



IDENTIFYING DATA

Motor control and learning

Subject	Motor control and learning			
Code	P02G051V01101			
Study programme	Grado en Ciencias de la Actividad Física y del Deporte			
Descriptors	ECTS Credits	Choose	Year	Quadmester
	6	Basic education	1st	1st
Teaching language	Spanish			
Department				
Coordinator	Novo Carballal, Antonio Figueira Rodríguez, Alberto			
Lecturers	Figueira Rodríguez, Alberto Novo Carballal, Antonio Romo Pérez, Vicente			
E-mail	anovo@uvigo.es AFIGUEIRA@UVIGO.ES			
Web				
General description				

Training and Learning Results

Code	
B1	1.1. Understand, elaborate and know how to apply the procedures, strategies, activities, resources, techniques and methods involved in the teaching-learning process with efficiency, developing the whole course of action in all sectors of professional intervention of physical activity and sport (formal and informal physical-sports teaching; physical and sports training; physical exercise for health; physical activity and sport management).
B2	2.1 To know how to guide, design, apply and technically-scientifically evaluate physical exercise and physical condition at an advanced level, based on scientific evidence, in different environments, contexts and types of activities for the entire population and with emphasis on special populations such as: the elderly, schoolchildren, people with disabilities and people with pathologies, health problems or similar (diagnosed and/or prescribed by a physician), taking into account gender and diversity.
B3	2.2 Identify, communicate and apply scientific anatomical-physiological and biomechanical criteria at an advanced level of skills in the design, development and technical-scientific evaluation of procedures, strategies, actions, activities and appropriate orientations; to prevent, minimize and/or avoid a health risk in the practice of physical activity and sport in all types of population.
B9	6.1 To know and understand the bases of the methodology of scientific work.
B10	6.2 Analyze, review and select the effect and effectiveness of the practice of methods, techniques and resources of research and scientific work methodology, in solving problems that require the use of creative and innovative ideas.
C1	1.1. Understand, elaborate and know how to apply the procedures, strategies, activities, resources, techniques and methods involved in the teaching-learning process with efficiency, developing the whole course of action in all sectors of professional intervention of physical activity and sport (formal and informal physical-sports teaching; physical and sports training; physical exercise for health; physical activity and sport management).
C2	1.2 To design and apply the methodological process integrated by observation, reflection, analysis, diagnosis, execution, technical-scientific evaluation and/or diffusion in different contexts and in all sectors of professional intervention in physical activity and sport.
C3	1.3. Communicate and interact appropriately and efficiently in physical activity and sports, in diverse intervention contexts, demonstrating teaching skills in a conscious, natural and continuous way.
C4	1.4. To adapt the educational intervention to the individual characteristics and needs of the entire population, with emphasis on special populations such as: schoolchildren, the elderly, people with reduced mobility and people with pathologies, health problems or similar (diagnosed and/or prescribed by a doctor), taking into account gender and diversity.

