and promotes the values and principles of professional deontology in psychological testing and assessment;</li> <li>• Understand professional ethics and deontology in scientific research and practice;</li> <li>• Manifests a critical attitude in the scientific approach of psychological testing and assessment.</li> <li>• Demonstrate ability to identify appropriate types of intelligence tests for various research- and evaluation purposes</li> <li>• Demonstrate ability to apply the knowledge above to relevant societal issues and problems</li> </ul>

**7. Objectives of the course** (based on the grid of acquired competencies)

7.1 General objective	<p>The course provides essential knowledge about the concept of intelligence and its significance from a broad differential-psychology perspective. Principal features of the present state and more than 150-year history of intelligence research are described, with central terms such as: psychometric intelligence, general intelligence (<i>g</i>), intelligence quotient (IQ), and cognitive ability. Students will become acquainted with the dominating models of psychometric intelligence and will discuss different definitions of intelligence. One main theme is validity and reliability, with respect to associations and causal relations between psychometric intelligence and outcomes, such as educational- and career success, physical and psychological health, and social relations. Another main theme is environmental and genetic factors that affect intelligence, and how they are related to the Flynn effect and its contrast, decreasing IQ in several countries. Critical arguments against both the concept of intelligence and its measurement are also discussed.</p>
7.2 Specific objectives	<p><b>1. Knowledge and understanding</b></p> <ul style="list-style-type: none"> <li>• Discuss the main psychometric instruments assessing intellectual aptitude and psychological functioning.</li> <li>• Discuss the principles of psychometric assessment and the properties of psychometric instruments.</li> <li>• Explore multicultural perceptions of intelligence and related biases in the use of</li> </ul>

psychometric instruments.

- Describe the utility and application of intelligence assessment.
- Discuss the strengths and weaknesses of psychometric instruments in the assessment of cognitive intelligence.
- Discuss ethical implications surrounding theories of intelligence and its assessment.

**2. Explanation and interpretation**

Learning which methods and techniques are required to investigate the psychometric properties of a cognitive abilities test or questionnaire, when and how these methods and techniques can be applied, and how their results can be interpreted:

- To create the environment for understanding the fundamental vocabulary and logic of intelligence assessment/ cognitive abilities;
- To develop the capacity for critical judgment of the adequacy of measures purported to assess intelligence/ cognitive abilities;
- To stir the appreciation of and an interest in the principles and methods of psychometric theory in general and intelligence/cognitive abilities assessment in particular;

**3. Instrumental – applicative**

- To develops the basic prerequisites as a future psychologist.
- To evaluate the psychometric properties of assessment instruments.
- To critically assess the clinical application and use of psychometric tests.

**4. Attitudinal**

To develop a scientist–practitioner attitude towards psychological testing and assessment of cognitive abilities/intelligence.

**8. Content**

8.1 Lecture	Teaching strategies	Remarks
1. Introduction in the main topics addressed by the discipline.	Lecture, demonstrative example, synthesis of knowledge, guided discovery	
2. Adaptation of Psychological Assessment Instruments.	Lecture, demonstrative example, synthesis of knowledge, guided discovery	
3. Assessment of Creativity: Description of the Main Assessment Tools.	Lecture, demonstrative example, synthesis of knowledge, guided discovery	
4. Assessment of Memory: Description of the Main Assessment Tools.	Lecture, demonstrative example, synthesis of knowledge, guided discovery	
5. Assessment of Attention: Description of the Main Assessment Tools.	Lecture, demonstrative example, synthesis of knowledge, guided discovery	

6. Cognitive Abilities: Definition, Classification.	Lecture, demonstrative example, synthesis of knowledge, guided discovery	
7. The utility of cognitive predictors in the educational, work, and social domains.	Lecture, demonstrative example, synthesis of knowledge, guided discovery	
8. Raven's Progressive Matrices Test: theoretical framework, description, and use.	Lecture, demonstrative example, synthesis of knowledge, guided discovery	
9. Cognitive Abilities: Theoretical Approaches to Intelligence.	Lecture, demonstrative example, synthesis of knowledge, guided discovery	
10. Wechsler Scales: Theoretical Framework, Description, and Use.	Lecture, demonstrative example, synthesis of knowledge, guided discovery	
11. Assessment of Intelligence: WISC-IV.	Lecture, demonstrative example, synthesis of knowledge, guided discovery	
12. Assessment of Development and Operational Tests.	Lecture, demonstrative example, synthesis of knowledge, guided discovery	
13. Neuropsychological Assessment and Learning Disabilities.	Lecture, demonstrative example, synthesis of knowledge, guided discovery	
14. Recapitulation.	Lecture, demonstrative example, synthesis of knowledge, guided discovery	

