

## SYLLABUS

### 1. Program details

1.1 Higher education institution	West University of Timișoara
1.2 Faculty / Department	Faculty of Psychology and Educational Sciences
1.3 Department	Psychology
1.4 Field of study	Psychology
1.5 Cycle of studies	Bachelor's degree
1.6 Study program / Qualification	Psychology – Cognitive science

### 2. Discipline details

2.1 Discipline name	<b>Research Methods and Statistics I</b>						
2.2 Tenured teacher – course activities	Lecturer Luca TISU, Ph.D.						
2.3 Tenured teacher – seminar / laboratory activities	Lecturer Luca TISU, Ph.D.						
2.4 Study year	I	2.5 Semester	I	2.6 Type of assessment	Exam	2.7 Discipline regime	DO
Classroom code	<b>nyhxp7qv</b>						

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

3.1 Number of hours per semester	4	Of which: 3.2 course	2	3.3 seminar/laboratory	2
3.4 Total hours from the curriculum	56	Of which: 3.5 course	28	3.6 seminar/laboratory	28
Time fund distribution:					hours
Study based on the textbook, course material, bibliography, and notes					30
Additional documentation in the library, on specialist electronic platforms / in the field					19
Preparing seminars/labs, homework, papers, portfolios, and essays					14
Tutoring					-
Examinations					4
Other activities					2
3.7 Total hours of individual study	<b>69</b>				
3.8 Total hours per semester	<b>125</b>				
3.9 Number of credits (ECTS)	<b>5</b>				

### 4. Prerequisites (where necessary)

4.1 for curriculum	N.A.
4.2 for competencies	N.A.

## 5. Conditions (where necessary)

5.1 for conducting the course	Classroom / Aula with a video projector and internet connection.
5.2 for conducting the seminar/laboratory	Laboratory with computers connected to the internet and specific software (JAMOVİ).

## 6. Discipline objectives - expected learning outcomes to which the discipline's study and promotion contributes

Knowledge	<ul style="list-style-type: none"> <li>Describes logically and articulately the basic principles underlying the science of psychology within current professional practice.</li> <li>Differentiates the main methodologies used in psychological research and practice.</li> <li>Formulates relevant scientific hypotheses to test the relationship between operationalized concepts within a research process, under supervision.</li> <li>Selects scientifically appropriate instruments necessary for well-founded arguments when addressing a study topic with significant knowledge potential.</li> <li>Analyzes and interprets research results both statistically and psychologically by applying fundamental and specialized knowledge from the field, under supervision.</li> </ul>
Skills	<ul style="list-style-type: none"> <li>Uses current methodologies and statistical analyses appropriate to the established study design, under supervision.</li> <li>Collects data and effectively manages databases containing psychological variables within a research process, under supervision.</li> <li>Analyzes and interprets empirical data from research, intervention, and psychological assessment processes, under supervision.</li> </ul>
Responsibility and autonomy	<ul style="list-style-type: none"> <li>Engages in critical, hypothesis-driven thinking.</li> <li>Maintains a strong commitment to scientific rigor while adopting a creative and innovative approach to psychological issues encountered in research within the field.</li> </ul>

## 7. Contents

7.1 Course	Teaching methods	Observations
1. Introductory course	Presentation, discussion	Overview of the course, its objectives, and evaluation means and standards.
2. Scientific research in psychology and cognitive sciences	Lecture, case studies, and debates	<i>To read:</i> Schweigert, W.A. (2021). <i>Research Methods in Psychology. A Handbook. 4<sup>th</sup> Ed.</i> Waveland Press, Inc. (Chapter 1, pp. 2-20)
3. From concept to variable. Forms and levels of operationalization	Lecture, case studies, and debates	<i>To read:</i> Schweigert, W.A. (2021). <i>Research Methods in Psychology. A Handbook. 4<sup>th</sup> Ed.</i> Waveland Press, Inc. (Chapter 5, pp. 77-81)

