26303 - Statistics

Información del Plan Docente

Academic Year	2017/18
Faculty / School	229 - Facultad de Ciencias de la Salud y del Deporte
Degree	295 - Degree in Physical Activity and Sports Science
ECTS	6.0
Year	1
Semester	First semester
Subject Type	Basic Education
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 learning process designed for this course is based on the following:

1. Theoretical classes: teachers will use the support of audiovisual and computer resources when appropriate, and also will seek interaction with students. Maximum 50% of the classes.

2. Techniques and tools for problem solving: solving techniques of exercises and problems using computers will be taught in class. Also, problems and exercises will be proposed. Students must do by they own a personal work for the resolution of the proposed problems and to write the solutions. At least 30% of the classes.

3. Seminars for theory / problems / computer practices: In these seminars students pose the doubts and difficulties that have been found, so that the teacher's role will be to give specific instructions to unblock the situation. At least 20% of classes.

4. Tutorials. Personal tutorials scheduled by the teacher.

5. Personal work. Individual study will allow to settle the concepts explained in the classes as well as learn and properly apply the techniques explained. Students must handle other literature proposed by the teacher, in addition to the lecture notes. They also must dedicate a significant part of their time to solving the proposed exercises.

The subject appears in the Moodle platform of the University of Zaragoza, where students can obtain information on the subject, notes, other literature, supplementary material, problem sheets, etc.

5.2.Learning tasks

The program offered to the students to help them achieve the expected results includes the following activities ...

Theoretical and practical lectures and computer practices, conducting exercises, tutorials and seminars on topics of qualitative methodology and statistics.

5.3.Syllabus

I: Introduction to research of physical activity

I.1.- Clarification conceptual: science, research and scientific method.

I.2.- Paradigms of social science research.

I.3.- Science Research Paradigms of physical activity and sport.

I.4 Research in Physical Education: The qualitative and quantitative in and physical activities.

II: Application of qualitative research of physical activity and sport methodology

II.1.- Overview and characteristics of qualitative methodology.

II.2.- Research designs in qualitative methodology.

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Criteria

II.3.- Credibility of qualitative methodology.

II.4.- Techniques and research tools in qualitative methodology.

III: Development of research reports

III.1.- The investigation report.

III.2.- Structuring the object of study.

III.3.- planning, organization and development of analysis and data processing.

IV.- Introduction to Statistics

IV.1.- Introduction.

IV.2.- Random phenomena and deterministic phenomena.

V.- Descriptive statistics

V.1.- Introduction.

V.2.- Statistical variables. Types.

V.3.- Graphic representations.

V.4.- Moments. Centralization measures. Measures of dispersion, other measures.

V.5.- Two-dimensional frequency distribution. Measures of association.

V.6.- Simple linear regression. Regression lines. Linear correlation coefficient.

VI.- Inferential statistics

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VI.1.- Introduction.

VI.2.- Point estimation of parameters .

VI.3.- Confidence interval estimation .

VI.4.- Hypothesis testing .

5.4.Course planning and calendar

The timetable of classes fits to the schedule approved by the Faculty of Health and Sports Sciences.

Dates of evaluation and delivery of work is fixed sufficiently in advance and announced to students.

5.5.Bibliography and recommended resources

- Fernández Cuesta, Carlos. Curso de estadística descriptiva : teoría y práctica / Carlos Fernández Cuesta y Felipe Fuentes García . [1a ed.] Barcelona : Ariel, 1995
- Ríos, Sixto. Métodos estadísticos / Sixto Ríos . 2a ed. Madrid : Ediciones del Castillo, 1977 (1985 imp.)
- Kazmier, Leonard J.. Estadística aplicada a la administración y a la economía / Leonard J. Kazmier, Alfredo Díaz Mata . 2ª ed. rev. México : McGraw-Hill Interamericana de Mexico, 1993
- Viladot Voegeli, Antonio. Lecciones básicas de biomecánica del aparato locomotor / Antonio Viladot Voegeli ; prólogo, D. Ruano Gil . Reimp. Barcelona : Masson, 2004
- Barriopedro, María Isabel. Análisis de datos en las ciencias de la actividad física y el deporte / María Isabel Barrriopedro, Carlos Muniesa . Madrid : Pirámide, 2012
- Martín Pliego, Francisco Javier. Introducción a la estadística económica y empresarial : teoría y práctica / Fco. Javier Martín-Pliego López . 3a. ed. rev. y act. / por Marta García Secades Madrid : Thomson, D.L. 2004