

<b>POLI</b> <b>ESCOLA SUPERIOR</b> <b>SAÚDE</b> <b>TÉCNICO</b> <b>GUARDA</b>	<b>OPERATION GUIDE</b> <b>COURSE UNIT</b> <b>(GFUC)</b>	<b>MODEL</b> PED.010.03
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Course	Pharmacy – 1st Cycle						
Curricular unit (CU)	Simulated Practices in Clinical Pharmacy						
School year	2022-2023	Year	3rd	Period	2nd semester	ECTS	3
Regime	Mandatory	Working time (hours)			Total:81h	Contact:T:15; TP:15 PL:25	
Teacher(s)	Ana Raquel Augusto Lima; Tânia Sofia Martins Martinho						
<div><input type="checkbox"/>Responsible</div> <div><input type="checkbox"/>Coordinator</div> <div><input checked="" type="checkbox"/>Regent</div>	from UC	Ana Raquel Augusto Lima					

### PREDICTED GFUC


## 1. LEARNING OBJECTIVES

Educational objectives:

- O1. Understand the different pharmaceutical services that are provided in hospital pharmacy and community pharmacy;
- O2. Know and identify possible Drug-Related Problems ( PRMs );
- O3. Understand the role of the National Pharmacovigilance System;
- O4. Detect and report adverse reactions to medications;
- O5. Integrate pharmacotherapeutic monitoring teams in both hospital and community pharmacies;
- O6. Understand the importance of serum drug monitoring;
- O7. Participate in medicine management and promoting the rational use of medicines;
- O8. Synthesize information and communicate with the patient and other healthcare professionals;
- O9. Work as a team with ethics and deontology underlying relationships with colleagues, other professionals and patients;
- O10. Recognize the importance of the evolution of knowledge and the need to research current and scientific information;

## 2. PROGRAM CONTENT

- C1. Pharmaceutical services provided in a community pharmacy.
- C2. Pharmacovigilance and Risk Management.
- C3. Pharmacotherapeutic monitoring in community pharmacy and hospital pharmacy.
  - C3.1. Pharmacotherapeutic monitoring of chronic patients.
  - C3.2. Pharmacotherapeutic monitoring of specific populations
  - C3.3. Tools for pharmacotherapeutic monitoring in elderly patients: Beers criteria , STOPP/START criteria and EU(7)PIM list
- C4. Serum drug monitoring
- C5. Interventions of the Senior Diagnostic and Therapeutic Technician in the Pharmacy area in primary care, hospital pharmacy and community pharmacy.

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#### Syllabus of Practical and Laboratory classes (PL):

Development of simulation protocols and case demonstrations.

### 3. DEMONSTRATION OF THE COHERENCE OF THE PROGRAM CONTENT WITH THE OBJECTIVES OF THE UC

So that students can understand the importance of services provided in the pharmacy, and correctly carry out adequate monitoring of patients in hospital and community pharmacy, identifying problems related to medicines and being part of pharmacotherapeutic follow-up and drug monitoring teams (O1 to O2 and O5 and O6), it is important that they study the services provided within the scope of national legislation and the techniques and tools for pharmacotherapeutic monitoring and serum drug monitoring (C1, C3 and C5). The study of the pharmacovigilance system, risk management (C2), will allow students to have a more active role in reporting adverse reactions within the scope of the National Pharmacovigilance System (O3 and O4).

All content (C1 to C5) contributes to the development of competence in promoting individual and community health (O7), as well as the ability to synthesize and communicate information to patients and other team members (O8) and collaboration in multidisciplinary teams (O9). Approaching all content in light of the most recent scientific advances will allow the development of scientific culture skills (O10).

