Course Title	Quantitative Research Approaches in Educational Sciences
Course Code	EDU630
Course Type	Optional for Research (for those who will not choose to write a Dissertation)
Level	Master (2nd cycle)
Year / Semester	2nd / 3rd
Instructor	TBA

ECTS	10	Lectures / week	3 Hours /14 Weeks	Labs / week	N/A
Course Aims	This course aims to introduce students to contemporary issues related to quantitative research methods. Its purpose is to help students acquire good understanding of the process of planning and carrying out a quantitative research study aimed at investigating issues related to educational sciences. The course focuses on the basic techniques of descriptive and inferential statistics, leading to the mastery of knowledge and skills related to sample data collection, analysis of empirical data using statistical analysis packages, and interpretation and presentation of results.				
Learning Outcomes	Upon successful completion of this course students should be able to: • Set research questions and assumptions and organise data collection; • Analyse data using appropriate statistical techniques in order to provide answers to specific research questions and assumptions related to education • Explain the main concepts and procedures that are being used in the analysis of quantitative data for the purpose of research in education; • Use statistical analysis software packages to record, process and analyse research data; • Interpret and present the results of a statistical analysis; • Critically evaluate quantitative research findings in the field of education.				

Pre-requisites	EDU600	Co-requisites	None
Course Content	The content of the course includes the following topics: • Formulation of research questions and statistical hypotheses; • Data organisation and presentation; • Descriptive statistics: measures of central tendency, dispersion, skewness and kurtosis; • Probability, probability models, sampling, principles of inferential statistics; • One-sample and two-sample hypothesis testing regarding the mean, proportion, and dispersion; • Confidence intervals; • Analysis of variance (ANOVA); • Correlation coefficients and linear regression (simple and multiple); • Non-parametric statistical tests; • Using statistical analysis software packages to record, process and analyse data.		
Teaching Methodology	In a computer laboratory		

Literature	Bryman, A. (2014).Social Science Research Methods . Oxford, UK: Oxford University Press Creswell, J.W., & Guetterman, T. C. (2019). *Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research*. New York, NY: Pearson. Cumming,G., & and Robert Calin-Jageman, R. (2017). Introduction to New Statistics: Estimation, Open Science and Beyond. New York and London: Routledge. Gray, D. E. (2018). Doing Research in the Real World. London: SAGE Publications. Harris, S. R. (2014). How to critique journal articles in the social sciences. Thousand Oaks, CA: Sage. Leary, M. R. (2016). Introduction to Behavioral Research Methods. New York, NY: Pearson. Muijz, D. (2011). Doing Quantitative Research in Education with SPSS. London: SAGE Publications. Singleton, R., & Straits, B. (2017). Approaches to social research . New York, NY: Oxford University Press.
Assessment	<table><tr><td>Exams</td><td>50%</td></tr><tr><td>Assignments</td><td>40%</td></tr><tr><td>Class Participation and Attendance</td><td>10%</td></tr></table>
Language	English