COURSE DATA

DATA SUBJECT

Code: 34472
Name: Casualties, medical emergencies and clinical toxicology
Cycle: Undergraduate Studies
ECTS Credits: 6
Academic year: 2025-26

STUDY (S)

Degree	Center	Acad. year	Period
1204 - Degree in Medicine	Facultat de Medicina i Odontologia	5	Second quarter

SUBJECT-MATTER

Degree	Subject-matter	Character
1204 - Degree in Medicine	Human clinical training I	COMPULSORY

COORDINATION

PALAU SAMPIO PATRICIA

BADENES QUILES RAFAEL

SUMMARY

The subject *Emergency, Medical Emergencies and Clinical Toxicology* is shared with the Departments of Medicine and Surgery and it is included in the module *Human Clinical Formation*. The general objective of its teaching is the formation of professionals with theoretical and practical knowledge that provides them skills to manage the patients in critical situations, with an integral, healing and preventive medicine that encourages health in any of the areas of the acute-serious illness.

Due to its attending nature, the processes involved in the pathogenesis of the acute and chronic diseases will be analysed and the criteria and diagnostic methods used, as well as the treatments indicated for each of the pathological situations, will be highlighted. As it is about acute and serious clinical symptoms, the knowledge and the main diagnostic techniques and the practical contents are of great importance in their learning, with particular reference to the clinical practice.

PREVIOUS KNOWLEDGE

RELATIONSHIP TO OTHER SUBJECTS OF THE SAME DEGREE

There are no specified enrollment restrictions with other subjects of the curriculum.

OTHER REQUIREMENTS

COMPETENCES / LEARNING OUTCOMES

1204 - Degree in Medicine

Acknowledge diversity and multiculturality.

Acquire properclinical experience in hospitals, health care centres and other health institutions, under supervision, as well as basic knowledge of clinical management focused on the patient and the correct use of tests, medicines and other resources available in the health care system.

Capacity for communicating with professional circles from other domains.

Consideration of ethics as a fundamental value in the professional practise.

Criticism and self-criticism skills.

Establish the diagnosis, prognosis and treatment, applying principles based on the bestinformation available and on conditions of clinical safety.

Have the capacity to make an initial diagnosis and establish a reasonable strategy of diagnosis.

Indicate the most accurate therapy in acute and chronic processes prevailing, as well as for terminally ill patients.

Keep and use medical records which contain information about the patient for later analysis, preserving the confidentiality of personal data.

Know how to use IT in clinical, therapeutic and preventive activities, and those of research.

Know how to use the sources of clinical and biomedical information available, and value them critically in order to obtain, organise, interpret and communicate scientific and sanitary information.

Knows how to carry out manoeuvres of basic and advanced life support.

Knows how to evaluate modifications in clinical parameters at different ages.

Knows how to perform a complete anamnesis, focused on the patient and orientated to various pathologies, interpreting its meaning.

Knows how to perform a physical examination of the body organs and systems, as well as a psychopathological exploration, interpreting their meanings.

Perform a physical examination and a mental health assessment.

Plan and propose appropriate preventive measures for each clinical situation.

Proper organisation and planning of the workload and timing in professional activities.

Recognise and address situations which may be life-threatening and others which demand immediate attention.

Recognises, diagnoses, and guides the management of vital risk situations.

Recognises, diagnoses and guides the management of intoxication.

Team-working skills and engaging with other people in the same line of work or different.

Working capacity to function in an international context.

DESCRIPTION OF CONTENTS

1. THEORETICAL TOPICS

AREA OF MEDICINE

1. The Hospital Emergency Department: concept, healthcare structure, diagnostic approach, and hospital triage in Medical Emergencies.
2. Acute dyspnea and global respiratory failure.
3. Acute heart failure, cardiogenic shock, and hypertensive emergencies.
4. Acute chest pain and acute coronary syndromes in the Emergency Department.
5. Cardiac arrhythmias and syncope in the Emergency Department.
6. Assessment of the patient with fever in the Medical Emergency Department.
7. Acute kidney injury.
8. Medical emergencies of the digestive system.
9. Neurological emergencies (I): headache, ischemic stroke, and non-traumatic cerebral hemorrhage.
10. Neurological emergencies (II): altered level of consciousness, seizures, and psychomotor agitation.
11. Acute decompensations of endocrine origin.
12. Emergencies related to environmental, chemical, and biological agents: acute intoxications and allergic reactions.

AREA OF SURGERY

1. Structural and functional elements in medical emergencies. Chain of survival: concept, structure, objectives, and methodology.
2. On-site healthcare. Characteristics of the Advanced Medical Post (AMP). Triage: concept, types, objectives, clinical usefulness, care prioritization, and resources.
3. Acute circulatory failure. Types of shock. Hypovolemic shock: etiology, diagnosis, types of hemodynamic monitoring, and fluid resuscitation with electrolyte solutions.
4. Sepsis and septic shock. Clinical guidelines from the Surviving Sepsis Campaign.
5. Acute hypoxemic respiratory failure: etiopathogenesis and pathophysiology.

6. Thoracic trauma and the drowning patient. Clinical assessment and medical management.
7. Principles of mechanical ventilation. Extracorporeal respiratory support systems.
8. Acute abdomen: concept, causes, assessment, therapeutic management, and abdominal compartment syndrome.
9. Polytraumatized patient: concept, diagnostic approach, prioritization, and medical management. Crush syndrome.
10. Traumatic brain injury. Management of intracranial hypertension.
11. Burn patient: concept, classification, clinical assessment, medical management, and carbon monoxide poisoning.