### References \*

#### a. Mandatory:

- (2017) ITC Guidelines for Translating and Adapting Tests (Second Edition), International Journal of Testing, DOI: 10.1080/15305058.2017.1398166
- Hambleton R. K., & Zenisky A. L. (2011). Translating and adapting tests for cross-cultural assessments. In Matsumoto D. & van de Vijver F. J. R. (Eds.). *Cross-Cultural Research Methods in Psychology* (pp. 46–74). Cambridge: Cambridge University Press
- Borsa, J. C., Damásio, B. F., & Bandeira, D. R. (2012). Cross-cultural adaptation and validation of psychological instruments: Some considerations. *Paidéia (Ribeirão Preto)*, 22(53), 423-432. doi:<http://dx.doi.org/10.1590/1982-43272253201314>
- Andrewes, D. (2015). *Neuropsychology: From Theory to Practice*. Psychology Press.
- Dawn P. Flanagan, Alan S. Kaufman (2004) *Essentials of WISC-IV assessment*. Wiley & Sons, Inc., Hoboken, New Jersey
- Deary, I., Penke, L., Johnson, W. (2010). The neuroscience of human intelligence differences. *Nature reviews. Neuroscience*, vol 11, 201-211
- Dugan, A. (2006). Assessing the validity and reliability of a piagetian based paper-pencil test.
- Fletcher, J. M., Francis, D. J., Morris, R. D., & Lyon, G. R. (2005). Evidence-based assessment of learning disabilities in children and adolescents. *Journal of Clinical Child and*

Adolescent Psychology, 34(3), 506-522. [https://doi.org/10.1207/s15374424jccp3403\\_7](https://doi.org/10.1207/s15374424jccp3403_7)

- Mitrofan, N., Mitrofan, L. (2009). Testarea psihologica. Inteligența și aptitudinile. Polirom:Iasi
- Nisbett, R., Aronson, J., Blair, C., et al (2012). Intelligence: New Findings and Theoretical Developments. American Psychologist, 1-30
- Raven, J. (2000). The Raven’s Progressive Matrices: Change and Stability over Culture and Time. Cognitive Psychology, 41, 1-48.
- Sternberg, R. (2010). Applying Psychological Theories to Educational Practice. American Educational Research Journal, 45, 1, 150-165
- Sternberg, R. J., & Kaufman, S. B. (2011). *The Cambridge Handbook of Intelligence*. Cambridge University Press.
- Weidman, N. (2005). History of Intelligence Measurement. In *Encyclopedia of Statistics in Behavioral Science*. John Wiley & Sons, Ltd. <https://doi.org/10.1002/0470013192.bsa382>

**b. Recommended:**

- Cattell-Horn-Carroll CHC (Gf-Gc) Theory: Past, Present & Future - <http://www.iapsych.com/CHCPP/CHCPP.HTML>
- Gardner Howard <http://pzweb.harvard.edu/PIs/HG.htm>
- Buckhalt, J. (2002). A short history of g: Psychometrics’ most enduring and controversial construct. *Learning and Individual differences*, 13, 101-114
- Kan, K. J., van der Maas, H. L., & Levine, S. Z. (2019). Extending psychometric network analysis: Empirical evidence against g in favor of mutualism?. *Intelligence*, 73, 52-62. <https://doi.org/10.1016/j.intell.2018.12.004>
- Plucker, J. A. (Ed.). (2003). Human intelligence: Historical influences, current controversies, teaching resources. <http://www.indiana.edu/~intell>

\* as well as other bibliographic sources mentioned during the course activities

8.2 Seminar / laboratory	Teaching strategies	Remarks
1. Recapitulation of the main elements of psychometrics.	Presentation, knowledge synthesis, conceptual clarification, group activities, guided discovery, practical activities	
2. Adaptation of Psychological Assessment Instruments.	Presentation, knowledge synthesis, conceptual clarification, group activities, guided discovery, practical activities	
3. Assessment of Creativity (Torrance Test of Creative Thinking).	Presentation, knowledge synthesis, conceptual clarification, group activities, guided discovery, practical activities	
4. Assessment of Memory (MMSE-II/MOCA).	Presentation, knowledge synthesis, conceptual clarification, group activities, guided discovery, practical activities	

