



Information about the subject

Degree: Bachelor of Science Degree in Podiatry

Faculty: Faculty of Medicine and Health Sciences

Code: 472012 **Name:** Physiotherapy Assessment

Credits: 6,00 **ECTS Year:** The course is not offered this academic year **Semester:** 2

Module: GENERAL PODOLOGY AND BIOMECHANICS

Subject Matter: Biomechanics **Type:** Elective

Field of knowledge: Health Sciences

Department: Physiotherapy

Type of learning: Classroom-based learning

Languages in which it is taught:

Lecturer/-s:



Module organization

GENERAL PODOLOGY AND BIOMECHANICS

Subject Matter	ECTS	Subject	ECTS	Year/semester
General Podiatry	21,00	Evolutionary Podiatry	3,00	This elective is not offered in the academic year 23/24
		Expertise in podiatry	3,00	This elective is not offered in the academic year 23/24
		General Podiatry	6,00	1/2
		Preventive Podiatry	3,00	4/1
		Social Morality. Deontology	6,00	3/1
Biomechanics	27,00	Biomechanics	6,00	2/2
		Ergonomics and footwear	3,00	4/1
		General Intervention Procedures	6,00	This elective is not offered in the academic year 23/24
		Physiotherapy Assessment	6,00	This elective is not offered in the academic year 23/24
		Sports Podiatry	6,00	3/2
Radiology	6,00	Radiology and Radiation Protection	6,00	3/1



Research and management	12,00	Introduction to research and sanitary documentation	6,00	4/1
		Planning and management of the podiatric clinic	6,00	4/2

Recommended knowledge

Not applicable

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 Knows how to locate and recognize on a phantom 10 points corresponding to the axes, planes of movement and joint paths of the different joints of the lower limb and foot.
- R2 After viewing two videos, the student is able to recognize the criteria of normality of the biomechanics of the foot and gait in a checklist.
- R3 Knows the main disciplines that integrate the physical sciences, their fundamentals and areas of work.
- R4 The student knows the different competences of the members of a multidisciplinary team.
- R5 The student is acquainted with ergonomics and its application in the prevention of physical and psychological problems and diseases caused by daily practice in the podiatry clinic.
- R6 Relaciona los diferentes medios físicos y manuales para cada patología.
- R7 Conoce los efectos fisiológicos sobre el cuerpo humano de la electricidad y sus terapias afines.
- R8 Conoce y razona sobre las diferentes finalidades de los medios físicos como tratamiento y diagnóstico.



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):

BASIC		Weighting			
		1	2	3	4
CB1	Students demonstrate knowledge and understanding in an area of study that is at the core of general secondary education, and is often at a level that, while supported by advanced textbooks, also includes some aspects that involve knowledge from the cutting edge of their field of study.			X	
CB3	Students have the ability to gather and interpret relevant data (usually within their area of study) to make judgments that include reflection on relevant social, scientific or ethical issues.			X	

GENERAL		Weighting			
		1	2	3	4
CG2	Students know the structure and function of the human body, especially of the lower limb, semiology, mechanisms, causes and general manifestations of the disease and diagnostic methods of medical and surgical pathological processes, interrelating general pathology with foot pathology.				X
CG3	Students develop the capacity, ability and skill necessary to diagnose, prescribe, indicate, perform and/or elaborate and evaluate any type of podiatric, orthopedic, chiropractic, podiatric surgery, physical, pharmacological, preventive and/or educational treatment, based on the clinical history.				X
CG4	Students acquire adequate clinical experience in each of the podiatry contents, carried out in centres accredited for university podiatry training, promoting interrelationship and effective communication with patients, relatives, and members of the multidisciplinary team.		X		



SPECIFIC	Weighting			
	1	2	3	4
CE37 Students know the basics of biomechanics and kinesiology. Support theories. Human walking. Structural alterations of the foot. Postural alterations of the locomotive system with repercussions on the foot and vice versa. Instruments of biomechanical analysis.				X

