

Academic Year/course: 2022/23

## 26785 - Basic Principles of Anesthesia and Resuscitation. Urgent Care for Critical Patients

### Syllabus Information

**Academic Year:** 2022/23

**Subject:** 26785 - Basic Principles of Anesthesia and Resuscitation. Urgent Care for Critical Patients

**Faculty / School:** 104 - Facultad de Medicina

**Degree:** 304 - Degree in Medicine

**ECTS:** 4.0

**Year:** 5

**Semester:** First semester

**Subject Type:** Optional

**Module:**

### 1. General information

### 2. Learning goals

### 3. Assessment (1st and 2nd call)

### 4. Methodology, learning tasks, syllabus and resources

#### 4.1. Methodological overview

The methodology followed in this course is oriented towards the achievement of the learning objectives. A wide range of teaching and learning tasks are implemented, such as

- Lectures will be lead following classical oral presentation for all students (27 hours)
- Practice sessions: the methodology follows is based on participate group students and it will be held in the research seminars in the morning (8 hours in four days) at the University of Medicine. And also workshops at the Miguel Servet Univesitary Hospital (Unidad de Formación) in the evening (4 p.m. to 8 p.m.).
- The workshops will be in small groups that we split according to the number of students.

#### 4.2. Learning tasks

The course 4 ECTS which includes the following learning tasks:

- Lectures
- Workshops

#### 4.3. Syllabus

The course will address the following topics.

Theory sessions:

- Topic 1. Subject presentation: introduction and History of Anaesthesiology
- Topic 2. Pharmacology I: inhalation anesthesia and nonopioid intravenous anesthetics
- Topic 3. Pharmacology II: opioids and muscle relaxants

- Topic 4. Evaluation of the patient and preoperative preparation. Preoperative medication
- Topic 5. Monitoring the anesthetized patient. Monitoring cardiac and respiratory function
- Topic 6. Anesthesia systems. Control of the respiration
- Topic 7. Postanesthesia Recovery. Management of postoperative period
- Topic 8. Anesthesia and electrolytes. Metabolism of sodium, potassium, chloride and acid-base balance
- Topic 9. Fluid replacement therapy. Colloids and crystalloids
- Topic 10. Outpatient Anaesthesia. Indications. Sedation
- Topic 11. Anesthetic complications. Latex allergy. Anaphylactic shock. Malignant Hyperthermia
- Topic 12. Cardiopulmonary resuscitation basic life support and advanced cardiac life support
- Topic 13. Management of the airway. Indications. Intubation in awake patient
- Topic 14. Syndrome of pulmonary aspiration. Anaesthetic management
- Topic 15. Enteral and parenteral nutrition
- Topic 16. Regional Anaesthesia. Epidural and spinal anaesthesia. Peripheral nerve blockade. Local anesthetics
- Topic 17. Management of acute postoperative pain. Chronic pain management. Treatment of cancer pain and terminal patient
- Topic 18. Pediatric Anaesthesia
- Topic 19. Anesthesia for General Surgery
- Topic 20. Anesthesia for Orthopedic and Trauma Surgery
- Topic 21. Anesthesia for Cardiac and Vascular Surgery
- Topic 22. Anesthesia for Genitourinary Surgery
- Topic 23. Anesthetic considerations by coexisting diseases
- Topic 24. Trauma patient management
- Topic 25. Anesthesia and Shock
- Topic 26. Anesthesia for organ transplantation. Organ donors. Brain death
- Topic 27. Critical Care Unit. Entrance indications. Diagnosis and treatment of complications
- Topic 28. Clinical cases of acute postoperative pain and chronic pain

#### Practice sessions:

- 1. Maintenance of a patent upper airway
- 2. Management of supraglottic device of ventilation
- 3. Management of airway and difficult airway
- 4. Channeling of venous peripheral lines
- 5. Placement of the nasogastric tube
- 6. Cardiopulmonary Resuscitation. Basic life support
- 7. Advanced cardiac life support
- 8. Treatment of complications in post-operative immediate
- 9. The trauma of patient management. Transport of patients
- 10. Monitoring respiratory function
- 11. Monitoring cardiac function
- 12. Monitoring neurologic
- 13. Assistance in the Critical Care Unit of the patient with cardiac pathology
- 14. Assistance in the Critical Care Unit of the patient with respiratory pathology
- 15. Assistance in the Critical Care Unit of the patient with renal pathology
- 16. Assistance in the Critical Care Unit of the patient with difficult airway
- 17. Criteria of discharge of the Critical Care Unit
- 18. Assessment of pharmacology of Pain

#### 4.4. Course planning and calendar

The lectures will be adapted to the academic calendar is its schedule of 10 a.m. To 11 a.m. For five weeks from 17th October 2022 to 28th November 2022.

The presentation of the autonomous work will be realised during the following week of theoretical lessons.

The practical lessons will consist of Two Workshops in the Miguel Servet University Hospital Training Unit in the schedule of 16 p.m. To 20 p.m. (The days will be agreed at the beginning of the course)

Global assessments: <https://medicina.unizar.es/quinto-curso#horario9>

#### 4.5. Bibliography and recommended resources

<http://psfunizar10.unizar.es/br13/egAsignaturas.php?codigo=26785>