5. Assessment of Attention (D2 Test).	Presentation, knowledge synthesis, conceptual clarification, group activities, guided discovery, practical activities	
6. Assessment of Cognitive Abilities – The Flynn Effect.	Presentation, knowledge synthesis, conceptual clarification, group activities, guided discovery, practical activities	
7. Cognitive Abilities and Their Relationship with Personality Traits.	Presentation, knowledge synthesis, conceptual clarification, group activities, guided discovery, practical activities	
8. Raven's Progressive Matrices – Application and Scoring	Presentation, knowledge synthesis, conceptual clarification, group activities, guided discovery, practical activities	
9. Measurement Tools for Cognitive Abilities Across Different Cultures (Culture-Fair Test)	Presentation, knowledge synthesis, conceptual clarification, group activities, guided discovery, practical activities	
10. Multiple Intelligences	Presentation, knowledge synthesis, conceptual clarification, group activities, guided discovery, practical activities	
11. WISC-IV – Application and Scoring	Presentation, knowledge synthesis, conceptual clarification, group activities, guided discovery, practical activities	
12. Early Cognitive Abilities (Developmental Scales)	Presentation, knowledge synthesis, conceptual clarification, group activities, guided discovery, practical activities	
13. Neuropsychological Assessment (NEPSY)	Presentation, knowledge synthesis, conceptual clarification, group activities, guided discovery, practical activities	
14. Recapitulation.	Presentation, knowledge synthesis, conceptual clarification, group activities, guided discovery, practical activities	

## References \*

### a. Mandatory:

- Beaton, D.,E., Bombardier, C., Guillemin, F., Ferraz, M.,B. (2000), Guidelines for the Process of Cross-Cultural Adaptation of Self-Report Measures, *Spine*, 3186–3191, doi:10.1097/00007632-200012150-00014
- Sousa, V.,D., Rojjanasrirat, W. (2010), Translation, adaptation and validation of instruments or scales for use in cross-cultural health care research: a clear and user-friendly guideline, *Journal of Evaluation in Clinical Practice*, 268–274, doi:10.1111/j.1365-2753.2010.01434.x
- Benedek, M., Jauk, E., Sommer, M., Arendasy, M., & Neubauer, A. C. (2014). Intelligence, creativity, and cognitive control: The common and differential involvement of executive functions in intelligence and creativity. *Intelligence*, 46, 73–83. <https://doi.org/10.1016/j.intell.2014.05.007>
- Alabbasi, A. M. A., Paek, S. H., Kim, D., & Cramond, B. (2022). What do educators need to know about the Torrance Tests of Creative Thinking: A comprehensive review. *Frontiers in Psychology*, 13. DOI: 10.3389/fpsyg.2022.1000385
- Siqueira, G. S., Hagemann, P. D. M., Coelho, D. D. S., Santos, F. H. D., & Bertolucci, P. H. (2019). Can MoCA and MMSE be interchangeable cognitive screening tools? A systematic review. *The Gerontologist*, 59(6), e743-e763.
- Burns, N. R., Nettelbeck, T., & McPherson, J. (2009). Attention and intelligence: A factor analytic study. *Journal of Individual Differences*, 30(1), 44-57.
- Bates, M. E., & Lemay, E. P. (2004). The d2 Test of attention: construct validity and extensions in scoring techniques. *Journal of the International Neuropsychological Society*, 10(3), 392-400. <https://doi.org/10.1017/S135561770410307X>
- Wongupparaj, P., Wongupparaj, R., Morris, R. G., & Kumari, V. (2023). Seventy years, 1000 samples, and 300,000 SPM scores: A new meta-analysis of Flynn effect patterns. *Intelligence*, 98, 101750.<https://doi.org/10.1016/j.intell.2023.101750>
- Poropat, A. E. (2009). A meta-analysis of the five-factor model of personality and academic performance. *Psychological bulletin*, 135(2), 322. DOI: 10.1037/a0014996322
- Rammstedt, B., Lechner, C. M., & Danner, D. (2018). Relationships between personality and cognitive ability: A facet-level analysis. *Journal of Intelligence*, 6(2), 28. <https://doi.org/10.3390/jintelligence6020028>
- Ang, S., Van Dyne, L., Koh, C., Ng, K. Y., Templer, K. J., Tay, C., & Chandrasekar, N. A. (2007). Cultural intelligence: Its measurement and effects on cultural judgment and decision making, cultural adaptation and task performance. *Management and organization review*, 3(3), 335-371.
- Cocodia, E., A. (2014), Cultural Perceptions of Human Intelligence, *Journal of Intelligence*, 180-196; doi:10.3390/jintelligence2040180
- Ng, R. (2013). Cultural intelligence. *The encyclopedia of cross-cultural psychology*, 310-313.



