

Medicine and Surgery Degree Course

Teaching: Emergency

Professor: Matteo Piattoli – matteo.piattoli@unicamillus.org
m.piattoli91@gmail.com
<https://www.unicamillus.org/personnel/piattoli-matteo/>

SDS: MED/41

Credits: 3

PREREQUISITES

There are no specific prerequisites or propaedeuticities. However, since this is a "cross-curricular" subject, it is desirable for students to have a good knowledge of systematic physiology and pathology and pharmacology, particularly with regard to the cardiovascular system, respiratory system, and pain pathways.

LEARNING OBJECTIVES

The teaching aims to convey the main concepts of Anesthesia, Resuscitation, Intensive Care and Pain Therapy with which the students will interface most often throughout their professional career, and will constitute one of the first moments in which they will need to combine concepts from multiple subjects for the purpose of integrated patient management.

Special emphasis will be placed on the recognition of major clinical deteriorating conditions, their initial stabilization, and cardiopulmonary resuscitation.

LEARNING OUTCOMES

Knowledge and understanding: Upon completion, students will be able to:

- Describe the main techniques and drugs used in anesthesia;
- Recognize the main signs/symptoms underlying life-threatening conditions and describe the most appropriate workup and the basics of immediate management;

- Describe the basics of evaluating, setting up and managing analgesic therapy;
- Perform basic cardiopulmonary resuscitation and take part in advanced-level management of cardiac arrest;
- Describe the basics of oxygen therapy and techniques of oxygen delivery;
- Describe the main aspects related to shock management and therapy monitoring;
- Know the main challenges related to major incident management and the necessary measures to take.

Knowledge application and understanding: The teaching aims to provide an integrated view of emergency-urgency pathology and of anesthesiologic/intensivist/antalgic management. Students will then be able to interface with specialists in the field by providing the relevant elements, actively participate in a cardiopulmonary resuscitation activity in basic and advanced modes, and provide their patients with the main concepts regarding anesthesia.

Communication abilities: Students will be able to actively participate in integrated patient management, providing necessary information in a timely manner and collaborating in the management itself. They will also have acquired basic knowledge and skills to communicate effectively with patients and/or their families.

Authonomy of judgment: Upon completion, students will have acquired sufficient knowledge and understanding to be able to make diagnosis and/or treatment in major emergency-urgency settings, and to request specialist consultations and appropriate instrumental or laboratory tests where required.

Learning abilities: Students will have the necessary tools to be able to further deepen their skills and knowledge, including through research of the scientific literature.

COURSE SYLLABUS

- Pharmacology in anesthesia: sedatives, analgesics, neuromuscular blocking agents;

- Main techniques in anesthesia, preoperative evaluation, post-operative monitoring. Anesthesia for the parturient, delivery labor analgesia;
- Basics of pain medicine;
- Cardiopulmonary resuscitation techniques: Basic and Advanced Life Support (American Heart Association guidelines);
- Clinical deterioration, shock, sepsis. Management of blood products and Patient Blood Management;
- Airway management;
- Oxygen therapy and mechanical ventilation, ARDS, blood gas analysis;
- Major trauma;
- Hemodynamic support: vasopressors and ExtraCorporeal Life Support;
- Main metabolic urgencies/emergencies;
- Death by neurological criteria;
- Effective communication;
- Vascular accesses;
- Major incidents.

COURSE STRUCTURE

The teaching consists of 30 total hours: part will consist of lectures, part of hands-on training on specific subjects related to the teaching. Lectures will also make use of slides and videos, and time will be spent on discussion of clinical cases.

Attendance is mandatory.

COURSE GRADE DETERMINATION

The exam will consist of two parts: a written exam and an oral exam. The written exam will consist of a single-answer multiple-choice written test on topics covered in class. Thirty questions will be asked in 45 minutes. The score will be given as follows: 1 point for each right answer, 0 points for no answer, -0.25 for wrong answer. A passing grade of 18/30 will be required to enter the oral test.

In the oral test, students will be given the opportunity to demonstrate their preparation by discussing the topics of the teaching, to reason about problems inherent in the subject demonstrating the ability to make connections and express themselves in an appropriate scientific language.

The final assessment will reflect the outcome of the written test and the oral examination as judged by the professor. The exam will be assessed overall according to the following criteria:

- 18-20: Barely sufficient knowledge and understanding with possible imperfections; analysis, synthesis and judgment autonomy are sufficient;
- 21-23: Ordinary knowledge and understanding of the subject; acceptable ability of analysis and synthesis, logical argumentation is coherent;
- 24-26: Fairly good knowledge and understanding of the subjects; good analysis and synthesis, argumentations are expressed with scientific rigour;
- 27-29: Overall good knowledge and understanding of the subjects; very good ability of analysis and synthesis. Good judgment autonomy;
- 30-30L: Outstanding knowledge and understanding of the subjects. Excellent ability of analysis and synthesis, conspicuous judgment autonomy. Argumentations are expressed in an original fashion.

OPTIONAL ACTIVITIES

An in-depth lecture will be scheduled, entitled “Main pediatric emergencies: assessment, recognition, stabilization”.

The professor will also be always available for any and all needs of clarification, through the usual means of contact.

READING MATERIALS

RECOMMENDED BOOKS/RESOURCES:

<https://cpr.heart.org/en/resuscitation-science/cpr-and-ecc-guidelines>

<https://www.asahq.org/standards-and-practice-parameters>

<https://www.sccm.org/SurvivingSepsisCampaign/Guidelines>

Stoelting's Pharmacology & Physiology in Anesthetic Practice – Pamela Flood et al., edited by Wolters Kluwer

Guyton and Hall Textbook of Medical Physiology (Guyton Physiology) 14th Edition – John E. Hall, Michael E. Hall, edited by Elsevier

FOR FURTHER INSIGHT (Optional):

Miller's Anesthesia 9th Edition - Michael A. Groppe et al., edited by Elsevier

Clinical Anesthesia, 8e – Paul G. Barash et al., edited by Wolters Kluwer

Major Incident Medical Management and Support: The Practical Approach at the Scene 3rd Edition – The Advanced Life Support Group, edited by BMJ Books

ATLS Advanced Trauma Life Support 10th Edition Student Course Manual - American College of Surgeons

The professor will provide all necessary notions during lesson time, and the slides. Further materials/resources may be provided, if needed or deemed appropriate.