- C6 2.2 Identify, communicate and apply scientific anatomical-physiological and biomechanical criteria at an advanced level of skills in the design, development and technical-scientific evaluation of procedures, strategies, actions, activities and appropriate orientations; to prevent, minimize and/or avoid a health risk in the practice of physical activity and sport in all types of population.
-
- C7 2.3 Design and apply with fluency, naturalness, consciously and continuously adequate, efficient, systematic, varied physical exercise and physical condition, based on scientific evidence, for the development of the processes of adaptation and improvement or readaptation of certain capacities of each person in relation to human movement and its optimization; in order to be able to solve unstructured problems, of increasing complexity and unpredictable and with emphasis on special populations.
-
- C8 2.4 Articulate and display an advanced level of skill in the analysis, design and evaluation of tests for the assessment and control of physical fitness and physical-sports performance.
-
- C9 2.5 Know how to readapt, retrain and/or re-educate individuals, groups or teams with injuries and pathologies (diagnosed and/or prescribed by a physician), whether they compete or not, through physical-sports activities and physical exercises appropriate to their characteristics and needs.
-
- C10 2.6 Develop an advanced level in the planning, implementation, control and evaluation of physical and sports training processes.
-
- C16 4.3 Develop and implement the technical-scientific evaluation of the elements, methods, procedures, activities, resources and techniques that make up the manifestations of movement and the processes of physical fitness and physical exercise; taking into account the development, characteristics, needs and context of individuals, the different types of population and the spaces where physical activity and sport are performed; in the various sectors of professional intervention and with emphasis on special populations
-
- C18 5.2 Identify, organize, direct, plan, coordinate, implement, and perform technical-scientific evaluation of the various types of physical and sporting activities adapted to the development, characteristics and needs of individuals and the typology of the activity, space and entity, in all types of physical activity and sport services, including sporting events, and in any type of organization, population, context, environment and population and with emphasis on populations of special character such as: elderly people (senior citizens), schoolchildren, people with disabilities and people with pathologies, health problems or assimilated (diagnosed and/or prescribed by a doctor) and in any sector of professional intervention of physical activity and sport (formal and informal physical-sports teaching; physical and sports training; physical exercise for health; management of physical activity and sport) ensuring safety, efficiency and professionalism in the activity performed in compliance with current regulations.
-
- C23 6.3 Articulate and deploy with rigor and scientific attitude the justifications on which all acts, decisions, processes, procedures, actions, activities, tasks, conclusions, reports and professional performance are elaborated, supported, substantiated and justified in a constant and professional way.
-
- D1 1.1. Understand, elaborate and know how to apply the procedures, strategies, activities, resources, techniques and methods involved in the teaching-learning process with efficiency, developing the whole course of action in all sectors of professional intervention of physical activity and sport (formal and informal physical-sports teaching; physical and sports training; physical exercise for health; physical activity and sport management).
-
- D2 1.2. To design and apply the methodological process integrated by observation, reflection, analysis, diagnosis, execution, technical-scientific evaluation and/or diffusion in different contexts and in all sectors of professional intervention in physical activity and sport.
-
- D3 1.3 Communicate and interact appropriately and efficiently in physical activity and sports, in diverse intervention contexts, demonstrating teaching skills in a conscious, natural and continuous way.
-
- D4 1.4. To adapt the educational intervention to the individual characteristics and needs of the entire population, with emphasis on special populations such as: schoolchildren, the elderly, people with reduced mobility and people with pathologies, health problems or similar (diagnosed and/or prescribed by a doctor), taking into account gender and diversity.
-
- D5 2.1 To know how to guide, design, apply and technically-scientifically evaluate physical exercise and physical condition at an advanced level, based on scientific evidence, in different environments, contexts and types of activities for the entire population and with emphasis on special populations such as: the elderly, schoolchildren, people with disabilities and people with pathologies, health problems or similar (diagnosed and/or prescribed by a physician), taking into account gender and diversity.
-
- D7 2.3 Design and apply with fluency, naturalness, consciously and continuously adequate, efficient, systematic, varied physical exercise and physical condition, based on scientific evidence, for the development of the processes of adaptation and improvement or readaptation of certain capacities of each person in relation to human movement and its optimization; in order to be able to solve unstructured problems, of increasing complexity and unpredictable and with emphasis on special populations.
-
- D8 2.4 Articulate and display an advanced level of skill in the analysis, design and evaluation of tests for the assessment and control of physical fitness and physical-sports performance.
-
- D9 2.5 Know how to readapt, retrain and/or re-educate individuals, groups or teams with injuries and pathologies (diagnosed and/or prescribed by a physician), whether they compete or not, through physical-sports activities and physical exercises appropriate to their characteristics and needs.
-

- D16 4.1 Fluently develop procedures and protocols to solve unstructured, unpredictable and increasingly complex problems, articulating and deploying a mastery of the elements, methods, processes, activities, resources and techniques that make up the basic motor skills, physical activities, sports skills, play, expressive body and dance activities, and activities in nature in an appropriate, efficient, systematic, varied and methodologically integrated way for the entire population and with emphasis on special populations such as: elderly people (senior citizens), schoolchildren, people with disabilities and people with pathologies, health problems or assimilated (diagnosed and/or prescribed by a doctor), attending to gender and diversity and in any sector of professional intervention of physical activity and sport (formal and informal physical-sports teaching; physical and sports training; physical exercise for health; physical activity and sport management).
- D18 4.3 Develop and implement the technical-scientific evaluation of the elements, methods, procedures, activities, resources and techniques that make up the manifestations of movement and the processes of physical fitness and physical exercise; taking into account the development, characteristics, needs and context of individuals, the different types of population and the spaces where physical activity and sport are performed; in the various sectors of professional intervention and with emphasis on special populations.
- D23 5.5 Articulate and deploy technical-scientific advice, certification, and evaluation of physical activity and sport activities and resources in all physical activity and sport services, contexts, environments and sectors of professional intervention in physical activity and sport as well as in the design and elaboration of technical reports in all physical activity and sport services.
- D24 6.1 To know and understand the bases of the methodology of scientific work.
- D25 6.2 Analyze, review and select the effect and effectiveness of the practice of methods, techniques and resources of research and scientific work methodology, in solving problems that require the use of creative and innovative ideas.

