60854 - Data analysis

Información del Plan Docente

Academic Year	2017/18
Subject	60854 - Data analysis
Faculty / School	229 - Facultad de Ciencias de la Salud y del Deporte
Degree	549 - Master's in Evaluation and Physical Training for Health
ECTS	3.0
Year	1
Semester	Second semester
Subject Type	Optional
Module	---

1.General information

1.1.Introduction

1.2.Recommendations to take this course

1.3.Context and importance of this course in the degree

1.4.Activities and key dates

2.Learning goals

2.1.Learning goals

2.2.Importance of learning goals

3.Aims of the course and competences

3.1.Aims of the course

3.2.Competences

4.Assessment (1st and 2nd call)

4.1.Assessment tasks (description of tasks, marking system and assessment criteria)

5.Methodology, learning tasks, syllabus and resources

5.1.Methodological overview

The methodology followed in this course is oriented towards achievement of the learning objectives. A wide range of teaching and learning tasks are implemented, such as

- Lectures. The teacher explains the class contents to transmit knowledge and activate students' cognitive processes.

60854 - Data analysis

- Practice sessions. Students have to find the correct solutions to problems and situations through the exercise of routines, application of formulas or algorithms, etc. And the interpretation of the obtained results. The purpose of problems and exercises is to test and implement prior acquired knowledge.
- Assignment. Students will carry out a research or practical project.

5.2.Learning tasks

The course includes the following learning tasks:

- Lectures
- Practice sessions
- Assignment

5.3.Syllabus

The course will address the following topics:

Topic 1: Introduction to computerized data analysis:

- - Creating databases in Microsoft Excel and SPSS.
- - Management of databases: transformation of variables, recoding, case selection, import and export data.

Topic 2: Descriptive Statistical Analysis:

- - Types of data and measurement scales.
- - Descriptive statistics and data exploration.
- - Graphical representations.
- - Interpretation and presentation of results.

Topic 3: Relationships between variables:

- - Correlation coefficients and association.
- - Simple linear regression.

Topic 4: Statistical Inference:

- - Point and interval estimation.
- - Parametric and nonparametric hypothesis tests.
- - Goodness-of-fit, homogeneity and independence.

Topic 5: Introduction to Multivariate Analysis:

- - Basic concepts and types of techniques.
- - Methods with Dependent variable: multiple linear regression, binary logistic regression, logit regression.
- - Methods with only independent variables: factor analysis, cluster analysis (cluster) biplot methods, MANOVA and discriminant analysis.

5.4.Course planning and calendar

Further information concerning the timetable, classroom, assessment dates and other details regarding this course, will be provided on the first day of class or please refer to the Faculty of Health and Sports Sciences http://fccsyd.unizar.es.

5.5.Bibliography and recommended resources