



Course Code PSY-703	Course Title Advanced Statistics and Research Methods I	ECTS Credits 7.5
Department Social Sciences	Semester Fall	Prerequisites None
Type of Course Required	Field Psychology	Language of Instruction English
Level of Course 3 rd Cycle	Year of Study 1st	Lecturer(s) Dr Menelaos Apostolou
Mode of Delivery face-to-face	Work Placement N/A	Co-requisites None

Objectives of the Course:

This is the first of two courses titled research methods. In this first course students are taken through basic to more advanced principles of statistics which psychologists use to analyze data giving emphasis to training in the usage of computerized statistical packages.

Learning Outcomes:

Upon completion of this course students are expected to

- to equip students with knowledge of statistical concepts and methods relevant to psychological research
- to teach the main SPSS commands required for data analysis including computing and recording variables, selecting cases and drawing charts and to
- learn how to implement statistical methods in research paradigms using SPSS analysis

Course Contents:

- Introduction to Statistical Methods in Psychology
- Introduction to Research Method in Psychology
- Fundamental Principles of Statistics
- Key principles such as sampling, randomization, null hypothesis, probability theory, and decision making; descriptive statistical methods; type I and type II errors
- Assessing Group Differences
- Chi-Square test, standard one-way ANOVA and factorial ANOVA; post hoc comparisons and linear contrasts.
- Assessing Changes overtime
- Paired samples t-tests, repeated measures ANOVA and Chi-Square
- Correlation
- Regression
- Multiple regression
- Structural Equation Modeling
- Questionnaire design
- Experimental research methods

Learning Activities and Teaching Methods:

Interactive Lectures, Lab Presentations, Lab Tutorials, Practical Exercises

Assessment Methods:

Mid-Term Exam, Final Exam.

Required Textbooks/Readings:

Authors	Title	Publisher	Year	ISBN
Field, A.	Discovering Statistics Using SPSS	SAGE	2009	978-1-84787-906-6
Smith, R. A. & Davis, S. F.	The Psychologists as detective 5 th edition	Pearson	2010	0-13-227731-X
Creswell, J.W.	Research Design	SAGE	2009	978-1-4129-6557-6

Recommended Textbooks/Readings:

Authors	Title	Publisher	Year	ISBN
American Psychological Association	Publication Manual of the American Psychological Association (6 th Edition)	American Psychological Association	2009	