Information about the subject

Degree: Bachelor of Sciences of Physical Activity and Sport

Faculty: Faculty of Physical Activity and Sport Sciences

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

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

Module: 1) Basic Training Module

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

Field of knowledge: Health Sciences

Department: Basic Sciences and Cross-disciplinary Subjects

Type of learning: Classroom-based learning

Languages in which it is taught: Spanish

Lecturer/-s:

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282A	Arnau Oliver Peretó **(Profesor responsable)**	arnau.oliver@ucv.es
282B	Gustavo Daniel Represas Lobeto **(Responsible Lecturer)**	gd.represas@ucv.es
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Module organization

1) Basic Training 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
		Physiology of Exercise	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
		Statitics 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, evaluate, and contrast statistical data related to physical and sports activity based on the scientific method.

R2 Critically analyze and interpret statistical research results in the field of Physical Education and Sports Sciences.

R3 Perform basic statistical analyses in the context of Physical Education and Sports Sciences using specific data processing programs.

Assessment system for the acquisition of competencies and grading system

Assessed learning outcomes	Granted percentage	Assessment method
R1, R2, R3	60,00%	Written and/or practical tests.
R1, R2, R3	15,00%	Individual or Group Work / Project.
R1, R2	5,00%	Self appraisal.
R1, R2, R3	20,00%	Non-face-to-face autonomous work.

Observations

-The student may keep the assessment instruments passed during the 3 years following the first registration, if the teacher considers it appropriate.
-It is necessary to obtain 50% in the following instruments (if this criterion is not met, the student will be graded with a maximum of 4.5 in this exam session):
·Written and/or practical tests
·Individual or group work/project
·Autonomous work not in attendance
- This subject is NOT subject to single assessment according to what is indicated in article 10.3 of the GENERAL RULES ON ASSESSMENT AND GRADING OF OFFICIAL COURSES AND UCV's OWN DEGREES.

The detailed explanation (procedure of the tasks) as well as the evaluation instruments (cards or rubrics) of each section will be published on the platform of each group at the student's disposal.

Use of Artificial Intelligence Tools in the CAFD Degree Program

Use of Artificial Intelligence tools in the CAFD degree program In the Bachelor's Degree in Physical Activity and Sports Sciences (CAFD), the use of Artificial Intelligence (AI) tools is permitted in a complementary and responsible manner, as long as it contributes to active learning, the development of critical thinking, and the improvement of students' professional skills. Under no circumstances should AI replace personal effort, direct practice, or independent reflection, which are fundamental pillars of this degree program.

Permitted Uses of AI:
·Obtaining alternative explanations of theoretical or methodological concepts.
·Generating outlines, concept maps, or summaries to support study.
·Simulating interviews, questionnaires, or training sessions as part of methodological or research practices.
·Receiving feedback on report writing, provided that the original content is the student's own.
·Supporting the search for bibliography or scientific references, always contrasting with reliable and real academic sources, and respecting the CAFD regulations for the presentation of university work.

Prohibited Uses of AI:
·Writing complete sections of academic papers, classroom exercises and practices, internship reports, journals, or portfolios, as well as the Final Degree Project.
·Formulating hypotheses, objectives, or conclusions for academic work.
·Replacing qualitative or quantitative data analysis with automated tools without human validation.
·Creating videos, presentations, or avatars with AI as a substitute for the student's oral or practical presentation.
·Obtaining automatic answers to tests, rubrics, or assessable activities through the use of AI.

Citation and Attribution Guidelines:
·Any use of AI tools must be explicitly acknowledged in the submitted document (e.g., in a footnote or appendix).
·The name of the tool, the purpose of use (e.g., grammatical review, organization of ideas, interview simulation), and where it was used in the work must be indicated.
·Responsible use of AI will be evaluated within the framework of originality, academic honesty, and digital competence.

Additional recommendations:
Students are encouraged to combine the use of AI with traditional methods (manual problem solving, practical session design, direct observation, etc.) to ensure the comprehensive development of their skills.

If there are any doubts about the permitted use of AI in a specific activity, students should consult the faculty responsible for the course.

Learning activities

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

M1 Attendance at practices.

M2 Resolution of problems and cases.

M3 Discussion in small groups.

M4 Practical laboratories.

M5 Presentation of content by the teacher.

M6 Practical lesson.

M7 Group dynamics and activities.

IN-CLASS LEARNING ACTIVITIES

	LEARNING OUTCOMES	HOURS	ECTS
THEORETICAL CLASS: Presentation of contents by the teacher. Competency analysis. Demonstration of capabilities, skills and knowledge in the classroom. M5	R1, R2, R3	32,00	1,28
PRACTICAL CLASS / SEMINAR: Group dynamics and activities. Resolution of problems and cases. Practical laboratories. Data search, computer classroom, library, etc. Meaningful construction of knowledge through student interaction and activity. M3, M4, M6	R1, R2, R3	20,00	0,80
EVALUATION: Set of oral and/or written tests used in the evaluation of the student, including the oral presentation of the final degree project. M6	R1, R2, R3	4,00	0,16
TUTORING: Supervision of learning, evolution. Discussion in small groups. Resolution of problems and cases. Presentation of results before the teacher. Presentation of diagrams and indexes of the proposed works. M5	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 present or deliver in classes and/or in tutoring. M3, M7	R1, R2, R3	20,00	0,80
SELF-EMPLOYED WORK: Study, Individual preparation of exercises, assignments, reports, to present or deliver in classes and/or in tutoring. Activities in platform or other virtual spaces. M2, M3	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.	Introduction to Statistics.
2. Descriptive statistics on one and two variables.	Descriptive statistics on one and two variables.
3. Introduction to probability.	Introduction to probability.
4. Random variables and probability distributions.	Random variables and probability distributions.
5. Introduction to Statistical Inference.	Introduction to Statistical Inference.
6. Confidence interval estimation.	Confidence interval estimation.
7. Hypothesis testing	Hypothesis testing

Temporary organization of learning:

Block of content	Number of sessions	Hours
1. Introduction to Statistics.	1,00	2,00
2. Descriptive statistics on one and two variables.	6,00	12,00
3. Introduction to probability.	3,00	6,00
4. Random variables and probability distributions.	5,00	10,00
5. Introduction to Statistical Inference.	1,00	2,00
6. Confidence interval estimation.	5,00	10,00
7. Hypothesis testing	9,00	18,00

References

REFERENCES:

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.

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