Physiotherapeutic Treatment of the Thorax

Code: 102973
ECTS Credits: 6

2024/2025

Degree	Type	Year
2500892 Physiotherapy	OT	4

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Teachers

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Teaching groups languages

You can view this information at the end of this document.

Prerequisites

To acquire knowledge of cardiorespiratory anatomy and physiology, to be able to analyze the different cardiopulmonary pathologies, and so choose the appropriate treatment.

To know the basics of the main techniques of respiratory physiotherapy.

Objectives and Contextualisation

Most recently, medical progress in preventive and therapeutic areas has favoured the increasing survival rate of patients suffering from cardiac and respiratory problems. At the same time, the advances in the field of respiratory and cardiac physiotherapy have made these specialties essential tools in the treatment of this type of patients, with a substantial improvement in their quality of life.

This course intends to incorporate more theoretical and practical knowledge in the field of cardiorespiratory physiotherapy, with the aim of carrying out a suitable therapeutic and/or preventive assessment of the patient, whether adult or child, acute or chronic, always from the viewpoint of scientific evidence and good clinical practice.

The students will be able to extend their practical abilities and their decision-making capacity when facing different pathologies, respiratory and / or cardiac and others that can derive to such type of complications, to be able to make a correct assessment of the patient, to establish the therapeutic objectives, apply the appropriate treatments and evaluate the results.

The physiotherapeutic techniques, both manual and mechanical, will be reviewed to improve the ventilation and bronchial hygiene of the patient with respiratory difficulties, depending on the pathology and the objective of the treatment, and will deepen in the knowledge of re-training the effort capability of the cardiorespiratory-ill patient.

Competences

- Act with ethical responsibility and respect for fundamental rights and duties, diversity and democratic values.
- Design the physiotherapy intervention plan in accordance with the criteria of appropriateness, validity and efficiency.
- 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.
- 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 changes to methods and processes in the area of knowledge in order to provide innovative responses to society's needs and demands.
- Show sensitivity to environmental issues.
- Solve problems.
- Take sex- or gender-based inequalities into consideration when operating within one's own area of knowledge.
- Work in teams.

Learning Outcomes

1. Analyse a situation and identify its points for improvement.
2. Apply the specific methods and techniques for chest diseases.
3. Communicate using language that is not sexist.
4. Consider how gender stereotypes and roles impinge on the exercise of the profession.
5. Critically analyse the principles, values and procedures that govern the exercise of the profession.
6. Define general and specific objectives for physiotherapy treatment of chest pathologies.
7. Describe the circumstances that can influence priorities when using physiotherapy to treat chest pathologies.
8. Display critical reasoning skills.
9. Enumerate the different types of material and apparatus used in physiotherapy treatment of chest pathologies.
10. Enumerate the medico-surgical treatments, mainly in the area of physiotherapy and orthopaedics, that are used in chest diseases.
11. Explain in detail the physiopathology of chest diseases.
12. Explain the explicit or implicit code of practice of one's own area of knowledge.
13. Identify situations in which a change or improvement is needed.
14. Identify the principal forms of sex- or gender-based inequality present in society.
15. Propose new methods or well-founded alternative solutions.
16. Propose new ways to measure success or failure when implementing innovative proposals or ideas.
17. Show sensitivity to environmental issues.

18. Solve problems.
19. Use physiotherapy to treat clinical cases involving chest pathologies.
20. 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.
21. Weigh up the risks and opportunities of suggestions for improvement: one's own and those of others.
22. Work in teams.

Content

CONTENT

The content of theorical lectures

1. Anatomic and physiological review of Ventilation. (A. Mayer)
2. In-depth study of respiratory physiotherapy techniques. (A. Mayer, S. Spiliopoulou)
3. Manual therapy of the Thorax. (J. Casimiro)
4. Respiratory physiotherapy in restrictive illness. (S. Spiliopoulou A. Mayer)
5. Respiratory physiotherapy in traumatic chest pathology (A. Mayer)
6. Pre-surgery and post-surgery physiotherapy in pulmonary surgery. (A. Mayer)
7. Respiratory physiotherapy in cardiac pathology and effort retraining programs (A. Mayer)
8. Respiratory physiotherapy in abdominal surgery (S. S. Spiliopoulou)
9. Paediatric respiratory physiotherapy. (S. S. Spiliopoulou)
10. Theory and practice of non-invasive mechanical ventilation. (I. Castillo)
11. *Initiation to mechanical ventilation of the patient in ICU and physiotherapist treatment of the patient in critical condition. (S.S. Spiliopoulou)*

Seminars

-Review and knowledge deepening of respiratory physiotherapy techniques and cases simulation.

