COURSE OUTLINE

1. GENERAL

SCHOOL:	SOCIAL SCIENCES		
DEPARTMENT:	PSYCHOLOGY		
LEVEL:	UNDERGRADUATE		
COURSE CODE:	**Ψ3102**	**SEMESTER**	**6th**
COURSE TITLE:	**Data management and analysis from quantitative diary studies II**		

TEACHING ACTIVITIES	**WEEKLY HOURS**	**ECTS**
Lectures and laboratory exercises	3	6

COURSE TYPE	Skills development (elective laboratory)
PREREQUISITE COURSES:	Statistics I Research Methods I
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek
IS THE COURSE OFFERED TO ERASMUS STUDENTS?	NO
COURSE WEBSITE (URL):	https://elearn.uoc.gr/course/view.php?id=6442

2. LEARNING OUTCOMES

Learning Objectives

n this laboratory, students will engage with the management and analysis of data derived from the quantitative diary method. This method, in its most basic and structured form, involves the regular collection of primarily quantitative self-reports over a limited period of time. The goal of the method is to capture experiences and psychological processes close to the moment of their occurrence. The data produced by this method are referred to as intensive longitudinal data and present analytical challenges stemming from the temporal dependencies of the data and the multiple levels of analysis.
The laboratory is grounded in the basic theoretical approaches of the fields of Research Methodology and Statistical Data Analysis that students studied in the background courses of Research Methodology in the Social Sciences I, and Statistics I and II. The laboratory will focus on the mixed-effects model for statistical analysis, which is a flexible analytical tool capable of accounting for the complexities of intensive longitudinal data.
Upon completing the course, students are expected to:

- Explain the different ways in which intensive longitudinal data can be collected (interval, signal, and event-contingent methods)
- Select appropriate psychometric instruments for their research
- Create suitable databases using Excel and convert data from wide to long format
- Explain the concept of intraindividual variability
- Estimate the proportion of intraindividual variance of a variable using multilevel models
- Estimate the intraindividual correlation between two variables
- Estimate the effect of individual differences on intraindividual relationships
- Explain the concept of statistical power

General Competencies

- Search for, analysis and synthesis of data and information, with the use of the necessary technology
- Working independently
- Team work
- Respect for difference and multiculturalism
- Production of free, creative and inductive thinking.

3. SYLLABUS

The course content is linked to the 5 core axes of the curriculum: **Scientific Foundations [1], Scientific Research and Critical Thinking [2], Ethics and Social Responsibility [3], Communication Skills [4], Basic preparation for career decisions and professional rehabilitation [5]** (next to each week, the number of the axis related to the content is mentioned).

Week 1: Introduction – Basic Laboratory Objectives and Requirements [1, 2]
- Explanation of how the laboratory works and how it is assessed
- Details of individual assignments (4 individual assignments)
- Details of group assignment (1 group assignment)

Week 2: Designing Research Protocols [2, 3]
- Data collection methods (interval, signal, event-contingent methods)
- Common problems that may arise
- Preparation of group assignment (involves the formation of 3 groups, each investigating the same phenomenon through the literature but with a different research protocol)

Week 3: Understanding Within-Person and Between-Person Relationships [1, 2, 3]
- Why should we think intraindividually?
- Research questions that can be addressed
- Selection of appropriate psychometric instruments

Week 4: Data Handling – Practical Skills [2, 5]
- Creating a database according to the research design
- Transforming data from wide to long format
- Consolidation exercises
- 1st Individual assignment (converting a database from wide to long format)

Week 5: How Many Participants and Time Points Are Required? [2, 3]
- The concept of statistical power in longitudinal data
- Examples

Week 6: Introduction to Multilevel Data Analysis Models [2, 5]
- Presentation of the null model for multilevel analysis
- Data entry in Jamovi
- Centering of values
- The intraclass correlation coefficient
- Estimation of intraindividual / interindividual variance of variables
- 2nd Individual assignment (estimation of the intraclass correlation coefficient – ICC)

Week 7: Estimating the Intraindividual Correlation Between Two Variables in Jamovi [2]
- Multilevel linear regression
- Consolidation exercises
- 3rd Individual assignment (estimation of the intraindividual correlation between two variables)

Week 8: Estimating the Effect of Individual Differences on Intraindividual Relationships in Jamovi [2]
- Consolidation exercises
- 4th Individual assignment (cross-level interaction in Jamovi)

Week 9: Review I – Example Based on a Research Topic Chosen by Students [1, 2]
- Creating a database
- Null model

Week 10: Review II – Example Based on a Research Topic Chosen by Students [1, 2]
- Multilevel regression
- Cross-level interaction

Week 11: Presentation of Group Assignments [3, 4]
Week 12: Ethics of the Quantitative Diary Method [3, 4]

- Issues of personal identity protection
- Issues of informed consent
- Pre-registration of studies and analysis plans

Week 13: Laboratory Closing Session [1, 5]

- Raising and resolving questions
- Reflective discussion on students' experience in the laboratory, the skills they gained, and potential areas of application

4. TEACHING AND LEARNING METHODS - EVALUATION

DELIVERY:	Face to face
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY:	- Use of Information and Communication Technologies (ICT) in teaching - Use of e-class for the support of teaching and the achievement of learning outcomes, and for communicating with students.
TEACHING METHODS:	

Activity	***Semester Workload***	***ECTS***
Lectures	39	1.56
Individual Assignments	20	0.80
Group Assignment	55	2.00
Independent Study	45	1.80
Total Course Workload (25 hours per ECTS credit)	**151**	**6,16**

STUDENT PERFORMANCE EVALUATION:	Assessment is conducted in Greek. The assessment criteria are presented during the first session and are posted on the course's online page. There are NO final examinations. Assessment will be based on: 4 Individual Assignments – 45% 1 Group Assignment – 55% (1st activity 40%, 2nd activity 25%)

5. BIBLIOGRAPHY

Books

- Myin-Germeys, I., & Kuppens, P. (Eds.). (2022) The open handbook of experience sampling methodology: A step-by-step guide to designing, conducting, and analyzing ESM studies (2nd ed.). Leuven: Center for Research on Experience Sampling and Ambulatory Methods. Διαθέσιμο: https://ppw.kuleuven.be/okp/esmhandbook.php
- Silvia, P.J. & Cotter, K.N (2021). Researching Daily Life: A Guide to Experience Sampling and Daily Diary Methods, American Psychological Association, Washington DC. \
- Bolger, N., & Laurenceau, J. P. (2013). Intensive longitudinal methods: An introduction to diary and experience sampling research. Guilford press.
- Bakker, A. B., & Daniels, K. (2012). A day in the life of a happy worker. Psychology Press.

Journal Papers

- Horstmann, K. T. (2021). Experience sampling and daily diary studies: Basic concepts, designs, and challenges. In: *The handbook of personality dynamics and processes* (pp. 791-814). Academic Press.
- Ohly, S., Sonnentag, S., Niessen, C., & Zapf, D. (2010). Diary studies in organizational research. *Journal of Personnel Psychology*, 9, 79-73
- Bolger, N., Davis, A., & Rafaeli, E. (2003). Diary methods: Capturing life as it is lived. Annual review of psychology, 54(1), 579-616.