Universidad Zaragoza

Year : 2019/20

26710 - Pysical diagnostic and therapeutic procedures I

Syllabus Information

Academic Year: 2019/20
Subject: 26710 - Pysical diagnostic and therapeutic procedures I
Faculty / School: 104 -
229 -

Degree: 304 - Degree in Medicine
305 - Degree in Medicine

ECTS: 6.0
Year: 305 - Degree in Medicine: 2
304 - Degree in Medicine: 2

Semester: First semester
Subject Type: Compulsory
Module: ---

1.General information

1.1.Aims of the course

1.2.Context and importance of this course in the degree

1.3.Recommendations to take this course

2.Learning goals

2.1.Competences

2.2.Learning goals

2.3.Importance of learning goals

3.Assessment (1st and 2nd call)

3.1.Assessment tasks (description of tasks, marking system and assessment criteria)

4.Methodology, learning tasks, syllabus and resources

4.1.Methodological overview

The methodology followed in this course is oriented towards the achievement of learning objectives.

The programmed activities include lectures, seminars, practical workshops, works in group and public presentation of them, and practice sessions at the hospital medical services related to concepts explained during the course.

Most of the classroom materials will be available via Moodle.

All the complementary information will be given to the students on the first day of class, during the presentation of the subject.

4.2.Learning tasks

This is a 6 ECTS course which includes the following learning tasks:

- **Lectures** (33 sessions) Whole group sessions of 50 minutes each one. The professor will explain the theoretical

contents, which are mostly available in advance on the virtual platform Moddle

- **Seminars** (7 sessions) Small groups sessions of 90-120 minutes each one.
- **Practical sessions** (4 sessions) in hospital
- **Assignments** (1) In small groups, students will prepare an work and will do an oral presentation.
- **Intermediate evaluation sessions** (3)
- **Autonomous work and study**: time devoted to study the course contents and prepare the sessions and assignments.

4.3.Syllabus

The course will address the following topics:

- Section 1:
    - Topic 1. PHYSICAL BASIS OF THE USE OF IONIZING RADIATIONS IN MEDICINE
        - Ionizing radiations.
        - Radiotherapy.
        - Radiodiagnosis.
        - Nuclear medicine.
    - Topic 2. PHYSICAL BASIS OF THE USE OF NON IONIZING RADIATIONS IN MEDICINE
        - Ultrasounds.
        - Magnetic resonance.
    - Topic 3. RADIATION PROTECTION
        - Risks of ionizing radiations. Radioprotection.
        - Basic criteria for Radiation Protection in Hospitals.
        - Monitoring and control methods.
    - RADIOTHERAPY
        - Biological Bases of Radiation Therapy.
    - Treatment techniques.
        - NUCLEAR MEDICINE
            - Diagnostic aspects of Nuclear Medicine.
            - Therapeutic aspects of Nuclear Medicine.
- Section 2.
    - Topic 4: RADIOLOGICAL ANATOMY. SEMIOLOGY
        - Radiological anatomy of the Brain and Spine.
        - Radiological anatomy of the eye and the ear.
        - Radiological anatomy of nasal and paranasal sinuses, larynx and pharynx.
        - Radiological anatomy of the tórax. Bronchial endoscopy
        - Radiological anatomy of the digestive tract (Esophagus, stomach and duodenum,small intestine and colon).
        - Radiological anatomy of the liver, spleen, biliary tract and pancreas.
        - Anatomy of the peritoneum and retroperitoneum.
        - Anatomy of the male urinary and genital apparatus.
        - Anatomy of the female urinary and genital apparatus.
- Section 3.
    - Topic 5: PHYSICAL MEDICINE AND REHABILITATION
        - Concept. Competences.
        - Impairment, disability, handicap, dependency.
        - Diagnostic systems in rehabilitation
        - Human movement: Motor Control. Biomechanical Bases of the normal and pathological movement. Evaluation of movement.
        - Analysis of posture, balance and gait.
        - Therapeutic exercise I: Prevention and treatment of disease through exercise. Benefits and risks of physical exercise. Medical assessment prior to prescription exercise.
        - Therapeutic exercise II: Evaluation of aerobic capacity and aerobic exercise prescription. Evaluation of force muscle and exercise prescription to improve it.
        - Main physical means in physical medicine and rehabilitation.
        - Common and general syndromes that can act on the physical medicine and rehabilitation:

pathology of immobilization.

4.4.Course planning and calendar

Practice sessions: Each student is assigned four weeks of practice sessions. Three of them will be dedicated to workshops and activities of radiological protection, radiological anatomy and rehabilitation. One week will be dedicated to activities in the University Hospitals Lozano Blesa and Miguel Servet, in the various medical services related to the subjects taught.

Tutorials: After requesting appointment through the electronic mail of the chosen professor

Further information concerning the timetable, classroom, office hours, assessment dates, evaluation dates, and other details regarding this course will be provided on the first day of class or please refer to the " Facultad de Medicina" website and the Degree website (http://medicina.unizar.es, http://medicina.unizar.es/horarios/, http://moodle2.unizar.es)

4.5.Bibliography and recommended resources

http://psfunizar7.unizar.es/br13/eBuscar.php?tipo=a