- Dobrean, A., Raven, J., Comşa, M., Rusu, C., Balazsi, R. (2008) The Romanian Standardisation of the Standard Progressive Matrices Plus: Sample and General Results\*, In Raven, J. & Raven, J. (eds.), *Uses and Abuses of Intelligence: Studies Advancing Spearman and Raven's Quest for Non-Arbitrary Metrics*, (pp. 113-126), Unionville, New York, US, Royal Fireworks Press, [http://eyeonsociety.co.uk/resources/fulllist.html#uses\\_and\\_abuses](http://eyeonsociety.co.uk/resources/fulllist.html#uses_and_abuses)
  - Raven, J. (2000). The Raven's Progressive Matrices: Change and Stability over Culture and Time. *Cognitive Psychology*, 41, 1-48.
  - Kaufman, A. S., Flanagan, D. P., Alfonso, V. C., & Mascolo, J. T. (2006). Test Review: Wechsler Intelligence Scale for Children, Fourth Edition (WISC-IV). *Journal of Psychoeducational Assessment*, 24(3), 278–295. doi:10.1177/0734282906288389
  - Davis, K., Christodoulou, J., Seider, S., Gardner, H. (2011). The theory of multiple intelligences. In R.J. Sternberg & S.B. Kaufman (Eds.), *Cambridge Handbook of Intelligence* (pp. 485-503). Cambridge, UK; New York: Cambridge University Press
  - Brian L. Brooks, Elisabeth M. S. Sherman & Esther Strauss (2009) NEPSY-II: A Developmental Neuropsychological Assessment, Second Edition, *Child Neuropsychology*, 16:1, 80-101, DOI: 10.1080/09297040903146966
  - Del Rosario, C., Slevin, M., Molloy, E. J., Quigley, J., & Nixon, E. (2021). How to use the Bayley scales of infant and toddler development. *Archives of Disease in Childhood-Education and Practice*, 106(2), 108-112. <http://dx.doi.org/10.1136/archdischild-2020-319063>
  - Frankenburg, W. K., & Dodds, J. B. (1967). The Denver developmental screening test. *The Journal of pediatrics*. [https://doi.org/10.1016/S0022-3476\(67\)80070-2](https://doi.org/10.1016/S0022-3476(67)80070-2)
- b. Recommended:**
- Ang, S., & Van Dyne, L. (2015). *Handbook of cultural intelligence: Theory, measurement, and applications*. Routledge.
  - Briley, D. A., & Tucker-Drob, E. M. (2017). Comparing the developmental genetics of cognition and personality over the life span. *Journal of Personality*, 85(1), 51-64. DOI: 10.1111/jopy.12186
  - Cattell-Horn-Carroll CHC (Gf-Gc) Theory: Past, Present & Future - <http://www.iapsych.com/CHCPP/CHCPP.HTML>
  - Carpenter, P. A., Just, M. A., & Shell, P. (1990). What one intelligence test measures: a theoretical account of the processing in the Raven Progressive Matrices Test. *Psychological review*, 97(3), 404.
  - Chan, R. C. K., Shum, D., Toulopoulou, T., & Chen, E. Y. H. (2008). Assessment of executive functions: Review of instruments and identification of critical issues. *Archives of Clinical Neuropsychology*, 23(2), 201–216. <https://doi.org/10.1016/j.acn.2007.08.010>
  - Cowan, N., Fristoe, N. M., Elliott, E. M., Brunner, R. P., & Saults, J. S. (2006). Scope of attention, control of attention, and intelligence in children and adults. *Memory & cognition*, 34(8), 1754-1768.
  - Schweizer, K., Moosbrugger, H., & Goldhammer, F. (2005). The structure of the

relationship between attention and intelligence. *Intelligence*, 33(6), 589-611.