### 4. MAIN BIBLIOGRAPHY

- Ordinance No. 1429/2007, of 2 November (Defines the pharmaceutical services that can be provided by pharmacies), Diário da República No. 211, 2 November 2007, I Series, p. 7993.
- National Association of Pharmacies, CheckSaúde – Practical Guide, Cardiovascular Risk, 2nd ed., 2008.
- Hernandez DS, Castro MMS, Dáder MJF Dader Method, 3rd edition, 2007 – Portuguese / European Version - Edições Universitárias Lusófonas 2009.
- Wells BG; DiPiro JT, Schwinghammer TL, Hamilton Ci.W., Pharmacotherapy Handbook, Sixth Edition, 2005.
- Koda-Kimble and Young's Applied Therapeutics: The Clinical Use of Drugs, Tenth Edition, 2009.
- Infarmed, Therapeutic Record 11, 2013.
- Infarmed, National Hospital Formulary for Medicines, 9th Edition, 2006.
- Infarmed, Pharmacovigilance in Portugal, 2003.

### Journals recommended

- British Journal of Clinical Pharmacology
- Drug Safety



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- European Journal of Clinical Pharmacology
- International Journal of Clinical Pharmacy
- Journal of clinical pharmacy and therapeutics
- Journal of Pharmacy and Pharmacology
- Journal in Social and Administrative Pharmacy

## 5. TEACHING METHODOLOGIES (ASSESSMENT RULES)

The teaching methodologies are adapted to the different teaching typologies planned for the UC, namely: (i) theoretical teaching, with masterful presentation of content and its systematization in an integrated way, (ii) theoretical-practical teaching, with solving exercises with situations practices and analysis of scientific articles, and (iii) practical teaching, with the resolution and demonstration of practical cases. All topics will be worked on in a practical way and simulating real situations in practical classes.

The assessment consists of continuous theoretical and theoretical-practical assessment, with a written test weighing 50%, 10% for attendance, participation and punctuality. Practical assessment consists of the continuous assessment of work developed in the different protocols of practical classes and the demonstration and simulation of cases (40%).

A minimum value of 8 values (on a scale of 0 to 20) was agreed with the students for each assessment component. Approval of the curricular unit was obtained with a minimum final grade of 9.5 (on a scale of 0 to 20).

## 6. DEMONSTRATION OF THE COHERENCE OF TEACHING METHODOLOGIES WITH THE OBJECTIVES OF THE UC

Theoretical classes consist of a masterful exposition of the program contents, proceeding to the systematization of the most pertinent and current aspects, using audiovisual media. These classes allow you to achieve objectives related to cognitive capacity and knowledge (O1 to O3). In theoretical-practical classes, interactive discussion with students is privileged, based on case studies, technical documents and the analysis of scientific articles, which allows achieving objectives related to the ability to research, analyze and synthesize information and with argumentative ability (O2-O5, O8, O10).

In practical classes, for the integration and application of content, practical chaos demonstration and simulation protocols are developed. These classes enable objectives related to behavior to be achieved, namely the participation of the pharmacy technician in the national pharmacovigilance system and in pharmacotherapeutic monitoring teams (O4 to O9).

As active learning activities, questions are asked to integrate the content presented, creating a space for debate and resolution of doubts. The recommended bibliography is complemented by suggestions for reading scientific articles adapted to each theme and each programmatic content. This approach allows the development of a scientific culture, developing current and scientific information research skills (O10).

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## 7. ATTENDANCE REGIME

Attendance at 75% of theoretical-practical and practical classes was mandatory.

## 8. CONTACTS AND OFFICE HOURS

Ana Raquel Augusto Lima; [anaraquellima@ipg.pt](mailto:anaraquellima@ipg.pt); Office 5

Office hours: Tuesday: 09:00am-11:00am;

Thursday: 08:00am-10:00am.

Tânia Sofia Martins Martinho; [tania.martinho@ipg.pt](mailto:tania.martinho@ipg.pt)

Office hours: Monday: 10:00am-12:00pm

Office hours: Tuesday: 09:30am-11:30am

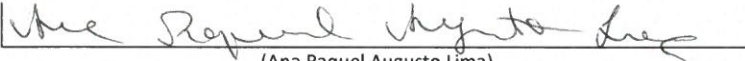
## DATE

**February 28, 2024**

## SUBSCRIPTIONS

*Signature of Teachers, Responsible/Coordinator/Regent of the UC or Disciplinary Area/Group*

**The UC Regent**

  
(Ana Raquel Augusto Lima)

**The Teacher**

  
(Tânia Sofia Martins Martinho)