**SYLLABUS**

1. **Program details**

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| * 1. Higher education institution | West University of Timișoara |
| 1.2 Faculty / Department | Faculty of Sociology and Psychology |
| 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 |

1. **Discipline details**

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| 2.1 Discipline name | | | *Research Methods and Statistics I* | | | | | |
| 2.2 Tenured teacher – course activities | | | Assoc. Prof. dr. Andrei RUSU | | | | | |
| 2.3 Tenured teacher – seminar / laboratory activities | | | Assist. Prof. dr. Norberth OKROS | | | | | |
| 2.4 Study year | I | 2.5 Semester | | I | 2.6 Type of assessment | Exam | 2.7 Discipline regime | DO |
| Classroom code | | | | | wgdla36 | | | |

1. **Estimated total time (hours per semester) of teaching activities**

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| 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 | **69** | |
| 3.8 Total hours per semester | **125** | |
| 3.9 Number of credits (ECTS) | **5** | |

1. **Prerequisites (where necessary)**

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

1. **Conditions (where necessary)**

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| 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 (JAMOVI). |

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

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| Knowledge | *Designing and carrying out psychological research:*  a) formulate hypotheses and operationalize key concepts to explain and interpret the phenomena that people face in their personal or professional lives;  b) explain and interpret psychological phenomena and processes by applying knowledge about scientific methods to uncover and understand such phenomena. |
| Skills | *Critical assessment of problem situations and possible solutions in psychology*  a) construction and assessment of psychological indicators relevant for research in the field of psychology;  b) critical interpretation and evaluation of the solutions provided by the referential theory and collected data.  *Forming a creative-innovative approach to the field of psychology as a science:*  a) to create and manage databases with psychological variables. |
| Responsibility and autonomy | *Graduates should be able to demonstrate that:*  a) have the ability to identify their own learning sources and resources;  b) they have the ability to reflect on the progress made in the learning process. |

