Universitat Autònoma de Barcelona

2023/2024

Instrumental Assessment in Physiotherapy of the Locomotor System

Code: 102984
ECTS Credits: 6

Degree	Type	Year	Semester
2500892 Physiotherapy	OB	2	1

Contact

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Teaching groups languages

You can check it through this link. To consult the language you will need to enter the CODE of the subject.
Please note that this information is provisional until 30 November 2023.

Teachers

Jordi Cuartero Archs

External teachers

Josep Padros Valls

Prerequisites

It is recommended to have acquired basic knowledge and competences of Human Anatomy I and II, Biological Bases of the Human Body, as well as Function of the Human Body.

Objectives and Contextualisation

This subject intends to give the student the necessary knowledge for the evaluation of the patient with pathology of the locomotor system, as well as of the nervous system, based on the indispensable criteria that describe the need to evaluate to be able to plan a treatment physiotherapist This subject will be carried out simultaneously with the subjects of Physiotherapy in Neurology I, Pathological Clinical Concepts. Diagnostic Techniques, Clinical Evaluation in Locomotor System Physiotherapy, Therapeutic Techniques in Locomotor System Physiotherapy, Physiotherapy in Locomotor System Pathology I, and Medico-Surgical Pathology, necessary and very useful knowledge to give the patient a quality Healthcare and an optimal return to functionality.
-Demonstrate the importance of monitoring and instrumentation to plan patient treatments.
-To adequately evaluate the different ailments of the patients.
-Determine the evolutionary changes or involved of the patients in relation to certain treatments.

Competences

- Act with ethical responsibility and respect for fundamental rights and duties, diversity and democratic values.
- Analyse and synthesise.
- Apply quality-assurance mechanisms in physiotherapy practice, in accordance with the recognised and validated criteria.
- Display critical reasoning skills.
- Display knowledge of the morphology, physiology, pathology and conduct of both healthy and sick people, in the natural and social environment.
- Display knowledge of the physiotherapy methods, procedures and interventions in clinical therapeutics.
- Evaluate the functional state of the patient, considering the physical, psychological and social aspects.
- Express ideas fluently, coherently and correctly, both orally and in writing.
- Integrate, through clinical experience, the ethical and professional values, knowledge, skills and attitudes of physiotherapy, in order to resolve specific clinical cases in the hospital and non-hospital environments, and primary and community care.
- Make a physiotherapy diagnosis applying internationally recognised norms and validation instruments.
- Make changes to methods and processes in the area of knowledge in order to provide innovative responses to society's needs and demands.
- Make the most correct decisions in given situations.
- Organise and plan.
- Participate in drawing up physiotherapy protocols on the basis of scientific evidence, and promote professional activities that facilitate physiotherapy research.
- Solve problems.
- Take account of social, economic and environmental impacts when operating within one's own area of knowledge.
- Take sex- or gender-based inequalities into consideration when operating within one's own area of knowledge.

Learning Outcomes

1. Analyse a situation and identify its points for improvement.
2. Analyse and synthesise.
3. Apply physiotherapy methods, procedures and interventions in the different clinical specialisations that treat conditions of the musculoskeletal system.
4. Apply specific physiotherapy methods to promote a healthy lifestyle, in relation to the musculoskeletal system, through health education.
5. Communicate using language that is not sexist.
6. Consider how gender stereotypes and roles impinge on the exercise of the profession.
7. Critically analyse the principles, values and procedures that govern the exercise of the profession.
8. Describe and analyse human movement.
9. Describe and analyse the evidence-based physiotherapy protocols for disorders of the musculoskeletal system.
10. Describe and apply advanced evaluation procedures in physiotherapy in order to determine the degree of damage to the musculoskeletal system and possible functional repercussions.
11. Describe clinical practice guidelines applied to disorders of the musculoskeletal system.
12. Display critical reasoning skills.
13. Establish diagnostic physiotherapy hypotheses through clinical cases with disorders of the musculoskeletal system.
14. Express ideas fluently, coherently and correctly, both orally and in writing.
15. Identify situations in which a change or improvement is needed.
16. Identify the physiological and structural changes that may occur as a result of physiotherapy intervention in disorders of the musculoskeletal system.
17. Identify the principal forms of sex- or gender-based inequality present in society.

18. Identify the social, economic and environmental implications of academic and professional activities within one?s own area of knowledge.
19. Locate the different muscles through surface palpation.
20. Make the most correct decisions in given situations.
21. Organise and plan.
22. Propose new methods or well-founded alternative solutions.
23. Propose new ways to measure success or failure when implementing innovative proposals or ideas.
24. Solve problems.
25. Use physiotherapy to treat clinical cases involving musculoskeletal system conditions.
26. Weigh up the impact of any long- or short-term difficulty, harm or discrimination that could be caused to certain persons or groups by the actions or projects.
27. Weigh up the risks and opportunities of suggestions for improvement: one's own and those of others.

