

Degree programme	Type	Course
Medicine	OP	6

Contact lecturer

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Group languages

You can consult this information at the [end](#) of the document.

Prerequisites

It is necessary that the student has basic clinical knowledge of the medical and surgical pathology, and of the ger

Objectives

This is an optional subject linked to the mention of Medical Clinic, taught in the sixth year of the Degree in Medicine. The general objective is the knowledge of the basic pathophysiology of the critical patient and its application to th

Learning outcomes

1. Describe the organ and system involvement and forms of presentation of diseases of the respiratory, circulatory and digestive systems, blood and hematopoietic organs, nervous system, musculoskeletal system, genitourinary system, metabolism and endocrine system.
2. Assess the relationship between efficacy and risk in the main therapeutic interventions.

3. Identify serious clinical situations.
4. a complete physical examination general and the respiratory, circulatory and digestive systems, blood and hematopoietic organs, nervous system, musculoskeletal system, genitourinary system, metabolism and endocrine system.
5. Indicate the basic complementary examinations for interpreting the manifestations of the illness in the different organs and systems of the human body.
6. Distinguish situations that require hospitalisation and those that require intensive care.
7. Perform basic and advanced life support manoeuvres.
8. Categorise emergency situations in accordance with the available indices of seriousness.
9. Establish a diagnostic and therapeutic approach in emergencies.
10. Maintain and sharpen one's professional competence, in particular by independently learning new material and techniques and by focusing on quality.
11. Demonstrate, in professional activity, a perspective that is critical, creative and research-oriented.
12. Formulate hypotheses and compile and critically assess information for problem-solving, using the scientific method.
13. Identify the affectionation on organs and systems of diseases of the blood, cardiovascular system, respiratory system, digestive system, nervous system, renal system and musculoskeletal system.

Contents

1. Directed Learning Activities

Activity Title Duration

Lecture The Critically Ill Patient 2 h

Clinical Skills (PHCA). Oxygen Transport, Consumption and Extraction 1 h

Case-Based Learning (SCC). Blood Volume 1 h

Simulation-Based Case Resolution (PSCA). Hemodynamic Management 1 h

Simulation-Based Case Resolution (PSCA). Pulmonary Mechanics 1 h

Simulation-Based Case Resolution (PSCA). Gas Exchange 1 h

Case-Based Learning (SCC). Filtration, Reabsorption and Solute Excretion 1 h

Case-Based Learning (SCC). Regulation of Electrolyte Balance 1 h

Clinical Skills and Case-Based Learning (PHCA). Regulation of Acid-Base Balance 1 h

Case-Based Learning (SCC). The Critically Ill Patient with Severe Neurological Disease 1 h

Clinical Skills (PHCA). The Severely Injured Polytrauma Patient 1 h

Simulation-Based Case Resolution (PSCA). The Patient with Septic Shock 1 h

Case-Based Learning (SCC). The Critically Ill Hematology Patient 1 h

Clinical Skills and Case-Based Learning (PHCA). The Patient with Severe Abdominal Pathology 1 h

2. Supervised Clinical Practice (PCAh)

Clinical placement in the Intensive Care Medicine Department (ICU), including the General Intensive Care Unit and other specialised units according to the characteristics of each Intensive Care Medicine Department, such as the Cardiac Intensive Care Unit, the Emergency Medical Service (EMS), and other related units.

Learning activities and methodology

Title	Hours	ECTS	Learning outcomes
Advanced Clinical Skills Practices	4	0.16	
ASISTENCIAL CLINICAL PRACTICES (PCAh)	15	0.6	
PSCA	4	0.16	
SEMINAR OF CLINICAL CASES	5	0.2	
THEORY	2	0.08	
DEVELOPMENT OF WORKS, PERSONAL STUDY, READING OF ARTICLES / REPORTS OF INTEREST	38	1.52	

The general rules of the subject are described here. The final organization in terms of calendar, dates of examination and distribution

of groups is specified on the first day of class through the teachers of the subject.

General methodology:

- Estimated hours of the subject: 75 (3 ECTS)
- Directed (40%): 30 h
- Autonomous work (51%): 38 h. Bibliographic and documentary references. Realization of schemes and summaries.
- Evaluation (9%): 7 h. Work presentation and solving problems.

