



Information about the subject

Degree: Bachelor of Sciences of Physical Activity and Sport

Faculty: Faculty of Physical Activity and Sport Sciences

Code: 281204 **Name:** Statistics and Data Processing

Credits: 6,00 **ECTS Year:** 2 **Semester:** 2

Module: 1) Basic formation Module

Subject Matter: Behavioral and social foundations of human motor skills. **Type:** Basic Formation

Field of knowledge: Ciencias sociales y Jurídicas.

Department: Basic Sciences

Type of learning: Classroom-based learning

Languages in which it is taught:

Lecturer/-s:



Module organization

1) Basic formation Module

Subject Matter	ECTS	Subject	ECTS	Year/semester
Biological and mechanical foundations of human motor skills.	36,00	Biochemistry and Human Physiology	9,00	1/2
		Biomechanics of Physical Activity	6,00	2/1
		Human Anatomy	9,00	1/2
		Kinesiology	6,00	2/1
Behavioral and social foundations of human motor skills.	24,00	History and Sociology of Physical Activity and Sport	6,00	1/2
		Sport Psychology	6,00	1/2
		Statistics and Data Processing	6,00	2/2
		Technology Applied to Physical Activity and Sport	6,00	1/1



Learning outcomes

At the end of the course, the student must be able to prove that he/she has acquired the following learning outcomes:

- R1 Summarize, assess and contrast statistical data related to physical-sports activity based on the scientific method.
- R2 Analyze and interpret in a critical and reasoned way statistical research results in the field of Physical Activity and Sports Sciences.
- R3 Carry out basic statistical analyzes in the field of Physical Activity and Sports Sciences through specific data processing programs.



Competencies

Depending on the learning outcomes, the competencies to which the subject contributes are (please score from 1 to 4, being 4 the highest score):

GENERAL		Weighting			
		1	2	3	4
CG1	Understand the scientific literature in English and in other languages ??of significant presence in the scientific field through proper information management.		X		
CG2	Know how to apply information and communication technologies (ICT).			X	
CG3	Develop skills to solve problems through decision making.				X
CG4	Convey any related information properly both in writing and orally.		X		
CG5	Plan and organize any activity efficiently.		X		
CG7	Be able to carry out critical reasoning using the knowledge acquired.				X
CG9	Know and act within the ethical principles necessary for proper professional practice.		X		
CG10	Develop skills for adaptation to new situations and for autonomous learning.				X
CG11	Develop skills for creativity, initiative and entrepreneurship.	X			
CG13	Be able to apply theoretical knowledge in practice.				X
CG14	Use the internet properly as a means of communication and as a source of information.			X	
CG18	Be able to self-evaluate.			X	
CG19	Develop habits of excellence and quality in professional practice.		X		



Assessment system for the acquisition of competencies and grading system

Assessed learning outcomes	Granted percentage	Assessment method
R1, R2, R3	50,00%	Carrying out a project.
R1, R2, R3	50,00%	Written / oral and / or practical tests.

Observations

Learning activities

The following methodologies will be used so that the students can achieve the learning outcomes of the subject:

- M2 Group dynamics and activities.
- M3 Practical lesson.
- M4 Presentation of content by the teacher.
- M5 Laboratory practices.
- M7 Small group discussion.
- M8 Resolution of problems and cases.
- M9 Attendance at practices.



IN-CLASS LEARNING ACTIVITIES

	LEARNING OUTCOMES	HOURS	ECTS
<p>THEORETICAL CLASS: Presentation of contents by the teacher. Competency analysis. Demonstration of capabilities, skills and knowledge in the classroom. M4</p>	R1, R2, R3	32,00	1,28
<p>PRACTICAL CLASS / SEMINAR: Group dynamics and activities. Resolution of problems and cases. Practical laboratories. Data search, computer room, library, etc. Meaningful construction of knowledge through interaction and student activity. M3, M5, M7</p>	R1, R2, R3	20,00	0,80
<p>TUTORING: Supervision of learning, evolution. Small group discussion. Resolution of problems and cases. Presentation of results before the teacher. Presentation of diagrams and indexes of the proposed works. M4</p>	R1, R2, R3	4,00	0,16
<p>EVALUATION: Set of oral and / or written tests used in the evaluation of the student, including the oral presentation of the final degree project. M3</p>	R1, R2, R3	4,00	0,16
TOTAL		60,00	2,40



LEARNING ACTIVITIES OF AUTONOMOUS WORK

	LEARNING OUTCOMES	HOURS	ECTS
GROUP WORK: Problem solving. Preparation of exercises, memoirs, to expose or deliver in classes and / or in tutoring. M2, M7	R1, R2, R3	20,00	0,80
SELF-EMPLOYED WORK: Study, individual preparation of exercises, works, memories, to expose or deliver in classes and / or in tutoring. Platform activities or other virtual spaces. M7, M8	R1, R2, R3	70,00	2,80
TOTAL		90,00	3,60



Description of the contents

Description of the necessary contents to acquire the learning outcomes.

Theoretical contents:

Content block	Contents
1 Introduction to Statistics.	1 Introduction to Statistics.
2 Descriptive statistics in one and two variables.	2 Descriptive statistics in one and two variables.
3 Introduction to probability.	3 Introduction to probability.
4 Random variables and probability distributions.	4 Random variables and probability distributions.
5 Introduction to Statistical Inference.	5 Introduction to Statistical Inference.
6 Confidence interval estimation.	6 Confidence interval estimation.
7 Contrast of hypotheses.	7 Contrast of hypotheses.



Temporary organization of learning:

Block of content	Number of sessions	Hours
1 Introduction to Statistics.	5,00	10,00
2 Descriptive statistics in one and two variables.	4,00	8,00
3 Introduction to probability.	4,00	8,00
4 Random variables and probability distributions.	5,00	10,00
5 Introduction to Statistical Inference.	4,00	8,00
6 Confidence interval estimation.	4,00	8,00
7 Contrast of hypotheses.	4,00	8,00



References

BASIC BIBLIOGRAPHY:

Diez, D., Barr, C. y Çentikaya-Rundel, M (2013). *Openintro Statistics* (2ª Ed). Recuperado de <https://www.openintro.org/stat/textbook.php>

Martín, G. (2007). *Introducción a la estadística*. Ed: Universidad Católica de Valencia San Vicente Mártir.

COMPLEMENTARY BIBLIOGRAPHY:

Ballester, R., Huertas, F., Yuste, F. J., Llorens, F., & Sanabria, D. (2015). The relationship between regular sports participation and vigilance in male and female adolescents. *PloS one*, 10(4).

Borreani, S., Calatayud, J., Martin, J., Colado, J. C., Tella, V., & Behm, D. (2014). Exercise intensity progression for exercises performed on unstable and stable platforms based on ankle muscle activation. *Gait & posture*, 39(1), 404-409.

González, M. T. y Pérez de Vargas, A. (2009). *Estadística Aplicada. Una visión instrumental*. Ed: Díaz de Santos

Molina-García, J., Castillo, I., Pablos, C., & Queralt, A. (2007). La práctica de deporte y la adiposidad corporal en una muestra de universitarios Descargar. *Apunts. Educación física y deportes*, 3(89), 23-30.

Romero-Franco, N., Martínez-Amat, A., & Martínez-López, E. J. (2016). Efecto del entrenamiento propioceptivo en atletas velocistas / Effect of the proprioceptive training in sprinters. *Revista Internacional de Medicina y Ciencias de la Actividad Física y del Deporte*, 13(51), 437-451. Recuperado de <http://cdeporte.rediris.es/revista/revista51/artefecto393.htm>