TRANSVERSAL	Weighting			
	1	2	3	4
CT1 Analytical capabilities				X
CT2 Organizational and planning skills				X
CT3 Oral and written communication in native language				X
CT6 Information management capacity				X
CT7 Problem solving			X	
CT8 Decision making			X	
CT10 Interdisciplinary teamwork			X	
CT14 Critical Reasoning			X	
CT15 Ethical commitment				X
CT16 Autonomous learning			X	
CT17 Adaptation to new situations				X
CT18 Creativity			X	
CT22 Motivation for quality			X	



Assessment system for the acquisition of competencies and grading system

Assessed learning outcomes	Granted percentage	Assessment method
	10,00%	Open questions
	40,00%	Tests
	10,00%	Oral presentation
	10,00%	Practice (exercises, case studies, problems)
	0,00%	Class participation
	30,00%	Practice exam- technical proficiency testing

Observations

MENTION OF DISTINCTION:

According to Article 22 of the Regulations governing the Evaluation and Qualification of UCV Courses, the mention of "Distinction of Honor" may be awarded by the professor responsible for the course to students who have obtained, at least, the qualification of 9 over 10 ("Sobresaliente"). The number of "Distinction of Honor" mentions that may be awarded may not exceed five percent of the number of students included in the same official record, unless this number is lower than 20, in which case only one "Distinction of Honor" may be awarded.

Learning activities

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



- M1 Theoretical classes (TC). Training activity preferably oriented to the acquisition of knowledge skills. It is characterised by the fact that students are spoken to. Also called master class or expository class, it refers to the oral exposition made by the teacher, (with the support of a blackboard, computer and cannon for the exposition of texts, graphics, etc.).
- M2 Seminars (S). Training activity preferably oriented to obtain knowledge application and research competences. Knowledge is built through interaction and activity. Consisting of supervised monographic sessions with shared participation (Teachers, students, experts). The size of the group is variable, from a large group to small groups, no less than 6 students for interaction. The evaluation will be made by means of follow-up records by the teacher. Participation and development of problem-solving skills should be taken into account.
- M3 Problems practice (CPP). Training activity oriented to group work for problem solving under the supervision of a teacher. The size of the group is variable, in a range of 10-20 students, to avoid confusion with a master class.
- M4 Classroom practice (CPA). Training activity of work in groups that is developed in the classroom. It includes work with documents (e.g.: work with articles or documents, clinical case studies, diagnostic analyses, etc). The size of the group is variable, in a range of 10-20 students.
- M5 Computer Practice (CPI). Training activity of work in groups that is developed in the Computer Classroom where the learning is developed using the computer as a support. It includes the work with computer models, specific software, web queries, etc. The size of the group is variable, in a range of 10-20 students.
- M6 Laboratory Practice (CPL). Training activity of work in groups that is developed in the Laboratory. It includes the sessions where students actively and autonomously develop, supervised by the teacher, laboratory experiments. The size of the group is variable, in a range of 10-20 students.
- M7 Tutorials (T). Set of activities carried out by the teacher with personalised attention to the student or in small groups with the aim of reviewing and discussing the materials and topics presented in the classes, seminars, readings, completion of assignments, etc. The aim is to ensure that education is truly a comprehensive training of the student and is not reduced to a transfer of information. It is, therefore, a personalized relationship of help in which the teacher-tutor attends, facilitates and guides one or more students in the formative process.



- M8 Evaluation (Ev). It is the set of processes that try to evaluate the learning results obtained by the students and expressed in terms of acquired knowledge, capacities, developed skills or abilities and manifested attitudes. It covers a wide range of activities that can be developed for students to demonstrate their training (e.g. written, oral and practical tests, projects or assignments,). It also includes Official Calls.
- M10 Estudio del alumno: Preparación individual de lecturas, ensayos, resolución de problemas, seminarios

IN-CLASS LEARNING ACTIVITIES

	LEARNING OUTCOMES	HOURS	ECTS
Theoretical lessons M1	R1, R2, R3, R4, R5, R6, R7, R8	38,00	1,52
Seminar M2	R1, R2, R3, R4, R5, R6, R7, R8	2,00	0,08
Practice lessons M3, M4	R1, R2, R3, R4, R5, R6, R7, R8	14,00	0,56
Office Hours M7	R7, R8	4,00	0,16
Evaluation M8	R1, R2, R3, R4, R5, R6, R7, R8	2,00	0,08
TOTAL		60,00	2,40

LEARNING ACTIVITIES OF AUTONOMOUS WORK

	LEARNING OUTCOMES	HOURS	ECTS
Autonomous work M10		60,00	2,40
Group work M10		30,00	1,20
TOTAL		90,00	3,60



Description of the contents

Description of the necessary contents to acquire the learning outcomes.

