# Medical and Pre-hospital Emergencies

Code: 102904
ECTS Credits: 3

2024/2025

| Degree | Type | Year |
|---|---|---|
| 2502442 Medicine | OT | 6 |

## Contact

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## Teachers

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Francesc Daniel Epelde Gonzalo

María Arranz Betegón

## Teaching groups languages

You can view this information at the end of this document.

## Prerequisites

- It is necessary that the student has basic clinical knowledge of medical and surgical pathology, and general hospital functioning.

- The student will acquire the commitment of preserving the confidentiality and professional secrecy of the data to which he / she may have access due to the learning in the assistance services. Also to maintain an attitude of professional ethics in all its actions.

## Objectives and Contextualisation

This is an optional subject linked to the mention of Clinical Medicine, taught in the sixth year of the Degree in Medicine. The general objective is the basic knowledge of the organization of the Emergency system and the clinical action guidelines for urgent processes, mainly in the hospital environment.

The course will provide students with the knowledge and skills necessary for the diagnosis and treatment of some of the most relevant pathologies in the emergency department.

## Competences

- Demonstrate understanding of the manifestations of the illness in the structure and function of the human body.
- Establish a diagnostic approach and a well thought-out strategy for action, taking account of the results of the anamnesis and the physical examination, and the results of the appropriate complementary tests carried out subsequently.
- Indicate the basic diagnosis techniques and procedures and analyse and interpret the results so as to better pinpoint the nature of the problems.
- Indicate the most suitable treatment for the most prevalent acute and chronic processes, and for the terminally ill.
- Maintain and sharpen one's professional competence, in particular by independently learning new material and techniques and by focusing on quality.
- Obtain and prepare a patient record that contains all important information and is structured and patient-centred, taking into account all age and gender groups and cultural, social and ethnic factors.
- Perform a general and a system-by-system physical examination appropriate to the patient's age and sex, in complete and systematic way, and a mental evaluation.
- Recognise and take action in life-threatening situations and others that require an immediate response.
- Use information and communication technologies in professional practice.

## Learning Outcomes

1. Assess the efficiency of the main therapeutic interventions.
2. Assess the importance of every sign and symptom in the current illness.
3. Assess the relationship between efficacy and risk in the main therapeutic interventions.
4. Categorise emergency situations in accordance with the available indices of seriousness.
5. 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.
6. Distinguish normality from pathological alterations on performing a physical examination.
7. Distinguish situations that require hospitalisation and those that require intensive care.
8. Establish a diagnostic and therapeutic approach in emergencies.
9. Gather, choose and record important information patient supplied by patients and accompanying persons.
10. Identify serious clinical situations.
11. Indicate suitable therapeutic interventions for the main health problems.
12. Indicate the basic complementary examinations for interpreting the manifestations of the illness in the different organs and systems of the human body.
13. Maintain and sharpen one's professional competence, in particular by independently learning new material and techniques and by focusing on quality.
14. Order signs and symptoms to perform a differential syndromic diagnosis.
15. Perform basic and advanced life support manoeuvres.
16. Propose a basic diagnostic strategy to reach a definitive diagnosis.
17. Understand the manifestations of the main pathologies on the structure and function of the human body.
18. Use information and communication technologies in professional practice.

## Content

LEARNING ACTIVITIES

1. Directed activities

Theoretical class: Hospital medical emergency. 1 hour

Clinical skills: Cardiopulmonary resuscitation (via advanced air). 2 hours per group (groups of 10 people)

Clinical skills: Polytrauma. 2 hours per group (groups of 10 people)

Clinical skills: Frequent arrhythmias. 2 hours per group (groups of 10 people)

Resolution of cases: Recognition of the critical or life-threatening patient 1 h

Resolution of cases: Thoracic pain. 1 hour

Case resolution: Respiratory failure 1 h

Resolution of cases: IAM Code 1 h

Case resolution: Hemodynamic management of the seriously ill. 1 hour

Case resolution: Management of hemoptysis. 1 hour

Resolution of cases: Intoxications. 1 hour

Case resolution: Acute neurological deficit. ICTUS code. 1 hour

2. Supervised practices

Face-to-face activity in emergency hospital: PRASS 15 h of supervised presence.

They will be organized according to the students' schedule at the beginning of the subject.

3. Autonomous activities

Comprehensive reading of texts and articles, study and realization of schemes, summaries and conceptual assimilation of the contents. Preparation of presentations and deliveries.