Expected results from this subject

Expected results from this subject	Training and Learning Results		
New	B1	C1	D1
	B2	C2	D2
	B3	C3	D3
	B9	C4	D4
	B10	C6	D5
		C7	D7
		C8	D8
		C9	D9
		C10	D16
		C16	D18
		C18	D23
		C23	D24
			D25

Contents

Topic	
(*)1. Fundamentos, característica e estrutura da aprendizaxe e control motor na Educación Física	(*)1.1. Comportamento motor: fundamentos, características, estrutura da aprendizaxe. 1.2. Evolución dos campos de estudo da aprendizaxe e control motor. 1.3. Perspectivas teóricas da aprendizaxe motora.
(*)2. A práctica motriz como elemento de aprendizaxe na Educación Física.	(*)2.1. Tipos de práctica. 2.2. Distribución da práctica. 2.3. Transferencia na práctica. 2.4. Variabilidade na práctica.
(*)3. Control motor no ámbito da actividade física e o deporte.	(*)3.1. Bases teóricas do control motor. 3.2. Fisioloxía do control motor. 3.3. Receptores e movemento.
(*)4. Procesos de adquisición da habilidade motora.	(*)4.1. Característica e estrutura da habilidade motriz. b. Dificultade e complexidade. 4.2. Etapas de adquisición da habilidade motriz. 4.3. Atención e aprendizaxe motora. 4.4. Memoria motriz, codificación e esquecemento. 4.5. Transferencia.
(*)5. Mecanismos na aprendizaxe motora.	(*)5.1. Modelos do comportamento motor. 5.2. A información na aprendizaxe motora (FB). 5.3. Percepción. 5.4. Decisión. 5.5. Execución.
(*)6. Avaliación da aprendizaxe motora.	(*)6.1. Avaliación da Aprendizaxe motora
(*)7. O programa motor.	(*) 7.1. Estrutura da programación motora. 7.2. Programa motor e patrón neuromuscular. 7.3. A complexidade motora. 7.4. Tipos de programa motor

Planning			
	Class hours	Hours outside the classroom	Total hours
Lecturing	28	60	88
Seminars	7	12	19
Laboratory practical	15	24	39
Objective questions exam	1	0	1
Essay questions exam	1	0	1

*The information in the planning table is for guidance only and does not take into account the heterogeneity of the students.

Methodologies	
	Description
Lecturing	(*)O profesor exporá os contidos da materia, aclarando conceptos, clasificacións, técnicas de aplicación, fundamentos, etc
Seminars	(*)Realizaranse seminarios para profundar na análise dos mecanismos de feedback, tipos de práctica e o control motor. O alumnado terá que realizar traballos sobre os temas tratados.
Laboratory practical	(*)Análise de vídeos. Prácticas onde se analizan os mecanismos de aprendizaxe. Prácticas sobre percepción e decisión.

Personalized assistance

Methodologies	Description
Lecturing	
Laboratory practical	
Seminars	

Assessment

	Description	Qualification	Training and Learning Results
Seminars	(*)Avaliarase: A calidade dos traballos. A participación activa.	15	
Laboratory practical	(*)Avaliarase: A calidade dos traballos. A participación activa.	10	
Objective questions exam	(*)Sobre os temas tratados nas sesións de clase, en calqueira das suas modalidades.	40	
Essay questions exam	(*)Questións a desenvolver sobre os temas da teoría.	35	

Other comments on the Evaluation

Sources of information

Basic Bibliography

Schmidt & Amp, Lee, **Motor Control and Learning**, HK,

Complementary Bibliography

Magill, R.A. & Anderson D.I., **Motor Learning and Control**, Macgraw-Hill,

Recommendations

Subjects that continue the syllabus

Human anatomy for movement/P02G051V01104

Exercise physiology 1/P02G051V01102

(*)Fundamentos da competencia motriz/P02G051V01106

(*)Kinesiología do movemento humano/P02G051V01107

Subjects that are recommended to be taken simultaneously

Human anatomy for movement/P02G051V01104

Exercise physiology 1/P02G051V01102