

## 26774 - Respiratory Apparatus and Nervous System

### Información del Plan Docente

Academic Year	2016/17
Academic center	104 - Facultad de Medicina
Degree	304 - Degree in Medicine
ECTS	9.0
Course	4
Period	First semester
Subject Type	Compulsory
Module	---

### 1. Basic info

#### 1.1. Recommendations to take this course

#### 1.2. Activities and key dates for the course

### 2. Initiation

#### 2.1. Learning outcomes that define the subject

#### 2.2. Introduction

### 3. Context and competences

#### 3.1. Goals

#### 3.2. Context and meaning of the subject in the degree

#### 3.3. Competences

#### 3.4. Importance of learning outcomes

### 4. Evaluation

### 5. Activities and resources

#### 5.1. General methodological presentation

#### 5.2. Learning activities

#### 5.3. Program

Neurosurgery Program

## 26774 - Respiratory Apparatus and Nervous System

Chapter 1. Pediatric Neurosurgery: Craniosynostosis. Chiari Malformations. Dandy -Walker Malformation. Aqueductal stenosis. Spinal Dysraphism.

Chapter 2.- Hydrocephalus: Classification. Clinical Features. Diagnostic. Treatment. Normal pressure hydrocephalus.

Chapter 3.- Cranial Trauma. Epidemiology. Etiology. Pathology (primary and secondary injury). Management and emergency Neurosurgical Intervention.

Chapter 4.- Cranial Trauma: Traumatic intracranial hemorrhages. Skull fractures. Cerebrospinal Fluid Fistulae. Sequelae.

Chapter 5.- Brain tumors: Incidence and Outcomes. Location and Types. Genetics. Symptoms. Workup. Treatment.

Chapter 6.- Glial tumors. Embryonal Tumors. Meningeal tumors. Germ cell tumors. Sellar Tumors. Metastases. Cysts.

Chapter 7.- Aneurysms. Arteriovenous malformations. Surgical management of spontaneous intracerebral Hemorrhage.

Chapter 8.- Acute spinal cord injury: cauda equina syndrome. Indications and contraindications for urgent spine surgery. Initial management of acute spinal cord injury. Ischemic spinal cord injury. Anterior spinal artery syndrome. Craniovertebral measurements. Fracture and dislocation.

Chapter 9.- Spinal cord tumors: extradural. Intradural extramedullary. Intramedullary. Spinal AVMs. Syringomyelia.

Chapter 10 .- Degenerative spine disease: disc herniation. Spinal stenosis. Spondylolisthesis. Lateral recess syndrome. Spondylolisthesis. Surgical Treatment options.

### Workshop Seminars of Neurosurgery

- Management of Traumatic Brain and Spine Injury.
- Diagnosis and Management of Central Nervous System tumors.
- Emergencies in Neurosurgery.
- Management of Degenerative Spine Disease Patients

### Neurology Program

Unit 1. Pathophysiology of the Central Nervous System

Unit 2. Cerebrovascular Diseases: concept, classification, pathogenesis and clinical manifestations

## 26774 - Respiratory Apparatus and Nervous System

Unit 3. Diagnosis, treatment and prevention of stroke.

Unit 4. Hypokinetic Syndromes: Parkinson's disease

Unit 5. Hyperkinetic Syndromes.

Unit 6. Alzheimer's disease and other dementias.

Unit 7. Demyelinating diseases.

Unit 8. Epilepsias

Unit 9. Spinocerebellar syndromes and motor neuron diseases

Unit 10. Diseases of peripheral nerves.

Unit 11. Diseases of the autonomic nervous system

Unit 12. Muscle and neuromuscular junction diseases

**Workshop Seminars of Neurology** : 4 seminars 2 h. Total 8 h.

- Loss of consciousness: assessment and differential diagnosis
- Dementias
- Migraines
- Sleep disorders

### **Tutorials**

Tutorials are personal or attending classes, requesting day and time with the chosen, or telematics, developed exclusively for the teacher / care business hours (8 to 15h) teacher. group tutorials we will also have to be carried out by teachers in charge of Seminars and Workshops

## **RESPIRATORY PROGRAMM**

### **Classroom teaching**

#### **1. LARGE GROUPS**

The program is divided into 30 theoretical lessons that must take place in 25 h., distributed in a logical and sequential manner with their medico-surgical contents semi-embedded and grouped into 10 blocks. Each block is listed next with the corresponded name and number of hours:

- Block A. It corresponds to the "pulmonary syndromes" and includes four lessons that referred to the most significant ones of the subject.

- Blocks B, C, D and H are concerned respectively with four of the most common respiratory pathologies: "infectious" (four lessons), "obstructive (three lessons),"interstitial"(five lessons) and"vascular"(two lessons)."