Theoretical contents:

Content block	Contents
Unidad 1. Anatomía y artrología	TEMA 1 ANATOMÍA GENERAL BÁSICA TEMA 2 ARTROLOGÍA
Unidad 2. Estudio general del movimiento humano	TEMA 3 PLANOS Y EJES.CINÉTICA Y CINEMÁTICA ARTICULAR. TEMA 4 EXAMEN DE LA POSTURA EN BIPEDESTACIÓN TEMA 5: EXAMEN DEL DOLOR
Unidad 3. Balance articular y balance muscular	TEMA 6 VALORACIÓN DEL MOVIMIENTO ARTICULAR TEMA 7 BALANCE MUSCULAR TEMA 8 VALORACIÓN GLOBAL TEMA 9 TERMOGRAFIA
Unidad 4. La marcha humana	TEMA 10 LA MARCHA HUMANA TEMA 11 AYUDAS TECNICAS PARA LA DEAMBULACIÓN
Unidad 5. Prácticas	PRACTICA 1: VALORACION ARTICULAR MIEMBRO SUPERIOR PRACTICA 2: VALORACION ARTICULAR MIEMBRO INFERIOR PRACTICA 3: BALANCE MUSCULAR MIEMBRO SUPERIOR.E INFERIOR PRACTICA 4: PRUEBAS FUNCIONALES PRACTICA 5: ESTUDIO DEL RAQUIS Y VALORACION GLOBAL PRACTICA 6: TERMOGRAFIA. EXPLORACIÓN CLINICA PRACTICA 7: SIMULACION EN VALORACIÓN



Temporary organization of learning:

Block of content	Number of sessions	Hours
Unidad 1. Anatomía y artrología	5,00	10,00
Unidad 2. Estudio general del movimiento humano	7,00	14,00
Unidad 3. Balance articular y balance muscular	8,00	16,00
Unidad 4. La marcha humana	3,00	6,00
Unidad 5. Prácticas	7,00	14,00



References

- Pattern Recognition of Clinical Syndromes Related to Neuromusculoskeletal Pain Disorders. Lluch, E. — López-Cubas, C. — Jones, M. — Jull, G. — Hall, T. — Lewis, J. 1ª Edición Diciembre 2020 Editorial ZERAPI ISBN 9788493918743
- Grieve's Modern Musculoskeletal Physiotherapy. Jull, G. — Moore, A. — Falla, D. — Lewis, J. — McCarthy, C. — Sterling, M. 4ª Edición Julio 2015 Editorial CHURCHILL LIVINGSTONE ISBN 9780702051524
- La Columna Cervical, Vol. 1: Evaluación Clínica y Aproximaciones Terapéuticas. Torres Cueco, R. 1ª Edición Mayo 2008 Editorial Medica Panamericana S.A. ISBN 9788479038670
- Musculoskeletal Examination and Assessment. Petty, N. J., & Ryder, D. (Eds.). (2017). E-Book: A Handbook for Therapists. Elsevier Health Sciences
- Prometheus. [Tomo 1]: texto y atlas de anatomía : anatomía general y aparato locomotor. Schünke, Michael. Schulte, Erik. Schumacher, Udo. Voll, Markus. Wesker, Karl. Médica Panamericana, 2010 Sobotta. Atlas de anatomía humana: tablas de músculos, articulaciones y nervios. Sobotta (1869-1945), Johannes. Paulsen, Friedrich. Waschke, Jens. Elsevier, D.L. 2011 Atlas de Anatomía Humana. NETTER. Ed. Saunders-Elsevier, 2010
- Anatomía para Estudiantes. DRAKE, Vogl, Mitchell. Gray Ed. Elsevier 2007
- Tendón: valoración y tratamiento en fisioterapia. Jurado Bueno, Antonio. Medina Porqueres, Iván. Paidotribo, [2015]
- Biomecánica funcional: miembros, cabeza, tronco. Dufour, Michel. Pillu, Michel. Elsevier, D. L. 2018
- Explicando el dolor. Butler, David S.. Moseley, Lorimer G.. Torres Cueco, Rafael. Noigroup, 2016
- Atlas de anatomía humana: estudio fotográfico del cuerpo humano. Rohen, Johannes W.. Yokochi, Chihiro. Lütjen-Drecoll, Elke. Elsevier, DL. 2011
- Cadenas musculares y articulares, método G.D.S. : aspectos biomecánicos. Fascículo nº 1, Nociones de base. Campignon, Philippe. Denys-Struyf, Godelieve. Lencina-Verdú Editores Indepen
- Cadenas musculares y articulares, método G.D.S. : Fascículo nº 3, Las cadenas antero-medianas. Campignon, Philippe. Valle Lencina, Aida del. Verdú Bellod, Elia. Lencina-Verdú Editores Indepen



