

## 25619 - Specific intervention methods in physiotherapy III

### Syllabus Information

**Academic Year:** 2019/20

**Subject:** 25619 - Specific intervention methods in physiotherapy III

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

**Degree:** 275 - Degree in Physiotherapy

**ECTS:** 6.0

**Year:** 3

**Semester:** First Four-month period

**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 learning process designed for this course is:

Learning activity		Hours/ student	Hours/student/week
Master class		12.5	1
Seminars, practical class y activities for evaluation		47.5	3
Non face-to-face activities		90	

#### 4.2.Learning tasks

The course includes the following learning tasks:

- 1.1. Theoretical class /master class: using powerpoint (ppt) as methodological support.
- 1.2. Seminars: using ppt, a practical-theoretical demonstration is made for each one of the methods and techniques viewed in this course.

- 1.3. Practical class: After a progressive practical demonstration of the technique or method of neurological treatment, the student repeats the demonstration done.
- 1.4. Clinical case: With the help of bibliography, students individually or in small groups develop a physiotherapeutic intervention plan on a key topic
- 1.5. Mandatory or recommended bibliography: completes the personal study of the course.

### 4.3.Syllabus

#### THEORETICAL LECTURES

- Lesson1. **Neuroplasticity** (2 hours). How the brain reorganises after a stroke. How medulla reorganises after a partial or total lesion. Necessary conditions for efficient plasticity. Abnormal postural tone and movement.
- Lesson 2. Motor Control (4 hours).Neurophysiological principles of motor control.
- Lesson 3. **Human movement in lesions of the central nervous system.** (4 hours)

Motor control disorders and strategies to cope.

- Lesson 4. Neurodevelopment treatment (Bobath Concept) (1 hour). Current theory. Basis of evaluation and treatment according to Bobath Concept.
- Lesson 5. **Cognitive therapeutic exercise** (0.5 hours).Neurophysiological principles. Hypothesis. Selections and design of tools and sessions using Perfetti method.
- Lesson 6. **Proprioceptive Neuromuscular Facilitation** (0.5 hour). Neurophysiological principles. Mechanism and techniques.
- Lesson 7. **Clinical neurodynamics** (0.5 hour). General neurodynamics. Assessment and mobilisation of neural structures.
- Lesson 8. Neurorehabilitation technology (1 hour).

#### SEMINARS

- Seminar 1. **Treatment of balance perturbations** (6 hours). Notions about posture. Dizziness and balance perturbations. Reeducation of peripheral dizziness.
- ~~Seminar 2. **Swallowing disturbances** (3.5 hours). Description of swallowing problems. Physical treatment of dysphagia.~~
- Seminar 2. **Bodyweight support treadmill** for incomplete medullar lesions. (2 hours)
- ~~Seminar 3. **Motor control** (1 hour).~~
- Seminar 3. **Mirror therapy** (2 hours).
- Seminar 4. **Dual-task and Neurocognitive problems** (2.5 hours).
- **Seminar 5. Pediatric neuro physiotherapy** (5 hours).

#### PRACTICAL LECTURES

- Session 1. **How to transfer a neurological patient. Specific bed and chair position** (4 hours).
- Session 2. **Human movement analysis for evaluating and treating a neurological patient.** (8 hours)
- Session 3. **NDT-Bobath Concept** (8 hours). Alingment of key points. Postural adjustments in the trunk. Limb treatment. Walking.
- Session 4. **Cognitive therapeutic exercise** (2 hours). Sets of equipment and design of exercises of different degrees of difficulty.
- Session 5. **Proprioceptive Neuromuscular Facilitation** (6 hours). Diagonal PNF patterns and joints. Techniques. Transferences.
- Session6.**Clinical neurodynamics** (2 hours). Specific assessment, clinical reasoning, and treatment.
- ~~Session 7. **Dry needling** (2 hours). Trigger point treatment to reduce tone and pain.~~
- ~~Session 8. **Neuromuscular** bandage. Applied to modulate muscular tone (2 hours)~~

### 4.4.Course planning and calendar

### 4.5.Bibliography and recommended resources