

**COURSE DATA****Data Subject**

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| Code | 33010 |
| Name | Pathology and therapeutic focus on cardiovascular and pulmonary systems |
| Cycle | Grade |
| ECTS Credits | 6.0 |
| Academic year | 2022 - 2023 |

Study (s)

| Degree | Center | Acad. Period |
|--------------------------------|--------------------------|---------------------|
| 1202 - Degree in Physiotherapy | Faculty of Physiotherapy | 2 Second term |

Subject-matter

| Degree | Subject-matter | Character |
|--------------------------------|---|------------------|
| 1202 - Degree in Physiotherapy | 7 - Medical conditions and surgical conditions and their treatments | Basic Training |

Coordination

| Name | Department |
|----------------------|---------------------|
| ARJONA TINAUT, LAURA | 191 - Physiotherapy |
| FERRUS CLARI, CLARA | 191 - Physiotherapy |

SUMMARY

- Physiopathology of the different diseases of the respiratory and cardiovascular systems.
- Clinical manifestations of the different diseases of the respiratory and cardiovascular systems.
- Medical and surgical treatment of the different diseases of the respiratory and cardiovascular systems
- Recognition and assessment of the symptoms of the diseases of the respiratory and cardiovascular systems.
- Recognition of the stage of the respiratory or cardiovascular disease.



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 (RD 1393/2007) // LEARNING OUTCOMES (RD 822/2021)

1202 - Degree in Physiotherapy

- Students must have acquired knowledge and understanding in a specific field of study, on the basis of general secondary education and at a level that includes mainly knowledge drawn from advanced textbooks, but also some cutting-edge knowledge in their field of study.
- Students must be able to apply their knowledge to their work or vocation in a professional manner and have acquired the competences required for the preparation and defence of arguments and for problem solving in their field of study.
- Students must have the ability to gather and interpret relevant data (usually in their field of study) to make judgements that take relevant social, scientific or ethical issues into consideration.
- Students must be able to communicate information, ideas, problems and solutions to both expert and lay audiences.
- Students must have developed the learning skills needed to undertake further study with a high degree of autonomy.
- Know and understand people's morphology, physiology, pathology and behaviour under health and sickness in the natural and social environments
- Recognise vital risk situations and be able to execute basic and advanced life support manoeuvres.
- Respect fundamental rights and equality between men and women.
- Recognise diversity, multiculturalism, democratic values and peace culture.
- Work in teams.
- Have the ability to organise and plan work.
- Know the general aspects of the endogenous and exogenous aetiology pathology of the locomotor, respiratory, cardiovascular and nervous systems.
- Know the structural, physiologic and functional changes that occur as a consequence of physiotherapy intervention.
- Know how to recognise and assess the symptoms of the diseases.
- Recognise the evolution momentum of the learnt diseases.



- Know the diverse medical and surgical treatments of the studied diseases.
- Promote the participation of the users and their families in the recovering process.

LEARNING OUTCOMES (RD 1393/2007) // NO CONTENT (RD 822/2021)

The student will know the characteristic features of the pathology of the respiratory and cardiovascular systems, the time course of the same and medical and surgical treatments applied in each case.

DESCRIPTION OF CONTENTS

1. RESPIRATORY PATHOLOGY

1. Introduction: Ventilation and breathing. Chest wall and lung organ. Procedures and drugs.
- 2 .- Sleep Apnea Syndrome: Concept, pathophysiology, diagnosis and management.
- 3 .- Respiratory in neuromuscular disorders: Definition, pathophysiology, pathogenesis, diagnosis and management.
- 4 .- Chronic Obstructive Disease: Definition, pathogenesis, diagnosis and management in the stable phase and during exacerbations. Prevention, drugs, oxygen therapy and noninvasive ventilation. Bronchiectasis: pathogenesis, diagnosis and management
- 5 .- Bronchial asthma: Definition, pathophysiology, pathogenesis, diagnosis and management. Bronchospasm mediated by exercise. Concept, pathophysiology, pathogenesis, diagnosis and management
- 6 .- Bronchiectasis: Concepts, pathophysiology, pathogenesis, diagnosis and management. Mucoviscidosis: Concept, pathophysiology, pathogenesis, diagnosis and management.
- 7 .- Pneumonia and lung abscess: Definition, pathophysiology, pathogenesis, diagnosis and management
- 8 .- pleural effusion, empyema and pneumothorax: Concept, pathophysiology, pathogenesis, diagnosis and management
- 9 .- Lung Cancer: Definition, epidemiology, pathogenesis, diagnosis and management
- 10 .- Pleural Tumors: Definition, epidemiology, pathogenesis, diagnosis and management