- Dugan, A. (2006). Assessing the validity and reliability of a piagetian based paper-pencil test.
- Gardner Howard <http://pzweb.harvard.edu/PIs/HG.htm>
- Julayanont, P., & Nasreddine, Z. S. (2017). Montreal Cognitive Assessment (MoCA): concept and clinical review. *Cognitive screening instruments: A practical approach*, 139-195.
- Mitchell, A. J. (2013). The Mini-Mental State Examination (MMSE): an update on its diagnostic validity for cognitive disorders. *Cognitive screening instruments: A practical approach*, 15-46. [https://doi.org/10.1007/978-1-4471-2452-8\\_2](https://doi.org/10.1007/978-1-4471-2452-8_2)
- Buckhalt, J. (2002). A short history of g: Psychometrics' most enduring and controversial construct. *Learning and Individual differences*, 13, 101-114
- Plucker, J. A. (Ed.). (2003). Human intelligence: Historical influences, current controversies, teaching resources. <http://www.indiana.edu/~intell>
- Lawrence G. W, Gregoire, L.J., Zhu, J., (2015). Flaws in Flynn Effect Research with the Wechsler Scales. *Journal of psychoeducational Assessment*, 1-10, DOI: 10.1177/0734282915621222.
- Pietschnig, J., Voracek, M. (2015), One Century of Global IQ Gains: A Formal Meta-Analysis of the Flynn Effect (1909–2013), *Perspectives on Psychological Science*, 282–306, <https://doi.org/10.1177/1745691615577701>
- Halpern, F., D., LaMay L.M.,. (2000). The Smarter Sex: A critical Review of sex differences in intelligence. *Educational Psychology Review*, 12, no 2.
- Sternberg, R. (2010). Applying Psychological Theories to Educational Practice. *American Educational Research Journal*, 45, 1, 150-165
- Dutton, E., van der Linden, D., & Lynn, R. (2016). The negative Flynn Effect: A systematic literature review. *Intelligence*, 59, 163–169. <https://doi.org/10.1016/j.intell.2016.10.002>
- Deary, I., Penke, L., Johnson, W. (2010). The neuroscience of human intelligence differences. *Nature reviews. Neuroscience*, vol 11, 201-211

\* as well as other bibliographic sources mentioned during the course activities

### 9. Correlations between the content of the course and the expectations of the representatives of the epistemic community, professional associations and representative employers in the field related to the program

- The main objective of this course is to facilitate the learning of the fundamental concepts, methods, and principles of psychological measurement. Particular attention will be devoted to reliability and validity issues underlying psychometric theory, and how psychometric theory relates to the assessment of individual differences or human individuality more generally.
- The course provides the necessary prerequisites for the use of psychological tests, as they are described in the documentation of the College of Psychologists of Romania ([www.alegericpr.ro](http://www.alegericpr.ro)).

### 10. Evaluation

Activity type	10.1 Evaluation criteria	10.2 Evaluation methods	10.3 Weight in the final grade
10.4 Lecture	The correctness and	Written exam	70%

	completeness of knowledge; The assimilation of the specialized language; logical coherence		
10.5 Seminar / laboratory	The capacity to apply the concepts and theoretical models used in psychological testing and assessment	Research project	30%
10.6 Minimum passing score			
<ul style="list-style-type: none"> <li>• Acquiring the skills for evaluating and critique asses a psychological instrument measuring cognitive abilities for its reliability, validity and biases;</li> <li>• Acquiring the skills for identifying a range of psychological assessment tools for cognitive abilities</li> <li>• Understand the validity and reliability of associations and causal relations between psychometric intelligence and outcomes, such as educational- and career success, physical and psychological health, and social relations.</li> <li>• Understand the environmental and genetic factors that affect intelligence and how they are related to the Flynn effect and its contrast, decreasing IQ in several countries.</li> </ul> <p><b>The final grade consists of:</b></p> <ol style="list-style-type: none"> <li>a. The score obtained in the written exam.</li> <li>b. the score obtained at the research project.</li> </ol> <p>The structure of evaluation will be maintained for multiple rounds of evaluation</p>			

Date

Signature of the  
teacher in charge of  
the lecture

Signature of the  
teacher in charge of  
the seminar

26.02. 2024

Lect. univ. dr. Ionuț-Stelian Florean

Lect. univ. dr. Ionuț-Stelian Florean

Date of approval in  
the department

Signature of the Head of  
the department /director

26.02.2024

Prof. Univ. Dr. Anca Dobrean