1. BASIC INFORMATION

Course	Statistics
Degree program	Global Sport Management Degree
School	Faculty of Medicine, Health, and Sport
Year	Second
ECTS	6 ECTS
Credit type	Basic
Language(s)	English
Delivery mode	Campus-based
Semester	S3
Academic year	2025/2026
Coordinating professor	Iyán Iván Baragaño

2. PRESENTATION

In this subject, the student will be familiarized with statistical data analysis applied to the area of sports management.

In this subject, the student will know the fundamental concepts used in statistics and will put them into practice through specific techniques. In this sense, the student will carry out case studies, with specific data in the area of sports, in general, and its management, in particular, through which they will carry out both a descriptive analysis of them and their interpretation for the inference of conclusions.

From this perspective, the subject seeks to develop the skills that allow students to make objective interpretations of the numbers that are handled in this discipline, constituting a tool that can be applied practically to any subject of the degree, either for the interpretation of the data handled in that field/discipline well to be able to assess the scientific knowledge of it.

3. LEARNING OUTCOMES

Knowledge

KN04. Recognizes fundamental concepts related to scientific evidence in sports management.

KN10. Identifies, describes, and analyzes the bases of the methodology of scientific work.

Skills

SK01. Develops optimal strategic and analysis tools for sports management.

Competences

CP08. Analyze and evaluate with scientific rigor social, legal, economic, scientific or ethical issues in physical activity and sports.

4. CONTENT

This section indicates the content of each of the topics contained in the units of learning:

- The scientific method.
- Descriptive Statistics: Summarize, analyze and interpret data.
- Inference Theory: Approach to reality through tools for the acceptance or hypothesis rejection.

The subject is organized into four learning units, which, in turn, are divided into sections:

Learning Unit 1. Research and documentation methods.

Topic 1. Research methodology: scientific method and its phases, sources of information and documentation, methodological modalities, quality criteria and ethics in research.

Learning Unit 2. Introduction to Statistics

Topic 2. Introduction to statistics: definition, general concepts, variables, data collection methods and summation

Learning Unit 3. Descriptive statistics.

Topic 3. Data organization: data distribution and graphical representations
Topic 4. Descriptive statistics: measures of position, central tendency, dispersion and shape.

Learning Unit 4. Inferential statistics.

Topic 5. Two-dimensional distributions
Topic 6. Covariance. Correlation. Regression. Model rating.
Topic 7. Probability: Basic concepts, probability distributions, sampling distribution
Topic 8. Construction of confidence intervals. Parameter estimation.
Subject 9. Contrast of hypotheses and types of error.
Item 10. Tests to analyze the relationship between variables. Tests to analyze the difference between variables/groups.

5. TEACHING-LEARNING METHODOLOGIES

The types of teaching-learning methodologies used are indicated below:

- Masterclasses / Webinars
- Problems resolution.
- Project based learning.

6. LEARNING ACTIVITIES

Listed below are the types of learning activities and the number of hours the student will spend on each one:

Campus-based mode:

Learning activity	Number of hours
Masterclasses	22 h
Reading of content topics	12 h
Problem solving and practical exercises	15 h
Resource search and selection of information sources	10 h
Preparation of reports and writings	16 h
Tutoring	4 h
Autonomous work	24 h
Use of computer programs	10 h
In-person knowledge tests	2 h
Individual and group work	35 h
TOTAL	**150 h**

7. ASSESSMENT

Listed below are the assessment systems used and the weight each one carries towards the final course grade:

Campus-based mode:

Assessment system	Weight
Activities	40%
Preparation of reports and writings	10%
Knowledge tests and exams	50%

When you access the course on the *Campus Virtual*, you'll find a description of the assessment activities you have to complete, as well as the delivery deadline and assessment procedure for each one.

7.1. First exam period

In general, the acquisition of skills by the student will be assessed through a continuous assessment system and, specifically, assessing the results obtained in the training and assessment activities designed for this purpose. The evaluation concludes with a test of knowledge about the level of learning achieved by the student and is expressed in numerical grades, in accordance with the provisions of current legislation.

To pass the course in the first exam period, you must obtain a final course grade of at least 5 out of 10 (weighted average).

In any case, you will need to obtain a grade of at 5.0 in the final exam in order for it to count towards the final grade along with all the grades corresponding to the other activities.

7.2. Second exam period

To pass the course in the second exam period, you must obtain a final grade of at least 5 out of 10 (weighted average).

In any case, you will need to obtain a grade of at 5.0 in the final exam in order for it to count towards the final grade along with all the grades corresponding to the other activities.

The student must deliver the activities not successfully completed in the first exam period after having received the corresponding corrections from the professor, or those that were not delivered in the first place.

8. SCHEDULE

This table shows the delivery deadline for each assessable activity in the course:

Assessment activities	Deadline
Research and projects	Week 3, 6, 14
Face-to-face evaluation test (1)	Week 8
Reports and writings	Week 12
Workshop-laboratory practice notebook	Week 15
Face-to-face evaluation test (2)	Week 16

This schedule may be subject to changes for logistical reasons relating to the activities. The student will be notified of any change as and when appropriate.

