**Advanced research methods in psychology**

Prof. Margherita Lanz; Prof. Angela Sorgente

***COURSE AIMS AND INTENDED LEARNING OUTCOMES***

The course aims to provide students with knowledge about research methods in Psychology (experimental, correlational, and descriptive methods). Students will learn various methods for conducting research in the different fields of Psychology, how to identify the methodological key elements of a research design, how to test the validity of a research design, and how to make a scientific poster. Special attention will be dedicated to the strengths and weaknesses of the research designs and to open science.

Upon completion of the course, students will be able to:

KNOWLEDGE AND UNDERSTANDING

* know the different research designs
* know the types of validity for quantitative research
* know the research practices proposed by the open science framework

APPLYING KNOWLEDGE AND UNDERSTANDING

* choose the right research design to respond to a specific research question
* read a research article identifying relevant information about the adopted research design
* make a scientific poster

MAKING JUDGEMENTS

* make judgments about whether a specific research study guarantees research validity
* make judgments about whether a specific research study guarantees open science standards

***COURSE CONTENT***

Unit 1: Research in Psychology

Research questions and aims

Correlation vs. causation

Research methods and research design

Unit 2: Experimental Methods

Independent groups designs

Repeated measures designs

Complex designs

Small-n experimental designs

Quasi-experimental designs

Unit 3: Descriptive Methods

Observation

Survey research

Single-case designs

Unit 4: Correlational Methods

Cross-sectional study

Longitudinal study

Unit 5: Validity of quantitative research methods

Internal validity

External validity

Unit 6: Scientific community

Communicating with the scientific community – The use of the posters

New rules for the scientific community - Open science

***READING LIST***

J. J. Shaughnessy – E. B. Shaughnessy – J. B. Zechmeister,*Research methods in psychology,* McGraw-Hill, 2015 chapters: 4, 5, 6, 7, 8, 9, 10.

Slides and articles uploaded on Blackboard are considered additional course materials.

***TEACHING METHOD***

Lecture - Exercises

***ASSESSMENT METHOD AND CRITERIA***

The assessment will consist of four parts. The first two parts will be realized during the course:

1. Students will be requested to take a test (5 multiple-choice questions) three times. The first test will concern Units 1 and 2; the second test Units 3 and 4; the third test Unit 5. The maximum score for each test is 5 (i.e., 15 for the three tests).
2. Students will be requested to present a research study through a poster presentation. This work will be done in a group and the maximum score is 25.

The other two parts of the assessment will be realized during the exam:

1. Students will be requested to take a test of 15 multiple-choice questions. The maximum score for this test is 15. For those who have not taken the first part of the assessment (three 5-question tests), this test will include 30 multiple-choice questions (Maximum score: 30).
2. Students will be requested to take an individual oral exam in which to discuss the methodological aspects of the scientific article presented through the poster (Maximum score: 5). For those who have not taken the second part of the assessment (poster), parts 2 and 4 of the exam will be substituted by a written exam in which the students have to identify the methodological choices made by the researchers in a scientific paper provided by the professor (e.g., which research design did researchers adopt? How did they guarantee the research validity?). The maximum score is 30.

The final mark consists of the average between the scores obtained at the tests (part 1 + part 3 of the assessment) and the scores obtained at the remaining two parts (part 2 + part 4 of the assessment).

***NOTES AND PREREQUISITES***

***Prerequisites***

The student needs to know the contents studied for the “Research methods in psychology” course (i.e., psychology as a scientific discipline, scientific method, measuring psychological constructs, the ethics of research, and the communication of research in psychology).

***Reception***

Prof. Margherita Lanz receives students at the end of each lesson or by appointment via e-mail: *margherita.lanz@unicatt.it*.

Prof. Angela Sorgente receives students at the end of each lesson or by appointment via e-mail: *angela.sorgente@unicatt.it*.