

<b>POLI</b> ESCOLA SUPERIOR SAÚDE <b>TÉCNICO</b> <b>GUARDA</b>	<b>SUBJECT DESCRIPTION</b>	<b>MODELO</b> PED.015.03
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<i>Course</i>	<b>Pharmacy</b>					
<i>Subject</i>	<b>Hospital Pharmacy</b>					
<i>Academic year</i>	2023-2024	<i>Curricular year</i>	2nd	<i>Study period</i>	1st semester	
<i>Type of subject</i>	Compulsory	<i>Student workload (H)</i>	Total: 135	Contact: 75	<i>ECTS</i>	5
<i>Professor(s)</i>	Cristiana Guimarães Martins Midões Karolline Krambeck					
<input type="checkbox"/> <i>Area/Group Coordinator</i> <input type="checkbox"/> <i>Head of Department</i>	<i>(select)</i>	Clique				

**PLANNED SUBJECT DESCRIPTION**

**1. LEARNING OBJECTIVES**

Students are expected to achieve the following goals:

- O1 – Recognize the importance of Hospital Pharmacy in the management of medicines in hospitals;
- O2 – Characterize the medicine’s circuit in hospitals and the steps involved, from the prescription of the medicine to its administration to the patient;
- O3 – Identify specific pharmacotherapeutic protocols in a hospital context;
- O4 – Recognize restricted use medications subject to additional risk monitoring, as well as their therapeutic indications;
- O5 – Integrate the concepts of drug safety, patient safety and risk management in Hospital Pharmacy.

**2. PROGRAMME**

- 1) Hospitals in Portugal. Hospital management. Integrated Information and Management Systems.
- 2) The Hospital Pharmacy. Responsibilities and functions of the Hospital Pharmaceutical Services.
- 3) The Medicine’s circuit: from the selection to the administration of the medicines to the patient. Specific procedures for each stage of the medicines’ circuit.
- 4) Medicines in Hospital Pharmacy. Therapeutic protocols in a hospital context.
- 5) Medicines risk management in Hospital Pharmacy. Essential medicines, restricted to hospital use and with additional monitoring. LASA (look-alike and sound-alike) and MAR (High Risk) medicines. Drug safety and patient safety. Minimization of errors and drug events.

**PRACTICAL AND LABORATORIAL CONTENT**

- 1) Reception and storage of medicines, pharmaceutical products and medical devices;

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- 2) Distribution of medicines by replenishment of leveled stocks, by traditional distribution and by individual daily distribution in a unit dose;
- 3) Preparation of most common non-sterile manipulated medicines in Hospital Pharmacy;
- 4) Repacking of medicines.

### 3. COHERENCE BETWEEN PROGRAMME AND OBJECTIVES

The syllabus presented reflect the importance of the activities developed in the Hospital Pharmacy, in the different stages of the medicine circuit, from its selection to the administration of medicines to the patient. The importance of medicine and of the Hospital Pharmacy is demonstrated by first discussing the importance of the existence of the Hospital Pharmacy related to the mission and assistance of Hospitals (point 1; O1). Secondly, the responsibilities, functions and activities of the Hospital Pharmacy (points 2 and 3) are discussed, which clearly demonstrate the importance of this service within hospitals (O1 and O2). Thirdly, some of the pharmacotherapeutic protocols used are presented, highlighting the importance of medication in the hospital context (point 4; O3). Drug and patient safety is highlighted with the discussion of the syllabus of point 5 (O4). Practical classes will allow the consolidation and application of acquired knowledge (point 6).

### 4. MAIN BIBLIOGRAPHY

- National Medicines Formulary. INFARMED (in <https://extranet.infarmed.pt/fnm-fo/#/>)
- Hospital Pharmacy Manual. INFARMED, 2005.
- Gomes, MJ; Reis, MM. Pharmaceutical Sciences: an approach in Hospital Pharmacy. 2001. Atheneu. ISBN: 8573793112

### 5. TEACHING METHODOLOGIES (INCLUDING EVALUATION)

The teaching methodologies are suitable for theoretical teaching, with masterly exposition of contents, theoretical-practical teaching, with targeted content research, and practical teaching, with the development of practical and laboratory activities for the application of knowledge.

The UC has a theoretical, theoretical-practical and practical assessment. Theoretical assessment results from the completion of written tests that focus on the theoretical contents taught (60%), and should be, at least, 8 values. The theoretical-practical evaluation results from discussion of worksheets and the presentation of a paper on the use of medicines in Hospital

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Pharmacy (20%). The practical and laboratory evaluation results from the performance of practical activities and the delivery of technical sheets on the activities carried out (20%).

Approval for attendance in the curricular unit is obtained with a final grade of at least 10, on a scale from 0 to 20, obtained from the sum of the partial grades.

## 6. COHERENCE BETWEEN TEACHING METHODOLOGIES AND OBJECTIVES

The curricular unit has theoretical (30T), theoretical-practical (30 TP) and practical and laboratory (15 PL) classes. In lectures, an expository methodology is used, encouraging participation and critical analysis of the themes and of facts presented. In the theoretical-practical classes an applied methodology is used, encouraging students to research, investigate and develop methodologies suitable for the learning process. Research on medicines and the search for technical and scientific information in selected databases allows for the development of research skills and the application of knowledge acquired in the proposed activities. The realization of experiences in practical and laboratory classes allow the integration and consolidation of knowledge acquired in theoretical and theoretical-practical classes. The laboratory practice classes also allow for the practical simulation of the activities developed in the Hospital Pharmacy, namely in the medicine circuit and in the preparation of master formulas and workshop preparations.

As active learning activities, questions are raised for the integration of the contents presented, creating a space for debate and for solving doubts. At the beginning of each class, the key points of the summary will be identified, highlighting the importance of the contents as learning objectives, and a brief summary of the contents presented and studied in the previous class will be made. The recommended bibliography can be complemented with suggestions for reading scientific articles adapted to each theme.

The assessment system, defined to assess the skills developed and the knowledge acquired, includes the assessment of the different components and highlights the close correlation between the contents taught and the teaching/learning methodologies used.

## 7. ATTENDANCE

The theoretical-practical (TP) and laboratory practices (PL) classes are mandatory, with the absence limit being 25% of the number of hours assigned to each class. Students with special status (student workers, association directors and others included in the regulation) are also subject to the same type of mandatory presence in classes.

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## 8. CONTACTS AND OFFICE HOURS

Cristiana Guimarães Martins Midões, [cmmidoes@gmail.com](mailto:cmmidoes@gmail.com)

Office hours: Monday, 11-13h

Karolline Krambeck, [karolline@ipg.pt](mailto:karolline@ipg.pt)

Office hours: Tuesday, 13:30 – 15:30h

## 9. OTHERS

The practical and laboratory activities involved the use of personal protective equipment in each class.


### DATE

**28th of september of 2023**

### SIGNATURES

*Professor(s), Area/Group Coordinator or Head of Department signatures*

Assinatura na qualidade de (clicar)

  
(Cristiana Guimarães Martins Midões)

Assinatura na qualidade de (clicar)

  
(Karolline Krambeck)