

25654 - Physiotherapy in Pneumology and Cardiology

Syllabus Information

Academic year: 2023/24

Subject: 25654 - Physiotherapy in Pneumology and Cardiology

Faculty / School: 127 - Facultad de Ciencias de la Salud

Degree: 605 - Degree in Physiotherapy

ECTS: 6.0

Year: 3

Semester: Second semester

Subject type: Compulsory

Module:

1. General information

1.1. Context and meaning of the subject in the degree program

"Physiotherapy in Pulmonology and Cardiology" is a basic subject of the second semester of the third year in which it is addressed how to integrate the contents developed in the subject "Physiotherapy Methods in Respiratory and Cardiovascular Processes" in different clinical situations.

This subject is related to some previously taught subjects: Human Anatomy I and II, Human Physiology, Assessment and Diagnosis in Physiotherapy I and II, General Pathology in Physiotherapy, Medical and Surgical Conditions, General Intervention Procedures in Physiotherapy I and II and Physiotherapy Methods in Respiratory and Cardiovascular Processes.

The subject is designed for the student to integrate the scientific physiotherapeutic process of clinical reasoning learning to implement treatment programs for cardiac or pneumologic pathology. Prevention strategies, implementation of therapeutic exercise and development of adherence to healthy habits will be key within the scope of physiotherapy.

1.2. Relationship to the Sustainable Development Goals (SDGs)

The approach of the subject and its proactive vision is very much aligned and in line with the SDGs of the 2030 Agenda of United Nations (<https://www.un.org/sustainabledevelopment/es/>). In a transversal and implicit way almost all are present in the subject but we emphasize some of special relevance in such a way that the acquisition of the learning results of the subject provides training and competence to contribute to some extent to its achievement.

- **Objective 1: End poverty in all its forms throughout the world.** The social and economic component is a risk factor in the development of many heart and respiratory pathologies. The subject analyses these risk factors in relation to poverty.
- **Objective 3: To ensure healthy living and promote wellness for all at all ages.** Factors such as diet, physical activity, sedentary lifestyle and hobbies largely define primary prevention for many pathologies. Likewise, only by means of a therapeutic exercise program we will achieve improvement in many heart and respiratory pathologies. The subject will encourage the physiotherapist to be a dynamic agent of this healthy life to their patients and themselves.

2. Learning results

2.1. Competencies

The general competencies covered in this subject are:

CG03 - To know and understand the methods, procedures and physiotherapeutic actions, aimed both at the actual therapy to be applied to the clinic for the re-education or functional recovery, as well as at the realization of activities aimed at the promotion and maintenance of health.

CG05 - Assess the patient's functional status, considering physical, psychological and social aspects.

CG06 - Perform a diagnostic assessment of physiotherapy care according to standards and validation tools internationally recognized.

CG07 - Design the physiotherapy intervention plan according to adequacy, validity and efficiency criteria.

CG08 - Execute, direct and coordinate the Physiotherapy intervention plan, using the proper therapeutic tools and taking into account the individuality of the user

CG09 - Evaluate the evolution of the results obtained with the treatment in relation to the objectives set.

CG10 - Prepare the discharge report of patients in Physiotherapy once the proposed objectives have been met.

CG11 - Provide effective physiotherapy care, providing comprehensive assistance to patients.

CG17 - Understand the importance of updating the knowledge, skills, abilities and attitudes that make up the professional competencies of the physiotherapist.

CG19 - Communicate effectively and clearly, both orally and in writing, with users of the health care system as well as with other professionals.

The specific competencies covered in this subject are:

CE09 - To know the physiological and structural changes that can occur as a result of the application of physiotherapy.

CE12 - To identify the changes produced as a consequence of physiotherapy intervention.

CE17 - To know and apply the theoretical bases and the development of physiotherapeutic methods and procedures.

CE18 - To have the ability to assess from a physiotherapy perspective, the functional status of the patient/user, considering their physical, psychological and social aspects.

CE19 - To understand and apply the manual and instrumental methods and procedures of assessment in Physical Therapy and Physical Rehabilitation, as well as the scientific evaluation of their usefulness and effectiveness.

CE23 - To identify the most appropriate physiotherapeutic treatment in the different processes of alteration, prevention and health promotion, as well as in the processes of growth and development.

CE24 - To identify the patient's/user's situation through a physiotherapy care diagnosis, planning the interventions and evaluating their effectiveness in a cooperative work with other health science professionals.

CE25 - To know and apply good clinical practice guidelines.

CE31 -To analyse, program and apply movement as a therapeutic measure, promoting the participation of the patient/user in their process.

CE37 -To know and apply the quality mechanisms in the practice of physiotherapy, adjusting to the criteria, indicators and quality standards recognized and validated for the adequate professional practice.

The transversal competencies that are worked on in this subject are:

CT01 - Ability to apply critical reasoning.

CT02 - Capacity for analysis and synthesis.

CT03 - Ability to assume ethical commitment.

