

## Course guide

Year 2025/2026 281203 - Kinesiology

## Information about the subject

Degree: Bachelor of Sciences of Physical Activity and Sport

Faculty: Faculty of Physical Activity and Sport Sciences

Code: 281203 Name: Kinesiology

Credits: 6,00 ECTS Year: 2 Semester: 1

Module: 1) Basic formation Module

Subject Matter: Biological and mechanical foundations of human motor skills. Type: Basic

Formation

Field of knowledge: Ciencias de la Salud.

Department: Physical Preparation and Conditioning

Type of learning: Classroom-based learning

Languages in which it is taught: Spanish

Lecturer/-s:

1164DT	Alejandro Sanz Bayo (Responsible Lecturer)
282A	<u>Alejandro Sanz Bayo</u> (Responsible Lecturer)
282B	Consuelo Moratal Lull (Responsible Lecturer)
282C	Ignacio Tamarit Grancha (Responsible Lecturer)
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# 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
		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 Explain, identify and apply the theoretical-practical knowledge about the different anatomical-physiological systems that allow the performance of any physical activity.
- R2 Assess joint range and / or functional capacity to optimize health and / or physical-sports performance.
- R3 Design, experiment and correct the technical execution of technical tasks / exercises / gestures, providing adequate feedback.







## 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):

ENER	AL	Weig	hting	J
	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		
CG3	Develop skills to solve problems through decision making.			x
CG4	Convey any related information properly both in writing and orally.	x		
CG6	Develop interpersonal relationship skills and teamwork, both in international and national contexts and in interdisciplinary as well as non-interdisciplinary teams.	X		
CG7	Be able to carry out critical reasoning using the knowledge acquired.			x
CG10	Develop skills for adaptation to new situations and for autonomous x learning.			
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		

PECIFIC	Weighting
	1 2 3 4
CE 2.2 Identify, communicate and apply anatomical-physiological and biomechanical scientific criteria at an advanced level of skills in the design, development and technical-scientific evaluation of	×
procedures, strategies, actions, activities and guidelines adequate; to prevent, minimize and / or avoid a health risk in the practice of physical activity and sport in all kinds of population.	





CE 2.3 Design and apply fluently, naturally, consciously and continuously physical exercise and adequate physical condition, efficient, systematic, varied, based on scientific evidence, for the development of adaptation and improvement processes or readaptation of certain capacities of each person in relation to human movement and its optimization; with the purpose of be able to solve unstructured, increasingly complex and unpredictable problems and with an emphasis on populations of character special.	X		
CE 2.4 Articulate and deploy an advanced level of skill in the analysis, design, and evaluation of assessment and control tests of physical condition and physical-sports performance.	x		
CE 3.1 Analyze, identify, diagnose, promote, guide and evaluate strategies, actions and activities that promote the adherence to an active lifestyle and the participation and regular and healthy practice of physical activity and sport and physical exercise in an adequate, efficient and safe way by citizens in order to improve their integral health, well-being and quality of life, and with emphasis on populations of a special nature such as: the elderly (elderly), schoolchildren, people with disability and people with pathologies, health problems or similar (diagnosed and / or prescribed by a doctor) attending gender and diversity.	X		
CE 3.4 Promote education, dissemination, information and constant orientation to people and leaders about the benefits, significance, characteristics and positive effects of the regular practice of physical and sports activity and physical exercise, of the risks and damages of an inadequate practice and of the elements and criteria that identify its adequate execution, as well as the information, guidance and advice on the possibilities of physical activity and appropriate sport in your environment in any professional intervention sector.			X
CE 6.1 Know and understand the bases of the methodology of scientific work.		x	
CE 6.3 Articulate and deploy with rigor and a scientific attitude the justifications on which to elaborate, support, base and constantly and professionally justify all acts, decisions, processes, procedures, actions, activities, tasks, conclusions, reports and professional performance.	×		





CE 6.4 Articulate and deploy procedures, processes, protocols, own analysis, with rigor and scientific attitude on matters of social, legal, economic, scientific or ethical nature, when necessary and pertinent in any professional sector of activity physical and sport (formal and informal physical-sport education; physical and sports training; physical exercise for health; direction of physical activity and sport).	x	
CE 7.2 Know, elaborate and know how to apply the ethical-deontological, structural-organizational conditions, professional performance and the regulations for the professional practice of Graduates in Physical Activity and Sports Sciences, in any sector professional of physical activity and sports (formal and informal physical-sports education; physical and sports training; exercise physical for health; direction of physical activity and sports); as well as being able to develop a multidisciplinary work	X	
CE 7.3 Understand, know how to explain and disseminate the functions, responsibilities and importance of a good professional Graduated in Sciences of Physical Activity and Sports as well as analyze, understand, identify and reflect critically and autonomously on their identity, training and professional performance to achieve the goals and benefits of physical activity and sport in an adequate, safe, healthy and efficient way in all the physical-sports services offered and provided and in any sector professional of physical activity and sports.	x	





# Assessment system for the acquisition of competencies and grading system

Assessed learning outcomes	Granted percentage	Assessment method
R1, R2, R3	30,00%	Carrying out a project.
R1, R2, R3	60,00%	Written / oral and / or practical tests.
R1, R2, R3	10,00%	Active participation.

