

26303 - Statistics

Syllabus Information

Academic year: 2024/25

Subject: 26303 - Statistics

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

The student should assimilate an understanding of qualitative methodology and be able to summarize quantitative information and interpret it in order to be able to take action decisions to improve the results obtained.

In professional practice: classes, training, and evaluating results, etc., it is necessary to manage data. This subject provides tools for quantitative and qualitative studies.

It will be necessary to use a computer and have office automation skills.

These approaches and objectives are aligned with the following Sustainable Development Goals (SDGs) of the United Nations Agenda 2030 (<https://www.un.org/sustainabledevelopment/es/>), in such a way that the acquisition of the learning results of the subject provides training and competence to contribute to some extent to the achievement of the goals: 4, 5, 8, 12 and 15.

2. Learning results

To critically analyse the lines of research in Physical Activity Sciences.

To apply the assumptions and procedures of qualitative methodology.

To apply and master in a practical way the techniques and instruments for the collection and treatment of qualitative data in order to be able to elaborate a qualitative research design applied to physical-sport activity.

To characterize statistical data by their nature, arrange them in frequency distributions and represent them graphically.

To calculate, know the properties and interpret the most important descriptive statistics that summarize a series of data or to compare two or more series. To analyse the relationship between two variables through contingency tables and regression lines.

To use statistical inference techniques on parameters: point estimation or by confidence intervals and hypothesis testing

3. Syllabus

1. Physical activity research.

- Research Paradigms in Physical Activity and Sport Sciences.
- Research in Physical Education.

2. Qualitative methodology and research in physical activity and sport.

- Generalities and characteristics of the qualitative methodology.
- Research designs and credibility criteria in qualitative methodology.
- Research techniques in qualitative methodology.

3. Introduction to Statistics

4. Descriptive Statistics

- Variables and graphical representations.
- Moments. Measures of centralization, dispersion and others.
- Two-dimensional frequency distribution. Measures of association.
- Simple linear regression. Regression lines. Linear correlation coefficient.

5. Inferential Statistics.

- Point estimation of parameters.
- Estimation by confidence intervals.

- Hypothesis testing.

4. Academic activities

They are used in active methodologies that favour critical thinking. A wide range of teaching and learning tasks are implemented, such as theoretical classes, practice sessions, autonomous work and evaluation tasks.

- Theoretical classes: 30 hours.
- Practical sessions, problems and cases: 50 hours.
- Seminars: 20 hours.
- Study and independent work: 50 hours.

Class materials will be available telematically. These include a repository of topics used in class, the subject syllabus, as well as other specific learning materials. More information about the subject will be provided on first day of class.

5. Assessment system

CONTINUOUS AND GLOBAL EVALUATION: It will consist of five tests.

In QUALITATIVE METHODOLOGY:

Exam, objective written test: 30%.

Required reading: 10%.

Practical work: 10%.

In STATISTICS:

Examination: 30%.

Practical work: 20%.

Assessment criteria:

In order to pass the subject, at least 50% of each test must be obtained. The final grade will be the weighted result of the grades of the five tests.

The following aspects will be assessed in papers and exams: formal, grammatical and spelling, structural and content aspects.

The grades of the different tests will be maintained during the academic year. Grades will not be saved for different academic years.

The dates for evaluation and delivery of work will be set well in advance and will be made known to the students.

After these dates, no papers will be collected and no further examinations will be held.

Students must attend practices with the materials and resources necessary for the development of the sessions.

Fraud or total or partial plagiarism in any of the evaluation tests will result in not passing the subject with the minimum grade, in addition to the disciplinary sanctions adopted by the Guarantee Committee for these cases.

6. Sustainable Development Goals

4 - Quality Education

8 - Decent Work and Economic Growth

12 - Responsible Production and Consumption