Visionado del vídeo: "Tame the Beast" <https://www.youtube.com/watch?v=ikUzvSph7Z4>. Puede consultar la web original donde encontrará, además del vídeo, otros recursos útiles

en <https://www.tamethebeast.org/#tame-the-beast>

BMJ Best Practice - Fibromyalgia [internet]. Disponible

en: <https://bestpractice.bmj.com/topics/en-gb/187>

Fitzcharles MA, Ste-Marie PA, Goldenberg DL, Pereira JX, Abbey S, Choinière M, Ko G, Moulin DE, Panopalis P, Proulx J, Shir Y, and the National Fibromyalgia Guideline Advisory Panel. 2012 Canadian Guidelines for the diagnosis and management of Fibromyalgia syndrome: Executive summary. *Pain Management*. 2013 May-Jun; 18 (3): 119-126. Disponible

en: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3673928/>

Stewart M, Loftus S. Sticks and Stones: The Impact of Language in Musculoskeletal Rehabilitation. *Journal of Orthopaedic & Sports Physical Therapy*. 2018, 48 (7), 519-522.

Disponible en: <https://www.jospt.org/doi/10.2519/jospt.2018.0610>



Addendum to the Course Guide of the Subject

Due to the exceptional situation caused by the health crisis of the COVID-19 and taking into account the security measures related to the development of the educational activity in the Higher Education Institution teaching area, the following changes have been made in the guide of the subject to ensure that Students achieve their learning outcomes of the Subject.

Situation 1: Teaching without limited capacity (when the number of enrolled students is lower than the allowed capacity in classroom, according to the security measures taken).

In this case, no changes are made in the guide of the subject.

Situation 2: Teaching with limited capacity (when the number of enrolled students is higher than the allowed capacity in classroom, according to the security measures taken).

In this case, the following changes are made:

1. Educational Activities of Onsite Work:

All the foreseen activities to be developed in the classroom as indicated in this field of the guide of the subject will be made through a simultaneous teaching method combining onsite teaching in the classroom and synchronous online teaching. Students will be able to attend classes onsite or to attend them online through the telematic tools provided by the university (videoconferences). In any case, students who attend classes onsite and who attend them by videoconference will rotate periodically.

In the particular case of this subject, these videoconferences will be made through:

☒ Microsoft Teams

☐ Kaltura



Situation 3: Confinement due to a new State of Alarm.

In this case, the following changes are made:

1. Educational Activities of Onsite Work:

All the foreseen activities to be developed in the classroom as indicated in this field of the guide of the subject, as well as the group and personalized tutoring, will be done with the telematic tools provided by the University, through:

☒ Microsoft Teams

☐ Kaltura

Explanation about the practical sessions:



2. System for Assessing the Acquisition of the competences and Assessment System

ONSITE WORK

Regarding the Assessment Tools:

☒ The Assessment Tools will not be modified. If onsite assessment is not possible, it will be done online through the UCVnet Campus.

☐ The following changes will be made to adapt the subject's assessment to the online teaching.

Course guide		Adaptation	
Assessment tool	Allocated percentage	Description of the suggested changes	Platform to be used

The other Assessment Tools will not be modified with regards to what is indicated in the Course Guide.

Comments to the Assessment System: