

**COURSE DATA****DATA SUBJECT****Code:** 44639**Name:** Advances in Physiotherapy Assessment and Intervention for Cardiorespiratory Patients**Cycle:** Master's Degree**ECTS Credits:** 6**Academic year:** 2025-26**STUDY (S)**

Degree	Center	Acad. year	Period
2220 - Master's Degree in Functional Recovery in Physiotherapy	Facultat de Fisioteràpia	1	Second quarter

SUBJECT-MATTER

Degree	Subject-matter	Character
2220 - Master's Degree in Functional Recovery in Physiotherapy	Developments in physiotherapeutic assessment and intervention in patients with cardiorespiratory con	ELECTIVES

COORDINATION

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SUMMARY

This subject deals with those aspects of physiotherapy assessment of cardio-respiratory patient, as a starting point in the planning and monitoring of their functional recovery. Moreover, are included the general and specific aspects of preventive and therapeutic physiotherapy intervention focused on physical exercise.

PREVIOUS KNOWLEDGE**RELATIONSHIP TO OTHER SUBJECTS OF THE SAME DEGREE**

There are no specified enrollment restrictions with other subjects of the curriculum.

OTHER REQUIREMENTS**COMPETENCES / LEARNING OUTCOMES**



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Apply acquired knowledge and develop the ability to solve problems in new or unfamiliar environments within broader or multidisciplinary contexts related to physiotherapy techniques across different levels of healthcare, specifically in the physical treatment of complex pathologies and injuries requiring a higher level of specialization.

Be able to correctly apply the various evidence-based methodologies available in the treatment of the pathologies and injuries in question

Be able to integrate knowledge and address the complexity of making judgments based on incomplete or limited information, including reflections on the social and ethical responsibilities linked to the application of their knowledge and judgments, while planning a comprehensive approach to patient care.

Being able to obtain and select specific information and relevant sources for problem-solving, strategy development and action plans, advising and implementing different physiotherapy interventions in the areas of functional recovery.

Deepening Knowledge of Clinical Assessment Methods and Systems in Functional Recovery

Delve into specific physiotherapy treatment approaches tailored to the unique characteristics of each pathology.

Develop the ability to effectively communicate to patients the importance of health and healthy lifestyles in primary and secondary prevention, as well as in improving specific pathologies and injuries.

Students should apply acquired knowledge to solve problems in unfamiliar contexts within their field of study, including multidisciplinary scenarios.

Students should be able to integrate knowledge and address the complexity of making informed judgments based on incomplete or limited information, including reflections on the social and ethical responsibilities associated with the application of their knowledge and judgments.

Students should demonstrate self-directed learning skills for continued academic growth.

Students should possess and understand foundational knowledge that enables original thinking and research in the field.

DESCRIPTION OF CONTENTS

1. Comprehensive physiotherapy assessment in the cardiorespiratory patient.

1.1. Basic semiology of cardiovascular and respiratory systems: physiotherapeutic approach.

1.2. Clinical cases development in order to learn about: Pulmonary auscultation; Assessment of ventilatory mechanics; and Tests of strength-endurance of the respiratory and peripheral muscles.

**2. General aspects of preventive and therapeutic physiotherapy intervention.**

- 2.1. Components of the comprehensive approach: role of the physiotherapist and scientific evidence of respiratory and cardiac rehabilitation.
- 2.2. Exercise stress tests: modalities, purpose, indications and contraindications, etc.
- 2.3. Prescription of therapeutic physical exercise.

3. Specific aspects of physiotherapy intervention: programmed physical exercise.

- 3.1. Bases and programming the strength training.
- 3.2. Bases and programming the endurance training.
- 3.3. Issues of perception and adherence to treatment.

