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| POLI ESCOLA SUPERIOR SAÚDE TÉCNICO GUARDA | SUBJECT DESCRIPTION | MODELO PED.015.03 |
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| <i>Course</i> | Pharmacy | | | | | |
| <i>Subject</i> | Aseptic Technology in Pharmacy | | | | | |
| <i>Academic year</i> | 2023/2024 | <i>Curricular year</i> | 2nd | <i>Study period</i> | 2nd semester | |
| <i>Type of subject</i> | Compulsory | <i>Student workload (H)</i> | Total: 121,5 | Contact: 50 | <i>ECTS</i> | 4,5 |
| <i>Professors</i> | Armanda Sofia Dias Carla Manuela Condesso Perpétuo Sandra Cristina do Espírito Santo Ventura | | | | | |
| <input checked="" type="checkbox"/> <i>Area/Group Coordinator</i> <input type="checkbox"/> <i>Head of Department</i> | | Sandra Cristina do Espírito Santo Ventura | | | | |

PLANNED SUBJECT DESCRIPTION

1. LEARNING OBJECTIVES

Students are expected to achieve the following educational goals:

- O1 – Recognize the importance, complexity goals and practical requirements of aseptic technique in Pharmacy;
- O2 – Relate aseptic technique in Pharmacy with the quality and safety of manipulated medicines;
- O3 – Apply the concepts and practices of disinfection and sterility in professional practice;
- O4 – Identify specific cancer chemotherapy, radiopharmaceutical and parenteral nutrition protocols;
- O5 – Identify the different steps and procedures related to the handling and preparation of medicines in cancer chemotherapy, radiopharmaceuticals and parenteral nutrition;
- O6 – Acquire competences and practical skills in handling the preparation of drugs under sterile conditions.

2. PROGRAMME

- 1) Introduction to Aseptic Technology in Pharmacy. The importance of aseptic technique.
- 2) Healthcare Associated Infection.
 - a. Antimicrobial Resistance in Portugal. National Plan to Combat Antimicrobial Resistance. Basic Infection Control Precautions.
 - b. Disinfection and sterilization policies. Sepsis, antisepsis and asepsis. Antiseptics and disinfectants.
 - c. Waste Management. Classification and treatment of waste produced in Health Services.
- 3) Aseptic Handling in Pharmacy:
 - a. Cancer therapy. Concepts. Antineoplastic drugs.
 - b. Enteral and parenteral nutrition. Nutritional supplements.
 - c. Radiopharmacy. Concepts. Radiopharmaceuticals used in diagnosis and therapy.

PRACTICAL AND LABORATORIAL CONTENT

Aseptic hand disinfection technique;
 Use of personal protective equipment;
 Techniques for reconstitution and handling of cytotoxic drugs.
 Techniques for preparation and handling of parenteral nutrition.

3. COHERENCE BETWEEN PROGRAMME AND OBJECTIVES

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The syllabus was defined to achieve the proposed objectives. More specifically, the contents reflect the importance of Aseptic Technique in the different activities and areas of manipulation in Pharmacy. In order for students to understand the importance of Aseptic Technique in Pharmacy (O1 and O2), the syllabus presented in point 1) were developed. The correlation between the assumptions of the aseptic technique and its applicability in a real context, in the health care (paragraph 2); O3), as well as in the Pharmacy (item 3; O4 and O5) are shown in the contents presented. The acquisition and demonstration of the acquired knowledge and skills is possible through the defined practical activities (paragraph 4); O6).

4. MAIN BIBLIOGRAPHY

European Centre for Disease Prevention and Control. Antimicrobial resistance in the EU/EEA (EARS-Net) - Annual Epidemiological Report 2019 (2020). Stockholm: ECDC.

Decreto-Lei n.º 73/2011, de 17 de junho. Regime geral aplicável à prevenção, produção e gestão de resíduos.

Gnanadha et al (2013). Biocides-resistance, cross-resistance mechanisms and assessment. 10.1517/13543784.2013.748035

Norma 004/2013 - Vigilância Epidemiológica das Resistências aos Antimicrobianos. DGS.

Norma 007/2019 - Higiene das Mãos nas Unidades de Saúde. DGS.

Plano Nacional de Combate à Resistência aos Antimicrobianos 2019-2023. DGS.

Programa de Prevenção e Controlo de Infecções e de Resistência aos Antimicrobianos (2017). DGS ISSN: 2184-1179.

Recomendações Nacionais para Diagnóstico e Tratamento do Cancro Do Pulmão e da Mama. DGS.

WHO guidelines on hand hygiene in health care. First Global Patient Safety Challenge Clean Care is Safer Care (2009). ISBN 978 92 4 159790 6.

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 for practical teaching, with the development of practical laboratory activities.

The UC has a theoretical, theoretical-practical and practical assessment. The theoretical and theoretical-practical assessment results from the completion of written tests and works, based on the contents taught. The practical assessment results from the acquisition of skills and competences, and the completion of a practical exam, which includes specific assessment parameters: the correct hand washing, the correct use of personal protective equipment, the correct handling technique and drug reconstitution, pharmaceutical calculations and safe handling. Approval by frequency is obtained with a minimum final grade of 10 values, on a scale from 0 to 20, obtained from the sum of the partial classifications.

6. COHERENCE BETWEEN TEACHING METHODOLOGIES AND OBJECTIVES

The curricular unit is structured in theoretical classes (15h), theoretical-practical (15h) and practical and laboratory classes (20h). Theoretical and theoretical-practical classes are dedicated to the masterful exposition and consolidation of the taught syllabus. The practical laboratory classes are dedicated to practice oriented towards the acquisition of practical skills necessary for the handling of medicines in aseptic and sterile conditions. Empowering students with these practical skills is essential so that they can develop with rigor and safety the activities developed within the Hospital Pharmacy, namely in the preparation, reconstitution and handling of cytotoxic drugs and parenteral nutrition. These activities are relevant for the completion of curricular internships and for the future

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professional practice, since aseptic handling in Pharmacy is a differentiated and specialized activity of the professional practice of the Pharmacy Technician in a hospital context.

The evaluation of theoretical content is carried out through one written evaluation test, related to the acquired contents of oncology, radiopharmacy and parenteral nutrition and of four worksheets through Moodle Learning Platform (65%). The theoretical-practical assessment (10%) includes the delivery of one work carried out in groups and/or individually, based on the theme of Hands Hygiene. The practical laboratory assessment (25%) includes the evaluation of acquired skills by students in practical and laboratory classes demonstrated on a practical exam covering the following parameters: correct hand washing, before and after putting on PPE (0.60 points), correct use of personal protective equipment (PPE) (0.60 points), correct medication handling technique (1.80 points), pharmaceutical calculations (1.00 points) and safe handling (1.00 points).

As active learning activities, questions are asked to integrate the contents presented, creating a space for debate and resolution of doubts. The recommended bibliography can be complemented with suggestions for reading scientific articles.

7. ATTENDANCE

The theoretical-practical (TP) and laboratory practices (PL) classes were 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.

8. CONTACTS AND OFFICE HOURS

Sandra Cristina Ventura; scventura@ipg.pt; Office 9 in ESS-IPG


Office hours: Tuesday: 11am-1pm and Friday: 9.30-11.30am

DATE

4 de março de 2024

SIGNATURES

Area/Group Coordinator


(Sandra Cristina do Espírito Santo Ventura)