		<p>Cohen, B.H. (2013). <i>Explaining Psychological Statistics</i>. 4<sup>th</sup> Ed. John Wiley &amp; Sons, Inc. (Chapter 1, pp. 1-13).</p> <p>Coolican, H. (2019). <i>Research Methods and Statistics in Psychology</i>. 7<sup>th</sup> Ed. Routledge. (Part 1.2, pp. 33-66).</p>
4. Descriptive methods I. Observational studies	Lecture, demonstration, applications	<p>To read:</p> <p>Schweigert, W.A. (2021). <i>Research Methods in Psychology. A Handbook</i>. 4<sup>th</sup> Ed. Waveland Press, Inc. (Chapter 10, pp. 171-192)</p>
5. Descriptive methods II. Survey studies	Lecture, demonstration, applications	<p>To read:</p> <p>Schweigert, W.A. (2021). <i>Research Methods in Psychology. A Handbook</i>. 4<sup>th</sup> Ed. Waveland Press, Inc. (Chapter 11, pp. 193-224)</p>
6. Univariate descriptive statistics I. Frequency and data visualization	Lecture, demonstration, applications	<p>To read:</p> <p>Cohen, B.H. (2013). <i>Explaining Psychological Statistics</i>. 4<sup>th</sup> Ed. John Wiley &amp; Sons, Inc. (Chapter 2A, pp. 27-36)</p>
7. Univariate descriptive statistics II. Measures of central tendency and dispersion	Lecture, demonstration, applications	<p>To read:</p> <p>Cohen, B.H. (2013). <i>Explaining Psychological Statistics</i>. 4<sup>th</sup> Ed. John Wiley &amp; Sons, Inc. (Chapter 3, pp. 57-87).</p>
8. Univariate descriptive statistics III. Data normality and standardized scores	Lecture, demonstration, applications	<p>To recap.:</p> <p>Cohen, B.H. (2013). <i>Explaining Psychological Statistics</i>. 4<sup>th</sup> Ed. John Wiley &amp; Sons, Inc. (Chapter 4, pp. 99-127).</p>
9. Statistical inference. Hypothesis testing and types of hypotheses	Lecture, demonstration, applications	<p>To read:</p> <p>Schweigert, W.A. (2021). <i>Research Methods in Psychology. A Handbook</i>. 4<sup>th</sup> Ed. Waveland Press, Inc. (Chapter 3, pp. 48-64).</p> <p>Cohen, B.H. (2013). <i>Explaining Psychological Statistics</i>. 4<sup>th</sup> Ed. John Wiley &amp; Sons, Inc. (Chapter 5A, pp. 135-147).</p>
10. Testing correlational hypotheses I	Lecture, demonstration, applications	<p>To read:</p> <p>Cohen, B.H. (2013). <i>Explaining Psychological Statistics</i>. 4<sup>th</sup> Ed. John Wiley &amp; Sons, Inc. (Chapter 9A, pp. 271-282).</p>
11. Testing correlational hypotheses II	Lecture, demonstration, applications	<p>To read:</p> <p>Cohen, B.H. (2013). <i>Explaining Psychological Statistics</i>. 4<sup>th</sup> Ed. John Wiley &amp; Sons, Inc. (Chapter 9B, pp. 283-295).</p>
12. Testing comparative hypotheses I	Lecture, demonstration, applications	<p>To read:</p> <p>Cohen, B.H. (2013). <i>Explaining Psychological Statistics</i>. 4<sup>th</sup> Ed. John Wiley &amp; Sons, Inc. (Chapter 7A-B, pp. 203-231).</p>
13. Testing comparative hypotheses II	Lecture, demonstration,	<p>To read:</p>

	applications	Cohen, B.H. (2013). <i>Explaining Psychological Statistics</i> . 4 <sup>th</sup> Ed. John Wiley & Sons, Inc. (Chapter 11A-B, pp. 337-359).
14. Research reports and literature reviews	Lecture, demonstration, discussion	<i>To read:</i> Schweigert, W.A. (2021). <i>Research Methods in Psychology. A Handbook</i> . 4 <sup>th</sup> Ed. Waveland Press, Inc. (Chapter 4, pp. 66-77).
<p><i>Fundamental bibliography:</i> Cohen, B.H. (2013). <i>Explaining Psychological Statistics</i>. 4<sup>th</sup> Ed. John Wiley &amp; Sons, Inc. Coolican, H. (2019). <i>Research Methods and Statistics in Psychology</i>. 7<sup>th</sup> Ed. Routledge. (Part 1.8, pp. 213-248). Schweigert, W.A. (2021). <i>Research Methods in Psychology. A Handbook</i>. 4<sup>th</sup> Ed. Waveland Press, Inc.</p> <p><i>Recommended reading:</i> Leary, M.R. (2017). <i>Introduction to Behavioral Research Methods</i>. 7<sup>th</sup> Ed. Pearson.</p>		
<b>7.2 Seminar / laboratory</b>	<b>Teaching methods</b>	<b>Observations</b>
1. Introductory seminar	Presentation, discussion	Overview of the seminars, types of activities and requirements, evaluation means and standards.
2. Crafting an online survey	Demonstration Discussion Exemplification	Schweigert, W.A. (2021). <i>Research Methods in Psychology. A Handbook</i> . 4 <sup>th</sup> Ed. Waveland Press, Inc. (Chapter 11, pp. 193-224)
3. Coding data in Excel	Demonstration Discussion Exemplification	Lanoue, S. (2025). How to recode in Excel. Accesible at <a href="https://www.thebricks.com/resources/guide-how-to-recode-in-excel">https://www.thebricks.com/resources/guide-how-to-recode-in-excel</a>
4. Introduction to the jamovi environment.	Demonstration Discussion Exemplification	Navarro, J. D., & Foxcroft, D. R. (2022). <i>Learning statistics with jamovi: A tutorial for psychology students and other beginners</i> . (Chapter 2, pp. 49-54)
5. Data handling in jamovi. Reliability, recoding, total scores	Demonstration Discussion Exemplification	Navarro, J. D., & Foxcroft, D. R. (2022). <i>Learning statistics with jamovi: A tutorial for psychology students and other beginners</i> . (Chapter 2, pp. 55-58)
6. Data visualization in jamovi. Graphs, frequencies, percentiles	Demonstration Discussion Exemplification	Navarro, J. D., & Foxcroft, D. R. (2022). <i>Learning statistics with jamovi: A tutorial for psychology students and other beginners</i> . (Chapter 3, pp. 61-80)
7. Univariate descriptive statistics	Demonstration Discussion Exemplification	Navarro, J. D., & Foxcroft, D. R. (2022). <i>Learning statistics with jamovi: A tutorial for psychology students and other beginners</i> . (Chapter 3, pp. 81-102)
8. Recap – from importing data to testing univariate descriptive statistics	Demonstration Discussion Exemplification	Rely on reading materials and exercises uploaded on Classroom up to this point.
9. Practical evaluation	Practical evaluation	Practical summary evaluation covering descriptive statistics.

10. Testing correlational hypotheses I	Demonstration Discussion Exemplification	Navarro, J. D., & Foxcroft, D. R. (2022). <i>Learning statistics with jamovi: A tutorial for psychology students and other beginners</i> . (Chapter 5, pp. 289-300)
11. Testing correlational hypotheses II	Demonstration Discussion Exemplification	Navarro, J. D., & Foxcroft, D. R. (2022). <i>Learning statistics with jamovi: A tutorial for psychology students and other beginners</i> . (Chapter 5, pp. 289-300)
12. Testing comparative hypotheses	Demonstration Discussion Exemplification	Navarro, J. D., & Foxcroft, D. R. (2022). <i>Learning statistics with jamovi: A tutorial for psychology students and other beginners</i> . (Chapter 5, pp. 254-257 & 268-272, 258-265 & 274-283)
13. Recap – hypothesis testing. Correlational and comparative analyses	Demonstration Discussion Exemplification	Rely on reading materials and exercises uploaded on Classroom up to this point.
14. Hypothesis testing. Practical evaluation	Practical evaluation	Practical summary evaluation covering hypothesis testing.
<p><i>Fundamental bibliography:</i> Navarro, J. D., &amp; Foxcroft, D. R. (2022). <i>Learning statistics with jamovi: A tutorial for psychology students and other beginners (version 0.75)</i>. <a href="https://doi.org/10.24384/hgc3-7p15">https://doi.org/10.24384/hgc3-7p15</a> Retrievable at: <a href="https://davidfoxcroft.github.io/lsj-book/learning-statistics-with-jamovi.pdf">https://davidfoxcroft.github.io/lsj-book/learning-statistics-with-jamovi.pdf</a></p> <p>Cohen, B.H. (2013). <i>Explaining Psychological Statistics</i>. 4th Ed. John Wiley &amp; Sons, Inc.</p> <p><i>Recommended reading:</i> Field, A., Miles, J., &amp; Field, Z. (2012). <i>Discovering statistics using R</i>. SAGE Publications.</p>		

## 8. Correlation of discipline contents with the expectations of the representatives of the epistemic community, professional associations and representative employers in the field related to the program

The course is developed in accordance with the Methodological commission of the Romanian Psychologists College. Also, the knowledge acquired in this discipline favors an approach to scientifically validated psychological practice through the appropriate reading of specialized literature, analysis, and interpretation of data available for decision-making and scientific advances.

## 9. Assessment

Activity type	9.1 Assessment criteria	9.2 Assessment methods	9.3 Weight of final mark
9.4 Course	Written exam	<p>The exam will contain 50 multiple-choice items with one correct answer. One correct response equals one point.</p> <p>This exam takes place at the end of the semester, during the official examination period.</p>	40% (between 0 and 40 points)

		Students must have at least 15 points accumulated from the laboratory tests to be eligible to enter the exam.	
9.5 Seminar / laboratory	Practical tests	<p>The tests contain a series of tasks to be completed in JAMOVI. These tests are scheduled during weeks 8 and 14 of the semester.</p> <p>Students must accumulate at least 15 points from both tests to be eligible to enter the written exam. Students who do not accumulate at least 15 points will have the option to retake one or both tests in the following exam period.</p>	30% (between 0 and 15 points for each test)
	Research report	<p>Students will have to conduct a correlational survey study on an assigned topic, that will be turned in one week before the final examination.</p> <p>The survey study will follow the structure of a research article – brief theoretical introduction with conceptual definitions and at least two correlational hypotheses, methods, results, and discussion. Additional details will be provided on Classroom.</p> <p>Grading criteria</p> <ul style="list-style-type: none"> <li>· Clarity and coherence of the research question and objectives – 3 points.</li> <li>· Rigor in operationalizing variables – 6 points.</li> <li>· Justification for participant selection and sampling method – 3 points.</li> <li>· Soundness of survey design and data collection methods – 3 points.</li> <li>· Appropriateness and accuracy of data analysis – 9 points.</li> <li>· Thoughtful interpretation of results and discussion of limitations – 3 points.</li> <li>· Quality of the overall research report, including organization, clarity, and the use of at least two references – 3 points.</li> </ul> <p>The assignment will be carried out in pairs of two students. Generative AI may be used judiciously to craft the introduction and discussion sections of the paper.</p>	30% (between 0 and 30 points)
9.6 Bonus points	Involvement in class and ongoing	Students can accumulate up to 7 bonus points by being active and engaged during the course (e.g., answering specific questions, raising insightful questions, winning Mentis, etc.)	15% (between 0 and 7 points for course engagement)

	research projects	<p>Students can also accumulate another 8 bonus points by participating in research activities. Information about ongoing research projects will be provided during the semester.</p> <p>Bonus points will be added only if the student obtains at least 41 points from the course and laboratory evaluations. If the students cannot obtain 41 points during the exam period, the bonus points will be reported for the next exam period of the ongoing academic year.</p>	and between 0 and 8 points for participating in research projects)
9.7. Retake exam	Written exam/practical tests / research paper	<p>Students with insufficient attendance to enter the exam (i.e., 70% attendance to seminar/laboratory activities / 50% attendance for students who provide a certificate of their employment) will not be allowed to enter the first exam session but will be allowed to take the exam in the second examination period without restrictions.</p> <p>Students who have no attendance to the seminar/laboratory activities will not be allowed to take the exam in any of the exam periods and will have to enroll for the course again in the next academic year.</p> <p>Students who wish to improve their grades by retaking the exam/practical tests and/or redo the research paper in the second examination period can do so by following the official guidelines provided by the Infocenter. The exam/practical tests/research paper will have a similar structure to that of the first exam period.</p>	
9.6 Minimum performance standard			
<p>The final grade will be calculated based on the total number of points cumulated during the semester, based on the following point intervals:</p> <p>91 points or more: 10</p> <p>Between 81 and 90 points: 9</p> <p>Between 71 and 80 points: 8</p> <p>Between 61 and 70 points: 7</p> <p>Between 51 and 60 points: 6</p> <p>Between 41 and 50 points: 5</p> <p>Between 31 and 40 points: 4</p> <p>Between 21 and 30 points: 3</p> <p>Between 11 and 20 points: 2</p> <p>Below 11 points: 1</p> <p>The minimum required grade to pass this course is: 5</p>			



Date of completion:  
16.09.2025

Tenure teacher:  
Luca Tisu, Ph.D.  
Lecturer

Date of approval in the department

Head of Department:  
Delia VÎRGĂ, PhD.  
Professor