WORKLOAD**PRESENCIAL ACTIVITIES**

Activity	Hours
Theory	12,00
Laboratory	24,00
Total hours	36,00

NON PRESENCIAL ACTIVITIES

Activity	Hours
Attendance at other activities	0,00
Individual or group project	24,00
Independent study and work	80,00
Preparation of lessons	0,00
Preparation for assessment activities	0,00
Resolution of case studies	10,00
Total hours	114,00

TEACHING METHODOLOGY

- Theoretical-practical classes.
- Individual work consisting of the resolution of a clinical case.
- Individual and/or group tutorials to resolve doubts about the content treated in the subject and the programmed individual activity.
- Autonomous work by the student.

**EVALUATION**

Evaluation system	Percentage of qualifying
The individual response of a clinical case.	20%
Student participation and attendance in the classroom.	30%
Written final test to asses both the conceptual and procedural aspects related to assessment, planning and intervention on the cardiorespiratory patient functional recovery.	50%

The final grade of the subject will be the weighted sum of the marks obtained in each evaluation test, as long as the student has obtained at least 50% of the maximum mark in each of the tests: individual activity (clinical case), participation-attendance in class and written final test.

Class attendance is compulsory and is part of the course evaluation. In this sense, a minimum attendance of 80% of the course hours is required to receive the highest grade in this evaluation category. Likewise, except for reasons of force majeure accredited to the master's degree management, a minimum attendance of 50% of the course hours is required to pass this part of the evaluation. Because face-to-face classes are non-recoverable, failing to attend 50% of the hours of the subject means it is impossible to pass the subject in either of the two calls.

REFERENCES

- American Thoracic Society/European Respiratory Society. ATS/ERS Statement on respiratory muscle testing. *Am J Respir Crit Care Med*. 2002 Aug 15;166(4):518–624. doi: 10.1164/rccm.166.4.518
- Gómez Garrido A, coordinadora. *Rehabilitación respiratoria (SORECAR)*. Madrid: Editorial Médica Panamericana; 2025. ISBN: 9788491190208.



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- Herrero-Cortina B, et al. European Respiratory Society statement on airway clearance techniques in adults with bronchiectasis. *Eur Respir J*. 2023 Jul 20;62(1):2202053. doi: 10.1183/13993003.02053-2022
- Herrero-Cortina B. Reliability and validity of computerised adventitious respiratory sounds in people with bronchiectasis. *J Clin Med*. 2022 Dec 19;11(24):7509. doi: 10.3390/jcm11247509
- Jesús Seco Calvo. *Sistema cardiovascular: métodos, fisioterapia clínica y afecciones para fisioterapeutas*. Madrid: Editorial Médica Panamericana; 2018. ISBN: 9788491138434.
- Jesús Seco Calvo, director. *Sistema respiratorio: métodos, fisioterapia clínica y afecciones para fisioterapeutas*. Madrid: Editorial Médica Panamericana; 2018. ISBN: 9788491138441.
- Jones A, et al. Interventions for improving adherence to airway clearance treatment and exercise in people with cystic fibrosis. *Cochrane Database Syst Rev*. 2023 Jul 18;7(7):CD013610. doi: 10.1002/14651858.CD013610.pub2.
- Kim Y, et al. The coming era of a new auscultation system for analyzing respiratory sounds. *BMC Pulm Med*. 2022 Mar 31;22(1):119. doi: 10.1186/s12890-022-01903-1
- Mercado Rus M. *Manual de fisioterapia respiratoria*. 2ª ed. Madrid: Ed. Ergon; 2002. ISBN: 9788478694148.
- Peroy Badal R, Torres Castro R, Maganto García A. *Fisioterapia respiratoria y cardiaca. De la teoría a la práctica*. Madrid: Fuden; 2021. ISBN: 9788418377055.
- Reyhler G, Roeseler J, Delguste P. *Kinésithérapie respiratoire*. Madrid: Editorial Elsevier Masson; 2009. ISBN: 9788445813528.

Likewise, the books, scientific articles and readings of interest recommended for the preparation of the contents addressed in each topic will be specified at the end of each class.