#### Observations

•The student will be able to keep the evaluation instruments passed during the 3 years following the first enrollment.

·It is necessary to obtain 50% in all the instruments to pass the subject. If this criterion is not met, the student will be graded with a maximum of 4.5 in said call.

## 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.





#### **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.	R1, R2, R3	22,00	0,88
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. M2, M3, M5, M7	R1, R2, R3	30,00	1,20
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	R1, R2, R3	4,00	0,16
EVALUATION: Set of oral and / or written tests used in the evaluation of the student, including the oral presentation of the final degree project. M2, M8	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, M3, M7	R1, R2, R3	32,00	1,28
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.	R1, R2, R3	58,00	2,32
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 The Human Movement: Application of human movement in relation to the type of exercise	1 The Human Movement: Application of human movement in relation to the type of exercise
2 Exercises in the different planes and body axes	2 Exercises in the different planes and body axes
3 Joint Behavior: Muscle Levers	3 Joint Behavior: Muscle Levers
4 Pulleys: Main uses for muscle exercise	4 Pulleys: Main uses for muscle exercise
5 muscle chains	5 muscle chains
6 Joint assessment	6 Joint assessment
7 Muscle assessment	7 Muscle assessment





## Temporary organization of learning:

Block of content	Number of sessions	Hours
1 The Human Movement: Application of human movement in relation to the type of exercise	4,00	8,00
2 Exercises in the different planes and body axes	5,00	10,00
3 Joint Behavior: Muscle Levers	5,00	10,00
4 Pulleys: Main uses for muscle exercise	4,00	8,00
5 muscle chains	4,00	8,00
6 Joint assessment	6,00	12,00
7 Muscle assessment	2,00	4,00





## References

#### **BASIC BIBLIOGRAPHY:**

Ahonen, J., Lahtinen, T. y Sandstrom, M. (2001). Kinesiología y Anatomía aplicada a la actividad física (2ª ed.). Paidotribo. Ayuso Gallardo, J. L. (2008). Anatomía funcional del aparato locomotor (1ª ed.). Wanceulen. Boyle, M. (2017). El entrenamiento funcional aplicado a los deportes (1ª ed.). Ediciones Tutor, SA. Busquet, L. (2002). Las cadenas musculares (Tomo 1-4. 1ª ed.). Paidotribo. Calais, B. (1991). Anatomía para el movimiento (Tomo I. 12ª ed.). Los Libros de la Liebre de Marzo. Calais, B. (1994). Anatomía para el movimiento (Tomo II. 12ª ed.). Los Libros de la Liebre de Marzo. Carr, K. (2021). Anatomía del entrenamiento funcional (1ª ed.). Ediciones Tutor, SA Clarkson, H. (2003). Proceso evaluativo músculo esquelético (1ª ed. 12ª ed.). Paidotribo. Contreras, B. (2014). Anatomía del entrenamiento de la fuerza con el propio peso corporal. guía ilustrada para mejorar la fuerza, la potencia y la definición muscular (1ª ed.). Ediciones Tutor, SA Delavier, F. (2001). Guía de los movimientos de musculación. Descripción anatómica (4ª ed.). Paidotribo. Enoka, R. (1994). Neuromechanical Basis of Kinesiology (2ª ed.). Human Kinetics. Guyard, J. C. (2008). Manual práctico de cinesiología (2ª ed.). Paidotribo. Kapandji, Y.A. (1982). Cuadernos de fisiología articular (Tomo 1, 2, 3, 6ª ed.). Masson. Kendall, F.P. y Kendall McCreary, E. (1985). Músculos, pruebas y funciones (5ª ed.). Jims. Kendall, F. P. (2007). Músculos: pruebas funcionales, postura y dolor (5ª ed.). Marban. Lloret, M. y Sancha, J.A. (2003). Anatomía aplicada a la actividad fisiodeportiva (3ª ed.). Paidotribo. Milo, J. (2020). Manual de Fuerza Anatomía y entrenamiento (1ª ed.). Jeronimo Milo. Neumann, D. A. (2016). Kinesiology of the musculoskeletal system (3rd ed.). Mosby. Plas, F., Viel, E. y Blanc, E. (1984). La marcha humana: cinesiología dinámica, biomecánica y patomecánica (1ª ed.). Masson. Rasch, P.J. y Burke, R.K. (1991). Kinesiología y anatomía aplicada (2ª ed.). El Ateneo. Rasch, P.J. y Burke, R.K. (1991). Kinesiología y anatomía aplicada: La ciencia del movimiento humano (1ª ed.). El Ateneo. Taboadela, C.H. (2007). Goniometría. Una herramienta para la evaluación de las incapacidades laborales (2ª ed.). Asociart ART. Thompson, C. y Floyd, R.T. (1996). Manual de Kinesiología structural (2ª ed.). Paidotribo. Walter, B. (2009). Anatomía y estiramientos: Guía de estiramientos: Descripción anatómica (1ª ed.). Paidotribo. WEBSITES:





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