GENERAL AIMS

The aim of this matter is to provide the conceptual and practical fundamentals of the major statistical techniques in the field of Psychology. The topics covered include four blocks. Block A consists in an introduction to exploratory (descriptive) data analysis; Block B refers to essentials of probability theory; Block C presents the foundations of statistical inference and, finally, the block D refers a set of basic statistical models. All contents are illustrated through “applied problems” or target situations that are discussed and resolved in practice sessions. At the end of the course the student should:

1. Employ proper vocabulary of data analysis.
2. Identify key components of a research problem.
3. Know and to describe formally univariate and bivariate data distributions, regarding to fundamental statistical properties.
4. Identify and to apply the basic statistical models in applied psychological contexts.

CONTENTS

BLOCK A: Exploring a data distribution
Lesson 1. Introduction to data analysis.
Lesson 2. Description of quantitative data.
Lesson 3. Description of categorical data.

BLOCK B: Principles of probability theory
Lesson 4. Probability theory and applications in Psychology
Lesson 5. Probability distributions

BLOCK C: Introduction to statistical inference
Lesson 6: Parameter estimation
Lesson 7: Hypothesis testing

BLOCK D: Basic statistical models
Lesson 8: Comparing two independent proportions
Lesson 9: Relation between categorical variables
Lesson 10: Comparing two independent means
Lesson 11: Comparing several independent means
Lesson 12: Correlation model
Lesson 13: Simple linear regression model
Lesson 14: Multiple linear regression model
Lesson 15: Analysis of related samples

BIBLIOGRAPHY

Bibliography to prepare the course:

Support bibliography:

IMPORTANT NOTICE: The lessons of this course are mainly given in Catalan and Spanish. None of them are given in English.