In the current exceptional circumstances, at the discretion of the teachers and also depending on the resources available and the public health situation, some of the theoretical classes, practicals and seminars organized by the Teaching Units may be taught either in person or virtually.

Annotation: within the schedule set by the centre or degree programme, 15 minutes of one class will be reserved for students to evaluate their lecturers and their courses or modules through questionnaires.

Assessment

Continuous assessment activities

Title	Weight	Hours	ECTS	Learning outcomes
Evaluation through case studies and problem solving	40%	3	0.12	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Written evaluation through objective tests	30%	2	0.08	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Continuous evaluation in practices. Assistance and active participation	30%	2	0.08	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13

For the final evaluation of the subject, the following will be taken into account:

1. Assessment of seminars and clinical skills sessions is carried out through a multiple-choice test based on the clinical cases discussed at the end of each class. For simulation sessions, assessment is based on students' attendance and active participation (30%).
2. Presentation of a clinical case related to the course content that students are likely to encounter during their clinical placements. The case must be submitted in an electronic format (40%).
3. Assessment of attendance at seminars (clinical skills and simulation sessions) and supervised hospital clinical placements (30%).

When it is considered that the student has not been able to provide sufficient evidence of evaluation in the record, this subject will be recorded as non-evaluable.

A recovery test will be scheduled for students who exceed the contents of the subject with a format to be determined.

This subject does not provide the single assessment system.

Assessment activities

In this course, the use of Artificial Intelligence (AI) technologies is permitted as an integral part of the development of the coursework, provided that the final outcome reflects a significant contribution from the student in terms of analysis and personal reflection. Students must clearly identify which parts have been generated using this technology, specify the tools used, and include a critical reflection on how these tools have influenced the process and the final outcome of the activity. Failure to disclose the use of AI will be considered a breach of academic integrity and may result in a penalty being applied to the grade of the activity, or further sanctions in serious cases.

Irregularities in assessment activities

The occurrence of any irregularity in an assessment activity (academic misconduct, plagiarism, or inappropriate use of AI that does not comply with the transparency and authorship requirements previously stated in this course guide) which may lead to a significant alteration of the final grade will result in the activity being graded as 0.

If the course guide establishes that achieving a minimum grade in this assessment activity is an essential requirement to pass the course, or if multiple irregularities occur in the assessment activities of the same course, the final grade for the course will be 0. Regardless of the above, disciplinary proceedings may be initiated against any student involved in any of these irregularities.

Bibliography

Bibliography

1. Barlett RH. Fisiopatologia en medicina intensiva. Ed. Masson, 1997
2. Rennke HG, Denker BM. Fisiopatologia renal. 5ª ed. Ed. Wolters Kluwer 2019.
3. Guyton CA. Tractat de Fisiologia Mèdica. 14 ed. Edit. Elsevier 2023.
4. Hall GB, Schmidt GA, Kress JP. Critical Care. 5th ed. Edit:Mc.Graw-Hill. 2021.
5. Manual de Medicina Intensiva Massachusetts General Hospital. 6ª ed. Ed. Wolters Kluwer. 2017.
6. Irwin an Rippe's Intensive Care Medicine. 9th edition. Ed. Wolterfs Kluwer. 2023.
7. European Trauma Course (ETC) - European Trauma Course Manual (7a edició, 2024).
<https://www.europeantraumacourse.com/on-line-resources>
8. European Resuscitation Council (ERC) Guidelines 2025.
https://www.erc.edu/science-research/guidelines/guidelines-2025/?utm_source=chatgpt.com

Software

- Use of the SimPad Plus during clinical simulation sessions with students divided into small groups. Each group progressively works through the management of a clinical case, including an initial briefing session and a final debriefing session to promote reflection and learning.
- Gamification methodology is incorporated into selected clinical skills sessions and seminars to enhance student engagement and learning.

Course groups and languages

The information provided is provisional until November 30. After this date, you will be able to consult the language of each group through this [link](#). To access the information, you will need to enter the course CODE