Course Unit	Introduction to Biomedical Laboratory Sciences			Field of study	Biomedical Laboratory Sciences		
Bachelor in	Biomedical Laboratory Sciences			School	School of Health		
Academic Year	2023/2024	Year of study	1	Level	1-1	ECTS credits	5.0
Type	Semestral	Semester	1	Code	9995-804-1105-00-23		

Workload (hours)	135	Contact hours	T	TP	PL	TC	S	E	OT	O
			-	30	-	-	5	-	15	-

T - Lectures; TP - Lectures and problem-solving; PL - Problem-solving, project or laboratory; TC - Fieldwork; S - Seminar; E - Placement; OT - Tutorial; O - Other

Name(s) of lecturer(s): Josiana Adelaide Vaz, Rossana Pilar Marcelino Correia, Paula Eduarda Lopes Martins

Learning outcomes and competences

At the end of the course unit the learner is expected to be able to:
1. Understand basic concepts of Histotechnology, Cytological Technique, Immunocytochemistry, Molecular Pathology, Tanatology and Hygiene and Laboratory Safety in the context of the profession.
2. Understand the basic concepts of Hematology, Microbiology, Biochemistry, Immunology, Transfusion Sciences and Public Health in the context of the profession.
3. Identify the functional contents of the Clinical Analysis and Public Health and Pathological, Thanatological and Cytological Anatomy as different areas of intervention.
4. Recognize the concepts of ethics and professional ethics and apply this knowledge in simulation of concrete situations of the professions.
5. Deepen the knowledge of the history and development of the Biomedical Laboratory Science (BLS) course and characterize it and fit it into the National and international context.
6. Study the evolution of the education system and legislation in Health Technologies
7. Understand the duties and rights of Diagnostic and Therapeutic Superior Technicians (DTST).

Prerequisites

Not applicable

Course contents

1. Description and analysis of the curricular plan, learning objectives of the course in Biomedical Laboratory Sciences. 2. Evolution of the system of education and legislation. 3. History and development of health technology professions. 4. The Laboratory of Pathological, Cytological and Thanatological Anatomy and of Clinical Analyzes and Public Health. 6. Good Laboratory Practice. 7. Bioethics and deontology. 8. The performance of the Profession in other countries (inside / outside the European Union) 9. Basic Life Support

Course contents (extended version)

1. Biomedical Laboratory Sciences course.
   - Description and analysis of curriculum.
   - Learning objectives.
2. Changes in the education system and legislation.
3. History and development of the professions of health technologies.
   - Brief history of the specific area of Pathologic Anatomy.
   - Brief history of the specific area of Clinical Analysis.
4. Pathology, Cytological and Tanatological laboratory.
   - Histopathology;
   - Cytopathology;
   - Tanatology.
5. Clinical Analysis Laboratory.
   - Hematology;
   - Microbiology;
   - Biochemistry;
   - Immunology;
   - Transfusion Science.
6. Public Health Laboratory.
7. Good Practices in the laboratory.
8. Bioethics and professional conduct.
9. Pathological Anatomy, Cytological and Tanatological professionals:
   - Roles;
   - Professional hierarchy;
   - Framing in the national health system.
10. Clinical and Public Health Analysis professionals:
    - Roles;
    - Professional hierarchy;
    - Framing in the national health system.
11. Pathology anatomy technicians abroad:
    - The performance of the profession in other countries (within/outside the European Union).
12. Clinical and Public Health Analysis technicians abroad:
    - The performance of the profession in other countries (within/outside the European Union).
13. Rules and elaboration of scientific works.
14. Basic Life Support
    - The survival chain
    - Basic Adult Life Support (algorithm and simulated practice)
    - Airway Approach
    - Airway Obstruction (OVA) in Adult Victim
    - Special Situations in Basic Life Support

Recommended reading

1. Fernandes, A. J. (1995). Métodos e regras para elaboração de trabalhos académicos e científicos. (2ª Edição). Porto: Porto Editora.
2. Abreu, W. C. (2001). Identidade, formação e trabalho. (1ª edição). Coimbra.
3. Frada, J. J. C. (1999). Guia Prático para Elaboração e Apresentação de Trabalhos Científicos. (9ª Edição). Lisboa: Edição Cosmos
4. DL nº 320/99 de 11 de Agosto. DL nº 564/99 de 21 de Dezembro. Portaria nº 526-A/86 de 28 de Maio, artigo 3º. DL nº 176/2006 de 30 de Agosto.
5. Bancroft, J. ; Gamble, M. (2002). Theory and Practice of Histological Techniques, 5th edition. London: Churchill Livingstone.

Teaching and learning methods

- Ative methodology and participative classes; - Encourage debate and active student participation in the learning process; - Guidance tutorial to carry out group work with subsequent oral presentation.

Assessment methods

1. Continuous evaluation - (Regular, Student Worker) (Final)
   - Presentations - 60%
   - Final Written Exam - 40%
2. Exam - (Regular, Student Worker) (Supplementary, Special)
   - Final Written Exam - 100%

Language of instruction

Portuguese, with additional English support for foreign students.

Electronic validation

Josiana Adelaide Vaz, Rossana Pilar Marcelino Correia	Antonio Jose Madeira Nogueira	Luis Migue Fernandes Nascimento	Adília Maria Pires da Silva Fernandes
26-10-2023	26-10-2023	26-10-2023	27-10-2023