2. SEMINARS

AREA OF MEDICINE

1. Urgent management protocol for acute coronary syndromes.
2. The patient with decompensated liver cirrhosis.
3. Hospital triage.
4. Urgent management protocol for acute respiratory failure.
5. Coma and seizures: diagnosis and initial management.

AREA OF SURGERY

1. Emergent airway management: algorithms, rescue maneuvers, cricothyrotomy, and other techniques.
2. Prehospital triage.
3. Non-invasive ventilation.
4. Arterial blood gas analysis.
5. Urgent management protocols for polytrauma patients.

3. CLINICAL PRACTICES

They are carried out in healthcare services that manage these types of pathologies.

WORKLOAD

PRESENCIAL ACTIVITIES

Activity	Hours
Theory	26,00
Seminars	26,00
Laboratory	0,00
In-class tutorials	0,00
Clinical practice	23,00
Total hours	**75,00**

NON PRESENCIAL ACTIVITIES

Activity	Hours
Attendance at other activities	2,00
Individual or group project	11,00
Independent study and work	43,00
Preparation of lessons	19,00
Preparation for assessment activities	0,00
Resolution of case studies	0,00
Preparation of supplementary reports	0,00
Preparation of the internship report and evaluation of the internship	0,00
Total hours	**75,00**

TEACHING METHODOLOGY

-**In the theoretical classes**, the lecturer presents the most important concepts and contents in a structured manner through master classes, with the aim of enabling students to acquire the necessary knowledge and skills. Student participation is encouraged. Teaching materials used by the lecturer will be made available, if deemed appropriate, through the Virtual Classroom's electronic platform.

-**The seminars** will be conducted based on the materials provided by the lecturer and will require active student participation. Students are expected to engage in the discussion of the topics.
In addition, clinical simulation will be used as a teaching tool to recreate real-life healthcare situations in a safe and controlled environment. This methodology allows students to integrate theoretical knowledge with practical skills and transversal competencies such as decision-making, teamwork, and clinical communication.

-**Clinical placements**. Students will undertake clinical placements in healthcare services across the various university hospitals (hospital emergency services, resuscitation units, and intensive care units) and with the SAMU (Emergency Medical Service).

Gender perspective, respect for diversity, and the Sustainable Development Goals (SDGs) will be incorporated into teaching whenever possible.

EVALUATION

Students must have attended at least 80% of the practicals before they can take the exam.

The exam will consist of a written test with questions of a theoretical and practical content. It will consist of 2 parts: Medicine and Surgery.

Area of Medicine:

Maximum total grade: 5 points. It will consist of a written test in two sections:

1) Theory test: 30 multiple-choice questions. Each question will have 4 possible answers of which only one is valid. Grading will be as follows: correct 1 point, blank 0 points, incorrect (-0.33 points).

2) Practical evaluation: 15 multiple-choice questions. Each question will have 4 possible answers of which only one is valid. Grading will be as follows: correct 1 point, blank 0 points, incorrect (-0.33 points).

Area of Surgery:

Maximum total grade: 5 points. It will consist of a written test in two sections:

1) Theory test: 30 multiple-choice questions. Each question will have 4 possible answers of which only one is valid. Grading is as follows: correct 1 point, blank 0 points, incorrect (-0.33 points).

2) Practical evaluation: 15 multiple-choice questions. Each question will have 4 possible answers of which only one is valid. Grading will be as follows: correct 1 point, blank 0 points, incorrect (-0.33 points).

It is not necessary to pass separately each area.

In order to access to an advance on the call of this subject, it is a requirement that the student has coursed all his/her practices.

Attendance at practical activities is mandatory. The student is considered to meet this requirement if he or she has attended a minimum of 80% of these activities and has adequately justified the impossibility of attending the remaining sessions due to the occurrence of a cause of force majeure. It will be essential to comply with this requirement to pass the subject.

Students are reminded of the importance of carrying out evaluation surveys on all the teaching staff of the degree subjects.

REFERENCES

BÁSICAS

-ATLS (Advanced Trauma Life Support) Student Course Manual. American College of Surgeons. 10ª ed, 2023. Editorial American College of Surgeons. ISBN 9781733714907
- Critical Care Handbook of the Massachusetts General Hospital. Edward A Bittner. Editorial Wolters Kluwer. 2023. ISBN 9781975183790
- Situaciones Clínicas en Anestesia y en Cuidados Críticos 2ª Edición. Alberto Hernández Martínez. Editorial Panamericana. 2022. ISBN 9788491104094
- Irwin and Rippe's Intensive Care Medicine. Richard S. Irwin, Craig M. Lilly MD, Walter A. Boyle, William F. Kelly Editorial Wolters Kluwer. 2023. ISBN 9781975181444.
- Frendl, G., & Tung, A. (Eds.). (2024). Cuidados intensivos de bolsillo (3.ª ed.). Wolters Kluwer.
-Chorro Gascó, F. J. [Francisco Javier] & López Merino, V. [Vicente] (2008). Electrocardiografía en la práctica clínica (2ª ed.). Universitat de València.

RECURSOS e-Salut
- ClinicalKey Student Medicina, Odontologia y Enfermería
[https://uv-es.libguides.com/RecursosSalut]
- Acces Medicina
[https://uv-es.libguides.com/Access_Medicina]
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