CT04 - Ability to recognize diversity and multiculturalism.

CT05 - Ability to work based on quality criteria.

CT06 - Ability to develop creativity.

CT07 - Ability to develop initiatives and entrepreneurial spirit.

CT09 - Ability to plan and evaluate.

CT10 - Ability to adequately use computer media and new technologies.

CT12 - Ability to develop information management skills.

CT13 - Capacity for criticism and self-criticism.

2.2. Learning Results

In order to pass this subject, the students shall demonstrate they has acquired the following results:

1. Explains, reasons and understands the concept and theoretical basis of clinical reasoning of physiotherapy in pulmonology and cardiology.
2. Establishes the physiotherapy diagnosis through anamnesis, physical examination, functional evaluation and complementary tests in pulmonology and cardiology.
3. Is able to perform and interpret complementary functional tests in pulmonology and cardiology.
4. Describes and prescribes a physical therapy intervention plan in pulmonology and cardiology according to scientific evidence.

3. Syllabus**Respiratory physiotherapy**

Physiotherapy intervention process in patients with obstructive pathology (COPD).

Physiotherapy intervention process in patients with restrictive pathology.

Physiotherapy intervention process in paediatric respiratory patients.

Physiotherapy intervention process in patients with respiratory pathology risk factors.

Process of physiotherapy intervention in patients with thoracic surgery

Therapeutic exercise in respiratory pathology.

Complementary tests in pulmonology.

FBAO intervention techniques.

Cardiovascular physiotherapy

Process of physiotherapy intervention in patients with acute myocardial infarction, coronary artery disease and coronary revascularization surgery.

Physiotherapy intervention process in patients with cardiac conditions: heart failure, cardiac transplants, valve replacements.

Physiotherapy intervention process in patients with peripheral arterial disease and vascular amputations.

Physiotherapy intervention process in patients with cardiovascular risk factors.

Therapeutic exercise in cardiovascular pathology.

Complementary tests in cardiology.

Basic CPR with AED.

4. Academic activities

Participative master classes (10 hours).

In them the student must understand and assimilate the information presented by the teacher, participatory models will be established with the student on the content presented. These classes will be face-to-face.

Practical laboratory classes (45 hours).

They will be carried out in 4 groups. In this practices, students focus their learning primarily on integrating the technical content in the context of a clinical reasoning model. Students are arranged in pairs where one of them pretends to be patient and the other a physiotherapist and put into practice the therapeutic methods and clinical reasoning explained.

Seminars on problem solving and case studies (5 hours).

They will be carried out in 2 groups. Real clinical cases are presented where the patient explains their pathology. An exposition, analysis and discussion of these clinical cases and actions considering the evidence shown in the clinical guidelines is established.

Personal and group work of the student (90 hours).

90 hours have been assigned for the work that the student must develop to pass the subject, including: study hours, training of skills and abilities, clinical reasoning and tutorials.

The student will also have to develop a real or virtual clinical case in group on physiotherapeutic intervention in pulmonology and cardiology.

5. Assessment system

The evaluation system will be as follows:

- Theoretical exam 50%
- Practical evaluations 30%
- Presentation and defence of the clinical case 20%

The student must demonstrate achievement of the intended learning results through the following assessment activities:

- Theoretical examination. Completion of an objective test on all the content of the subject (theory, practices, problems, and cases). The grade for this test will account for 50% of the final grade. The basic formula for objective tests will be applied. $\text{Test grade} = \frac{\text{right answers}}{\text{errors} + n - 1}$.
- Practices evaluation. There will be a practical exam on the skills and clinical reasoning developed in the laboratory practices. The participation and involvement in the practices of the subject will also be continuously evaluated. The grade of the practical exam will account for 20% of the final grade and the continuous evaluation of the practices will account for 10% of the final grade. In order to take the practical exam it is necessary to attend 80% of the practices.
- Elaboration and defence of a simulated clinical case (pulmonology or cardiology) including the whole method of physiotherapy intervention. The sections of the clinical case will be:

1. Introduction, identification of the study problem and description of the pathology and clinic.
2. Case description.
3. Initial assessment.
4. Physiotherapeutic diagnosis.
5. Therapeutic objectives.
6. Intervention.
7. Discussion.

The work will be group work and the presentation will be 20 minutes per group plus 5 minutes for questions.

The final grade for the subject will be the average of all partial grades. In order to average the grades it is necessary to have a minimum of 4.5 out of 10 in each part separately.

For those students who have not attended 80% of the practical classes, there will be a written exam on a clinical case to evaluate the practical part of the subject. For students who do not pass the presentation of the clinical case, cannot attend the exams for a justified cause foreseen in the regulations; the exam will be through the resolution of a clinical case individually.

The evaluation tests will be carried out in the face-to-face mode. In case of special conditions, and if instructions are received from the academic authorities, the tests will be conducted in a non-face-to-face mode using the online resources of the University of Zaragoza. This will be notified in advance.