-Knowledge improvement of technical aids.

-Resolution of theoretical and real clinical cases.

The Content of supervised lectures:

-Under the supervision of the teacher, the students will practice the techniques explained in the lectures.

-Tutorials arranged with the teacher, individual or in team.

Activities and Methodology

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
CLINICAL CASE SEMINARS	4	0.16	
LABORATORY PRACTICES	16.3	0.65	
THEORY	20.2	0.81	
Type: Supervised			

TUTORIALS	10	0.4
Type: Autonomous		
PREPARATION OF WRITTEN WORKS	30	1.2
SELF-STUDY	62	2.48

The subject is distributed in theoretical and practical lectures.

DIRECTED TEACHING TYPOLOGIES: 27% = 40.5 HOURS

Theory (master lectures; TE typology). Scheduled sessions (1h or 2h per session).

Laboratory practices (PLAB typology). Scheduled sessions: 5 (2 hours per session) and 5 (1 hour per session). They are held in a classroom that is qualified for clinical practice within a scheduled timetable. They are aimed at the acquisition of clinical skills

Clinical case seminars (SCC, PCLI typology, also include problem-based learning activities (ABP)).. Scheduled sessions: 2 sessions of 2 hours, 1 session of 1.5 hours. The students, in small groups, will discuss standard clinical cases, under the supervision of a tutor.

SUPERVISED TEACHING TYPOLOGIES: 20% = 30 HOURS

TUTORIALS

The tutorials will not be counted as face-to-face hours, but they can be programmed and done individually or in groups, in the professors' office, in teaching locations or using ICTs, and the student shall be informed about the teachers schedule for students' attention.

AUTONOMOUS WORK: 48% = 72 hours

Comprehensive reading of texts and articles, study and realization of diagrams, summarizing and conceptual assimilation of the contents. Preparation of presentations and deliveries.

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.

Assessment

Continous Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Oral assessment of written works	25%	2.5	0.1	19, 3, 6, 17, 7, 9, 10, 11, 12, 14, 21, 15, 16, 8, 18, 22, 4
Practical evaluations with simulations and oral evaluations	35%	3	0.12	5, 1, 19, 2, 3, 6, 17, 7, 9, 13, 15, 16, 8, 18, 22
Written evaluation: Objective tests with multiple choice questions and essay tests of extensive questions	40%	2	0.08	19, 6, 7, 9, 12, 14, 13, 8, 18, 22, 4, 20

The written test will consist in two parts:

- 1ªpart: Question test exam, with four possible answers, only one of them correct. The correct answers will score 1,00 points and the wrong ones -0'25 points. The result will be quantified by 10 and will represent 25% of the final mark.

- 2ªpart: To develop a case study. It will be quantified over 10 and will represent 15% of the final mark.

Practical evaluation: The student must demonstrate its practical abilities when confronted with a specific pathology. It will represent 35% of the final mark.

The written works, individual or team works, will be proposed throughout the course, and will have to be accompanied by a presentation. It will represent 25% of the final mark.

80% minimum practice attendance is mandatory. This requisite is compulsory to pass the course.

When it is considered that the student has not been able to provide sufficient evidences of evaluation in the act, this subject will be assigned as non-evaluable.

The Erasmus students will be evaluated in same way as the other students.

The student who passes the recovery examination, will obtain a pass in that part regardless of the grade obtained.

This subject does not provide for the single evaluation system.

Bibliography

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During the course, more bibliography of interest will be provided.

Software

No specific software required

Language list

Name	Group	Language	Semester	Turn
(PLAB) Practical laboratories	301	Catalan	second semester	afternoon
(SCC) Clinical case seminars	301	Catalan	second semester	afternoon
(TE) Theory	301	Catalan	second semester	afternoon