1. **Contents**

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| **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 | *To read:*  Schweigert, W.A. (2021). *Research Methods in Psychology. A Handbook. 4th Ed.* Waveland Press, Inc. (Chapter 1, pp. 2-20) |
| 3. From concept to variable. Forms and levels of operationalization | Lecture, case studies, and debates | *To read:*  Schweigert, W.A. (2021). *Research Methods in Psychology. A Handbook. 4th Ed.* Waveland Press, Inc. (Chapter 5, pp. 77-81)  Cohen, B.H. (2013). *Explaining Psychological Statistics. 4th Ed.* John Wiley & Sons, Inc. (Chapter 1, pp. 1-13).  Coolican, H. (2019). *Research Methods and Statistics in Psychology. 7th Ed.* Routledge. (Part 1.2, pp. 33-66). |
| 4. Descriptive methods I. Observational studies | Lecture, demonstration, applications | *To read:*  Schweigert, W.A. (2021). *Research Methods in Psychology. A Handbook. 4th Ed.* Waveland Press, Inc. (Chapter 10, pp. 171-192) |
| 5. Descriptive methods II. Survey studies | Lecture, demonstration, applications | *To read:*  Schweigert, W.A. (2021). *Research Methods in Psychology. A Handbook. 4th Ed.* Waveland Press, Inc. (Chapter 11, pp. 193-224) |
| 6. Univariate descriptive statistics I | Lecture, demonstration, applications | *To read:*  Cohen, B.H. (2013). *Explaining Psychological Statistics. 4th Ed.* John Wiley & Sons, Inc. (Chapter 2A, pp. 27-36; Chapter 3A-B, pp. 57-88). |
| 7. Univariate descriptive statistics II | Lecture, demonstration, applications | *To read:*  Cohen, B.H. (2013). *Explaining Psychological Statistics. 4th Ed.* John Wiley & Sons, Inc. (Chapter 4A-B, pp. 99-128). |
| 8. Descriptive statistics. Summary course | Case-studies,  discussion | *To recap.:*  Cohen, B.H. (2013). *Explaining Psychological Statistics. 4th Ed.* John Wiley & Sons, Inc. (Chapter 2A, Chapter 3A-B, Chapter 4A-B). |
| 9. Statistical inference. Hypothesis testing and types of hypotheses | Lecture, demonstration,  applications | *To read:*  Schweigert, W.A. (2021). *Research Methods in Psychology. A Handbook. 4th Ed.* Waveland Press, Inc. (Chapter 3, pp. 48-64).  Cohen, B.H. (2013). *Explaining Psychological Statistics. 4th Ed.* John Wiley & Sons, Inc. (Chapter 5A, pp. 135-147). |
| 10. Testing correlational hypotheses I | Lecture, demonstration,  applications | *To read:*  Cohen, B.H. (2013). *Explaining Psychological Statistics. 4th Ed.* John Wiley & Sons, Inc. (Chapter 9A, pp. 271-282). |
| 11. Testing correlational hypotheses II | Lecture, demonstration,  applications | *To read:*  Cohen, B.H. (2013). *Explaining Psychological Statistics. 4th Ed.* John Wiley & Sons, Inc. (Chapter 9B, pp. 283-295). |
| 12. Testing comparative hypotheses I | Lecture, demonstration,  applications | *To read:*  Cohen, B.H. (2013). *Explaining Psychological Statistics. 4th Ed.* John Wiley & Sons, Inc. (Chapter 7A-B, pp. 203-231). |
| 13. Testing comparative hypotheses II | Lecture, demonstration,  applications | *To read:*  Cohen, B.H. (2013). *Explaining Psychological Statistics. 4th Ed.* John Wiley & Sons, Inc. (Chapter 11A-B, pp. 337-359). |
| 14. Research reports and literature reviews | Lecture, demonstration,  discussion | *To read:*  Schweigert, W.A. (2021). *Research Methods in Psychology. A Handbook. 4th Ed.* Waveland Press, Inc. (Chapter 4, pp. 66-77). |
| *Fundamental bibliography:*  Cohen, B.H. (2013). *Explaining Psychological Statistics. 4th Ed.* John Wiley & Sons, Inc.  Coolican, H. (2019). *Research Methods and Statistics in Psychology. 7th Ed*. Routledge. (Part 1.8, pp. 213-248).  Schweigert, W.A. (2021). *Research Methods in Psychology. A Handbook. 4th Ed.* Waveland Press, Inc.  *Recommended reading:*  Leary, M.R. (2017). *Introduction to Behavioral Research Methods. 7th Ed.* Pearson. | | |
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| **7.2 Seminar / laboratory** | **Teaching methods** | **Observations** |
| 1. Introductory seminar | Presentation, discussion | Overview of the seminars, types of activities and requirements, evaluation means and standards. |
| 2. Ethical principles in psychological research | Demonstration  Discussion  Exemplification | University of Arkansas. (2013). Ethical principles of research. Sage Publications, pp. 1-22 |
| 3. Conceptual vs. Operational definitions. Understanding the levels of measurement | Demonstration  Discussion  Exemplification | Cohen, B.H. (2013). *Explaining Psychological Statistics. 4th Ed.* John Wiley & Sons, Inc. (Chapter 1, pp. 1-13). |
| 4. Introduction to the JASP environment | Demonstration  Discussion  Exemplification | Navarro, J. D., & Foxcroft, D. R. (2022). *Learning statistics with jamovi: A tutorial for psychology students and other beginners*. (Chapter 2, pp. 49-54) |
| 5. Data handling in JASP | Demonstration  Discussion  Exemplification | Navarro, J. D., & Foxcroft, D. R. (2022). *Learning statistics with jamovi: A tutorial for psychology students and other beginners*. (Chapter 2, pp. 55-58) |
| 6. Performing univariate descriptive statistics in JASP | Demonstration  Discussion  Exemplification | Navarro, J. D., & Foxcroft, D. R. (2022). *Learning statistics with jamovi: A tutorial for psychology students and other beginners*. (Chapter 3, pp. 61-80) |
| 7. Data visualization in JASP | Demonstration  Discussion  Exemplification | Navarro, J. D., & Foxcroft, D. R. (2022). *Learning statistics with jamovi: A tutorial for psychology students and other beginners*. (Chapter 3, pp. 81-102) |
| 8. Descriptive statistics. Practical evaluation | Practical evaluation | Practical summary evaluation covering descriptive statistics. |
| 9. Data transformations in JASP | Demonstration  Discussion  Exemplification | Navarro, J. D., & Foxcroft, D. R. (2022). *Learning statistics with jamovi: A tutorial for psychology students and other beginners*. (Chapter 3, pp. 105-123) |
| 10. Testing correlational hypotheses I | Demonstration  Discussion  Exemplification | Navarro, J. D., & Foxcroft, D. R. (2022). *Learning statistics with jamovi: A tutorial for psychology students and other beginners*. (Chapter 5, pp. 289-300) |
| 11. Testing correlational hypotheses II | Demonstration  Discussion  Exemplification | Navarro, J. D., & Foxcroft, D. R. (2022). *Learning statistics with jamovi: A tutorial for psychology students and other beginners*. (Chapter 5, pp. 289-300) |
| 12. Testing comparative hypotheses I | Demonstration  Discussion  Exemplification | Navarro, J. D., & Foxcroft, D. R. (2022). *Learning statistics with jamovi: A tutorial for psychology students and other beginners*. (Chapter 5, pp. 258-265 & 274-283) |
| 13. Testing comparative hypotheses II | Demonstration  Discussion  Exemplification | Navarro, J. D., & Foxcroft, D. R. (2022). *Learning statistics with jamovi: A tutorial for psychology students and other beginners*. (Chapter 5, pp. 254-257 & 268-272) |
| 14. Hypothesis testing. Practical evaluation | Practical evaluation | Practical summary evaluation covering hypothesis testing. |
| *Fundamental bibliography:*  Navarro, J. D., & Foxcroft, D. R. (2022). *Learning statistics with jamovi: A tutorial for psychology students and other beginners* (*version 0.75).* https://doi.org/10.24384/hgc3-7p15 Retrievable at:  https://davidfoxcroft.github.io/lsj-book/learning-statistics-with-jamovi.pdf  Cohen, B.H. (2013). *Explaining Psychological Statistics. 4th Ed.* John Wiley & Sons, Inc.  *Recommended reading:*  Field, A., Miles, J., & Field, Z. (2012). *Discovering statistics using R*. SAGE Publications. | | |