9. BIBLIOGRAPHY

The main reference work for this subject is:

Barriopedro, M. I. & Muniesa, C. (2012). *Análisis de datos en las ciencias de la actividad física y del deporte.* Pirámide.

The recommended Bibliography for this subject is:

Acosta, R. (2005). Gestión *y administración de organizaciones deportivas*. Paidotribo.

Biblioteca Dulce Chacón. (s.f.): Gestión bibliográfica. Recuperado el 21 de julio de 2022 de https://web-uem.bibliocrai.universidadeuropea.com/buscar-informacion-sobre/gestion-bibliografica

Botella, J. León, O., San Martín, R. & Barriopedro, M. I. (2003). Análisis de datos en Psicología I (4th ed.). Pirámide.

Desenti, J. T. & Rosenberg D. (1995). *Ethics in Sport Management*. Bookcrafters.
Griffith, A. (2010). *SPSS for dummies* (2nd ed.). Wiley Publishing.
Jiménez Villa, J., Argimón Pallàs, J. M., Martín Zurro, A. & Villardell Tarrès, M. (2015). *Publicación científica biomédica: cómo escribir y publicar un artículo de investigación* (2nd ed.). Elsevier.
Martín Andrés, A. & Luna del Castillo, J. D. (2004). Bioestadística para las Ciencias de la Salud (+) (5th ed.). Norma-Capitel.
Martínez González, M. A., Sánchez Villegas, A., Toledo Alucha, E. A. & Faulin Fajardo, J. (2014). *Bioestadística amigable* (3rd ed.). Elsevier.
Newel, J., Aitchison, T. & Grant, S. (2010). *Statistics for sports and exercise science: a practical approach*. Pearson Education.
Rumsey, D. J. (2013). *Estadística para dummies*. Planeta.

The recommended complementary bibliography for this subject is:

Alcaide, A. & Arenales, C. (1992). *Estadística, introducción* (3rd ed.). Universidad Nacional de Educación a Distancia.
Bunge, M. (1969). *La investigación científica*. Ariel.
Coll, S. & Guijarro, M. (1998). *Estadística aplicada a la historia y a las ciencias sociales*. Pirámide.
Harris, M. & Taylor, G. (2003). *Medical statistics made easy.* INFRMA-HC.
Kronos: La revista científica de actividad física y deporte. Recuperado el 21 de julio de 2022 de https://revistakronos.info/
Kuhn, T. S. (1987). *La estructura de las revoluciones científicas.* Fondo de Cultura Económica.
Peña, D. (1987). *Estadística: Modelos y métodos*. Alianza Editorial.
Popper, K. R. (1997). *La lógica de la investigación científica*. Tecnos.
San Martín, R. & Pardo, A. (1989). *Psicoestadística: contrastes paramétricos y no paramétricos*. Pirámide.
San Martín, R., Espinosa, L. & Fernández, L. (1986). *Psicoestadística descriptiva*. Pirámide.
San Martín, R., Espinosa, L. & Fernández, L. (1987). *Psicoestadística: estimación y contraste*. Pirámide.
Spiegel, M. (1991). *Estadística* (2n ed.). McGraw-Hill.

Scientific researches databases:

(availables in https://web-uem.bibliocrai.universidadeuropea.com/recursos-digitales/bases-de-datos)

- Academic Search Ultimate.
- Google Academic.
- Medline.
- Pubmed.
- Sport Discus.

Databases:

- Google Académico. Recurso disponible en https://scholar.google.es/.
- Instituto Nacional de Estadística. Recurso disponible en http://www.ine.es/dyngs/INEbase/listaoperaciones.htm.
- Sistema de Análisis de Balances Ibéricos (SABI). Recurso disponible en: http://biblioteca.uem.es/es/colecciones-bibliograficas/colecciones-formato/recursos-digitales/ciencias-sociales-y-comunicacion.
-

10. EDUCATIONAL GUIDANCE AND DIVERSITY UNIT

From the Educational Guidance and Diversity Unit we offer support to our students throughout their university life to help them reach their academic achievements. Other main actions are the students inclusions with specific educational needs, universal accessibility on the different campuses of the university and equal opportunities.

From this unit we offer to our students:

1. Accompaniment and follow-up by means of counselling and personalized plans for students who need to improve their academic performance.
2. In terms of attention to diversity, non-significant curricular adjustments are made in terms of methodology and assessment for those students with specific educational needs, pursuing an equal opportunities for all students.
3. We offer students different extracurricular resources to develop different competences that will encourage their personal and professional development.
4. Vocational guidance through the provision of tools and counselling to students with vocational doubts or who believe they have made a mistake in their choice of degree.

Students in need of educational support can write to us at:

orientacioneducativa@universidadeuropea.es

11. ONLINE SURVEYS

Your opinion matters!

The Universidad Europea encourages you to participate in several surveys which help identify the strengths and areas we need to improve regarding professors, degree programs and the teaching-learning process.

The surveys will be made available in the “surveys” section in virtual campus or via e-mail.

Your assessment is necessary for us to improve.

Thank you very much for your participation.