## 26774 - Respiratory Apparatus and Nervous System

- Block E allows the student to know the general characteristics of thoracic surgery and the basic concepts of the lung transplant (one lesson).
  - Block F (two lessons) addresses in a semi-embedded manner the "pulmonary tumors".
  - Block G (four M lessons and one C lesson) deals with "pleural pathology".
  - Block I (two lessons) is about of the "traumatological thoracic pathology" and
  - Block J (two lessons), deals with the "pathology of the mediastinum and diaphragm"
- The subjects taught through lectures, include the following:

### **A. PULMONARY SYNDROMES . (2 hours)**

1. Respiratory failure. Diagnosis and treatment (M).
2. Adult respiratory distress syndrome (M).
3. Sleep apnea/hypopnea syndrome (M).
4. Obesity-hypoventilation syndrome (M).

### **B. RESPIRATORY INCTIOUS PATHOLOGY. (4 hours)**

5. Acute bronchitis (M).
6. Pneumonia. Lung abscess (M).
7. Pulmonary tuberculosis. Other mycobacteriopathies (M).
8. Pulmonary Mycosis (M).

### **C. OBSTRUCTIVE PULMONARY DISEASES (4 hours)**

9. Chronic obstructive pulmonary disease (M)

## 26774 - Respiratory Apparatus and Nervous System

10. Asthma (M)

11. Bronchiectasis. Adults cystic pulmonary fibrosis (M)

### **D. INTERSTITIAL PULMONARY DISEASES** (2 hours)

12. Diagnostic strategies among diffuse pulmonary diseases (M).

13. Occupational and environmental disorders (M).

14. Extrinsic allergic alveolitis (M):

15. Idiopathic interstitial lung diseases. Idiopathic pulmonary fibrosis (M).

16. Respiratory involvement in systemic diseases. Sarcoidosis (M).

### **E. THORACIC SURGERY** (1 hour)

17. General principles of thoracic surgery. Lung transplant (C).

### **F. NEOPLASM OF THE LUNGS** (3 hours).

18. Lung cancer. Benign tumors of the lungs (M).

19. Lung cancer surgical treatment approach (C, 1 hour)

### **G. PLEURAL DISORDERS** (3 hours) + 1 h.

20. Diagnostic approach in pleural disorders (M).

21. Infectious pleural effusions (M).

22. Malignant pleural effusions (M).

23. Other non-infectious non-malignant pleural effusions (M)

## 26774 - Respiratory Apparatus and Nervous System

24. Pneumothorax. Surgical treatment of empyema (C).

### **H. PULMONARY VASCULAR DISORDERS** (2 hours)

25. Pulmonary hypertension (M)

26. Pulmonary thromboembolic disease: pulmonary emboli (M).

### **I. THORACIC TRAUMATISM** (2 hours)

27. Close thoracic trauma (C).

28. Open thoracic trauma (C).

### **J. DISORDERS OF THE MEDIASTINUM AND DIAPHRAGM** (2 hours)

29. Mediastinitis and neoplasm of the mediastinum (C).

30. Diaphragmatic hernias and eventrations

## **2. SMALL GROUPS.**

### **Seminars**

- Seminars are related to topics of general medical and surgical program, and are based on clinical cases and they will be displayed through computer presentations with active participation of the student

- Each seminar will be held in groups of approximately 20 students. Your schedule and distribution will be shown in advance on bulletin boards at the departments of medicine and/or surgery.

- The topics are as follows:

1. Person in contact with a tuberculous patient (M)

## 26774 - Respiratory Apparatus and Nervous System

2. Patient with pneumonia (M)
3. Patient with COPD and patient with asthma (M)
4. Patient with lung cancer (M and C) (2 seminars).
5. Suspected pulmonary thromboembolism (M)
6. Patient with suspected sleep apnea (M).
7. Thoracic drainage. Pulmonary resections (C).
8. Traumatized chest (C).

### **Workshops.**

- Workshops are eminently practical and where possible, developed partially with simulators as part of a "skills Lab". Each workshop will take place in groups of approximately 20 students, those who receive the seminars. Your schedule, order of presentation and distribution will appear in advance on bulletin boards of the departments of medicine and/or surgery. The issues to consider are as follows:

1. Spirometry. Other tests (M).
2. Arterial blood gas (M)
3. Oxygen therapy. Non-invasive mechanical ventilation (M)
4. Smoking (M)
5. Preoperative and postoperative management in thoracic surgery (C).
6. Specific complications in thoracic surgery (C).