Content

1 - Measure and evaluation. What and why

- Observational methodology
- Observation vs. Experimentation

2 - Deficiency, disability and handicap

- ICIDH model
- CIF model

3 - General exploration:

1. Modulating factors and biotypology

- Intrinsic
- Extrinsic
- Physiological
- Psychological
- Pathological modulating factors

4 - Exploration of lesions of the nervous roots by neurological level:

- Upper extremity
- Trunk
- Lower extremity

5 - Introduction muscular balance (Goniometry and Oxford Scale)

- Measuring
- variables
- Interferences in measure
- Measurement systems
- New conception of the muscle

6- Joint Balance and Balance of the Trunk and the Head (Goniometry and Oxford Scale)

- Measuring variables
- Measurement systems
- Special tests

7- Stance and balance

- Posture analysis
- Characteristics and main evaluation systems
- Functional ladders

8- Normal human walking

- Biomechanics of the normal march
- Analysis of the personal employer
- Muscle dysfunction and walking
- Functional ladders

9- Communication with the patient as an instrumental tool

- Contents of the communication
- Variables and interferences in communication
- Expectations and beliefs
- Legibility

10- General evaluation of spinal cord injury and brain damage. Validated scales

11- Specific techniques of functional evaluation:

- Daily cleansing activities. Validated scales
- Upper Tip Validated scales
- Lower extremity Validated scales

12- Kinematic, kinetic, electromyographic analysis and pressure map. Interpretation of results.

13 - Evaluation of technical aids:

a. Support products

a.1. Upper limbs

a.2. Lower limbs

a.3.Trunk

14 -Assessment of the perception of health and quality of life. Validated scales

Methodology

The methodology is based on theory (master classes) and practice.

Laboratory hours are mandatory. You must have at least 80% attendance to pass the course.

Annotation: Within the schedule set by the centre or degree programme, 15 minutes of one class will be reserved for students to evaluate their lecturers and their courses or modules through questionnaires.

Activities

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Theory	30	1.2	3, 4, 8, 10, 13, 16, 19, 25
laboratory practice	15	0.6	3, 4, 8, 10, 11, 13, 16, 19, 25
Type: Autonomous			
PREPARATION OF WRITTEN WORKS	31.5	1.26	2, 9, 14, 21
READING ARTICLES /REPORTS OF INTEREST	40	1.6	2, 9, 14, 21
Self Study	30	1.2	2, 9, 14, 21

Assessment

Sngle assessment

This subject does not provide the single assessment system

The evaluation of the subject covers the following sections:

30% of the final mark will be written test:

- Multiple choice. 60 questions at 1 mark per question. Errors subtract 0.33 points. 70% of the questions must be answered.

In this test there will be questions from the master classes and the topics covered in the practice sessions.

30% of the final mark will be clinical case resolution (2 cases):

- Determine examinations to be performed in each clinical case. Demonstrate suitability of scales administered for each case.

20% of the final grade will be in relation to a video recording in relation to the practical exploration classes making contributions to Campus Virtual UAB

-20% of the final grade will be assignments assigned in class in relation to the syllabus (1/3). It will be determined during the development of the subject:

-Commentary of an article

-Oral/written dissertation on a subject covered in class

- Commentary on clinical cases

NOTE: To pass the subject you must have a grade higher than 5. This grade is the average of the three assessments, each of which must have a score of 15 to be able to make an average.

If a part is suspended, it is not necessary to take a summary test of everything, but only of the suspended part. This part of the subject will only be eligible for a 5 in the synthesis test.

Art 116.8. When it is considered that the student has not been able to provide sufficient evaluation evidence in the report, this subject will be recorded as non-evaluable

Students who have not passed the course through continuous assessment may sit a final exam or a final make-up test.

The evaluation of the subject includes the following sections:

30% of the final grade will be a written test:

- Multiple Choice. 60 questions at 1 point per question. Errors subtract 0.33 points. At least 70% of the questions

30% of the final grade will be clinical case resolution (2 cases):

- Determine examinations to be performed in each clinical case. Demonstrate suitability of scales administered for each case.

20% of the final grade will be in relation to a video recording in relation to the practical exploration classes making contributions to the UAB Virtual Campus

- 20% of the final mark will be of works entrusted to class in relation to the syllabus (1/3):

-Comment on an article

-Oral / written dissertation on a topic addressed in class

-Commentary of clinical cases

NOTE: To pass the subject you must obtain a grade higher than 5. This grade will result from the average of the three tests. For them to average, they must be approved with at least 5 each part. If a part of the subject is not passed, it is not necessary to take the synthesis test of the whole subject, but only of the suspended part. This part of the subject can only be chosen for a 5 if it is passed.

This subject/module does not provide for the single assessment system.

Art 116.8. When it is considered that the student has not been able to provide sufficient evidence of evaluation in the report, this subject will be recorded as non-evaluable.

Students who have not passed the assessment by means of continuous assessment may take a final exam or a final resit test.

Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Narrative records	20 %	1	0.04	7, 2, 1, 3, 4, 5, 8, 9, 10, 11, 13, 14, 16, 18, 17, 15, 19, 21, 27, 20, 22, 23, 12, 25, 24, 6, 26
Oral Assessment :structured test	20 %	0.5	0.02	7, 2, 1, 3, 4, 5, 8, 9, 10, 11, 13, 14, 16, 18, 17, 15, 19, 21, 27, 20, 22, 23, 12, 25, 24, 6, 26
Written avaluation:objective tests	60 %	2	0.08	7, 2, 1, 3, 4, 5, 8, 9, 10, 11, 13, 14, 16, 18, 17, 15, 19, 21, 27, 20, 22, 23, 12, 25, 24, 6, 26

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Software

No specific software is required.