1. **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**

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| 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. |

1. **Assessment**

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| **Activity type** | **9.1 Assessment criteria** | **9.2 Assessment methods** | **9.3 Weight of final mark** |
| 9.4 Course | Written exam | The exam will contain 50 multiple-choice items with one correct answer. One correct response equals one point; one false response detracts 1/2 point. Unanswered questions will not affect the total number of accumulated points.  This exam takes place at the end of the semester, during the official examination period.  Students must have at least 25 points accumulated from the laboratory tests to be eligible to enter the exam. | 50% (between 0 and 50 points) |
| 9.5 Seminar / laboratory | Practical tests | The tests contain a series of tasks to be completed in JAMOVI. These tests are scheduled during weeks 8 and 14 of the semester.  Students must accumulate at least 25 points from both tests to be eligible to enter the written exam. Students who do not accumulate at least 25 points will have the option to retake one or both tests in the following exam period. | 50% (between 0 and 25 points for each test) |
| 9.6 Bonus points | Involvement in class and ongoing research projects | Students can accumulate up to 5 bonus points by being active and engaged during the course (e.g., answering specific questions, raising insightful questions, etc.)  Students can also accumulate another 10 bonus points by participating in research activities. Information about ongoing research projects will be provided during the semester.  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. | 15% (between 0 and 5 points for course engagement and between 0 and 10 points for participating in research projects) |
| 9.7. Retake exam | Written exam/practical tests | 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.  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.  Students who wish to improve their grades by retaking the exam/practical tests in the second examination period can do so by following the official guidelines provided by the Infocenter. The exam/practical tests will have a similar structure to that of the first exam period. |  |
| 9.6 Minimum performance standard | | | |
| The final grade will be calculated based on the total number of points cumulated during the semester, based on the following point intervals:  91 points or more: 10  Between 81 and 90 points: 9  Between 71 and 80 points: 8  Between 61 and 70 points: 7  Between 51 and 60 points: 6  Between 41 and 50 points: 5  Between 31 and 40 points: 4  Between 21 and 30 points: 3  Between 11 and 20 points: 2  Below 11 points: 1  The minimum required grade to pass this course is: 5 | | | |

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| Date of completion:  07.09.2023 | Tenure teacher:  Assoc. Prof. dr. Andrei RUSU |
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| Date of approval | Head of Department:  Prof. univ. dr. Delia VÎRGĂ |