## Activities and Methodology

| Title | Hours | ECTS | Learning Outcomes |
|---|---|---|---|
| Type: Directed | | | |
| ASISTENCIAL CLINICAL PRACTICES (PCAh) | 15 | 0.6 | 4, 17, 5, 6, 7, 8, 10, 12, 13, 14, 16, 15, 9, 18, 1, 3, 2 |
| Practices in the laboratory of clinical skills. | 6 | 0.24 | 4, 17, 5, 6, 7, 8, 10, 12, 13, 14, 16, 15, 9, 18, 1, 3, 2 |
| Resolution of clinical cases. | 8 | 0.32 | 4, 17, 5, 6, 7, 8, 10, 12, 13, 14, 16, 15, 9, 18, 1, 3, 2 |
| Theorical class | 1 | 0.04 | 4, 17, 5, 6, 7, 8, 10, 12, 13, 14, 16, 15, 9, 18, 1, 3, 2 |

| Type: Autonomous | | | |
|---|---|---|---|
| Bibliographic and documentary consultations. Realization of schemes and summaries. | 41 | 1.64 | 4, 17, 5, 6, 7, 8, 10, 12, 13, 14, 16, 15, 9, 18, 1, 3, 2 |

This Guide describes the framework, contents, methodology and general rules of the subject, in accordance with the current curriculum. The final organization of the subject in terms of number and size of groups, distribution in the calendar and dates of exams, specific criteria for evaluation and review of exams, will be specified in each of the Hospital Teaching Units (UDH), which will explain it through their web pages and the first day of class of each subject, through the professors responsible for the subject in the UDH.

For this course, the professors appointed by the Departments as responsible for the subject at the Faculty and the UDH level are:

Departament (s) responsible (s): Departament de Medicina

Head of Faculty: nom (e-corru): Anna Carreres Molas (acarreres.germanstrias@gencat.cat)

Those responsible for the subject

| Responsible UDHSP | Responsible UDHVH | Responsible UDGTiP | Responsible UDHPT |
|---|---|---|---|
| Mireia Puig i Campmany<br>mpuigc@santpau.cat | Maria Arranz Betegón<br>maria.arranz@vallhebron.cat | Anna Carreres Molas (acarreres.germanstrias@gencat.cat) | Francesc Daniel Epelde<br>FEpelde@tauli.cat |

General methodology:

Estimated hours of the subject: 75 (3 ECTS)

Directed (40%): 30 h

Theorical class (TE)

Practices in the laboratory (PLAB)

Asistencial clinical practices (PCAh)

Resolution of clinical cases (SCC)

Self-employment 55%: 41 h.

Bibliographic and documentary consultations. Realization of schemes and summaries.

5% evaluation: 4 h.

Work presentation and problem solving.

*Exceptionally and according to the criteria of the responsible professorat, the available resources and the health situation at each moment to the different Unitats Docents, part of the continguts corresponents to the teachers, practitioners and seminars may be taught in person or virtual.*

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

## Continous Assessment Activities

| Title | Weighting | Hours | ECTS | Learning Outcomes |
|---|---|---|---|---|
| Assistance and active participation in class and seminars | 50% | 0 | 0 | 4, 17, 5, 6, 7, 8, 10, 12, 13, 14, 16, 15, 9, 18, 1, 3, 2 |
| Delivery of written work | Optional | 2.67 | 0.11 | 4, 17, 5, 6, 7, 8, 10, 12, 11, 13, 14, 16, 15, 9, 18, 1, 3, 2 |
| multiple response tests | 50% | 1.33 | 0.05 | 4, 17, 5, 6, 7, 8, 10, 12, 13, 14, 16, 15, 9, 18, 1, 3, 2 |

- *This subject does not provide the single assessment system*

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

1) Attendance at practices (80%).

(Face-to-face activity in emergency hospital : 15 h)

2) The presentation of a clinical case of the agenda, presented in free electronic format (optional).

3) Objective multiple response tests (5) on the content of clinical cases (50%).

(At the end of each of the case resolution sessions).

Students who do not take the theoretical and practical assessment tests will be considered as not evaluated, exhausting the rights to the registration of the subject.

## Bibliography

Books:

- Urgencias Médicas. En: Harrison Principios de Medicina Interna. 21 ed. McGraw-Hill, 2022. ISBN: 9781264540259

- Jiménez Murillo L, Montero Pérez FJ. Medicina de Urgencias y Emergencias. 7 ed. Elsevier SA, 2023. ISBN 9788413820040

- Piñera P, Moya M, Mariné M. Tratado de Medicina de Urgencias SEMES (Sociedad Española de Medicina de Urgencias y Emergencias). 2ª Edición. Ergón, 2020. ISBN-13: 9788416732869.

- Tintinalli JE. Manual de Medicina de Urgencias. 8ª Edición McGraw-Hill, 2019. ISBN: 9781456263133

- Rosen's Emergency Medicine. Concepts and Clinical Practice. 10 ed. Elsevier SA, 2022.

- Manual d'Urgències Hospital Germans Trias 2023. ISBN: 978-84-09-52254-5 / Dipòsit legal: B 12923-2023

Journals:

- Emergencias: http://emergencias.portalsemes.org

- European Journal of Emergency Medicine: https://journals.lww.com/euro-emergencymed/pages/default.aspx

- Annals of Emergency Medicine: https://www.annemergmed.com

- New England Journal of Medicine: https://www.nejm.org

- Journal of Emergency Medicine: https://www.jem-journal.com

- American Journal of Emergency Medicine: https://www.ajemjournal.com

Videos:

https://www.youtube.com/watch?v=IowHO8g9cnA

https://elpais.com/ccaa/2019/07/04/catalunya/1562262167_670465.html

## Software

does not require specific software

## Language list

Information on the teaching languages can be checked on the CONTENTS section of the guide.