2. HEART PATHOLOGY

- 1: Anatomy and physiologic heart. Or systemic circulation and pulmonary circulation.
- 2: cardiac rhythm disturbances
- 3: Hypertension
- 4: Cardiac Vascular disorders
- 5: Heart Failure
- 6: acute cardiocirculatory failure: study of shock.
- 7: Endocarditis. Myocarditis. pericarditis

3. Peripheral angiopathy

- 1: Blood Pathology
- 2: peripheral arterial disease
- 3: Pathology of the venous system

4. OTHERS

1. Covid-19

5. PRACTICAL PROGRAM

- 1 .- History-oriented for physiotherapists in respiratory disease.
- 2 .- Physical examination-oriented for physiotherapists in respiratory disease.
- 3 .- basic lung function.
- 4 .- Chest Radiology Basics
- 5 .- History-oriented for physiotherapists, cardiocirculatory pathology
- 6 .- Physical examination-oriented for physiotherapists, cardiocirculatory pathology
- 7 .- Functional evaluation and resting heart rate during exercise



WORKLOAD

| ACTIVITY | Hours | % To be attended |
|--------------------------------------|---------------|------------------|
| Theory classes | 40,00 | 100 |
| Classroom practices | 20,00 | 100 |
| Study and independent work | 11,00 | 0 |
| Preparation of evaluation activities | 34,00 | 0 |
| Preparing lectures | 45,00 | 0 |
| TOTAL | 150,00 | |

TEACHING METHODOLOGY

The contents of the lectures will be worked through participatory lecture.

In the practical classes will review the practical aspects of some of the basic procedures on respiratory disease and cardiovascular diseases.

“The teaching program may be modified during the development of the course if the teacher under teacher quality criteria and assimilation of knowledge by the student, it deems appropriate”.

EVALUATION

6. 1. Theoretical and practical programme

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|--------------------------------|---|-------------|
| Objective multiple choice test | <ul style="list-style-type: none"> ▷ 50 questions ▷ 4 options with 1 correct answer ▷ $GRADE = [successes - (failures/n^{\circ} options - 1)] \times$ (highest score/number of questions) | 100% |
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REFERENCES

Basic

- Mason RJ, Broaddus VC, Martin TR, King TE, Schraufnagel DE, Murray JE, Nadel JA. Murray & Nadel's Textbook of respiratory Medicine. 5 th Edition. Saunders Elsevier, 2010.
- West JB. Respiratory Physiology: the Essentials. 8th Ed. Lippincott Williams & Wilkins, 2008
- Bach JB. Management of patients with neuromuscular disease. Hanley & Belfus, 2004
- Fraser R, Muller N, Colman N, Pare P. Fraser and Pares diagnosis of diseases of the Chest. Saunders, 1999
- Giménez M., Servera E., Vergara P. Prevención y rehabilitación en patología respiratoria crónica. Panamericana, 2004.
- Libby P, Bonow RO, Zipes DP, Mann DL. Braunwald's Heart Disease. 8 th Ed. Elsevier, 2009
- Fuster V, Alexander RV, O'Rourke RA. Hurts The Heart. 11th Ed. Mc Graw Hill, 2004

Additional

- Sociedad Española de Cardiología. En línea. <http://www.secardiologia.es/>
- Sociedad Española de Neumología y Cirugía Torácica (SEPAR). En línea. <http://www.separ.es/>