### **Tutorials.**

Tutorials will be personal and face-to-face. The student will ask previously for date and time with the chosen teacher. Tutorials can also be telematics. All tutorials are done exclusively during teaching/care hours (8 to 15 h). We will also have tutoring groups to be carried out by the teacher in charge of the corresponding seminars and workshops.

## 26774 - Respiratory Apparatus and Nervous System

### 5.4.Planning and scheduling

### 5.5.Bibliography and recommended resources

#### BB

[Aparato respiratorio - cirugía] - Compendio de cirugía / H. Durán Sacristán ... [et al.] . [1ª ed., 1ª reimp.] Madrid [etc.] : McGraw-Hill Interamericana, D.L. 2003

BB

[Aparato respiratorio - cirugía] - Principios de cirugía [10ª ed.] / editor en jefe, F. Charles Brunicardi ; editores asociados, Dana K. Andersen ... [et al.] ; traducción, Martha Elena Araiza Martínez, Rafael Blengio Pinto, José Luis González Hernández ; traductor de vídeos, Anahí Chong Hurtado. - 10ª ed. México ; Madrid [etc.] : McGraw-Hill Interamericana, cop. 2015

BB

[[Aparato respiratorio - cirugía]] - Tratado de cirugía : fundamentos biológicos de la práctica quirúrgica moderna / [editor] Courtney M. Townsend, Jr. ; [editores asociados] R. Daniel Beauchamp, B. Mark Evers, Kenneth L. Mattox . 18ª ed. Barcelona [etc.] : Elsevier, cop. 2009  
[Precede al título: Sabiston]

BB

[Aparato respiratorio - medicina] - Medicina interna [18ª ed.] / fundado por A. von Domarus ; continuado por P. Farreras Valentí ; director (desde 1968) C. Rozman ; subdirector (desde 2003), F. Cardellach López . - 18ª ed. Barcelona : Elsevier, 2016

BB

[Aparato respiratorio - medicina] - Principios de medicina interna [19ª ed.] / editores, Dennis L. Kasper... [et al.]. - 19ª ed. México ; Madrid [etc.] : McGraw-Hill, cop. 2016

BB

[Sistema nervioso] - Greenberg, Mark S.. Handbook of neurosurgery / Mark S. Greenberg . 7th ed. New York : Thieme, 2010



## 26774 - Respiratory Apparatus and Nervous System

- BB** [Sistema nervioso] - Houston Merrit H..  
Tratado de neurología. - 2010
- BB** [Sistema nervioso] - Mezzadri, Juan José.  
Introducción a la neurocirugía / Juan José  
Mezzadri, Javier Goland, Mariano  
Socolovsky . 2ª ed. Buenos Aires : Journal,  
cop. 2011
- BB** [Sistema nervioso] - Netter, Frank H..  
Frank H. Netter. Parte 2, Trastornos  
neurológicos y neuromusculares /  
dirección H. Royden Jones , Jr.; dirección  
editorial Regina V. Dingle. [1a ed.,reimp.]  
Barcelona [etc.] : Masson, 1999 imp.
- BB** [Sistema nervioso] - Tsmentzis, Sotirios A.  
Diagnóstico diferencial en neurología y  
neurocirugía: Manual para el clínico.  
Elsevier, 2002
- BB** [Sistema nervioso] - Vaquero Crespo,  
Jesús. Patología quirúrgica del sistema  
nervioso / Jesús Vaquero Crespo . Madrid  
: Centro de Estudios Ramón Areces, D.L.  
2006
- BB** [Sistema nervioso] - Yáñez Lermada,  
Alfredo. Neurología fundamental / Alfredo  
Yáñez Lermada . Santiago ; Buenos  
Aires : Mediterráneo, cop. 2011
- BB** [Sistema nervioso] - Zarranz, Juan José.  
Neurología / Juan J. Zarranz . 5ª ed.  
Ámsterdam ; Barcelona ; Madrid [etc.] :  
Elsevier, D.L. 2013
- BC** [[Aparato respiratorio - medicina]] -  
Diagnóstico de las enfermedades del tórax  
/ R.S. [i.e. G] Fraser ... [et al.] . 4ª ed.  
Buenos Aires : Editorial Médica  
Panamericana, imp. 2002
- BC** [[Aparato respiratorio - medicina]] -  
Textbook of respiratory medicine / editors,  
John F. Murray, Jay A. Nadel ; associate  
editors, Robert J. Mason, Homer A.  
Boushey . 3rd ed. Philadelphia : W.B.  
Saunders Company, cop. 2000

## 26774 - Respiratory Apparatus and Nervous System

Manual de patología médico-quirúrgica del sistema nervioso. Prensas universitarias. 2014