

Course Unit	Thanatology and Fetal Pathology		Field of study	Biomedical Laboratory Sciences	
Bachelor in	Biomedical Laboratory Sciences		School	School of Health	
Academic Year	2022/2023	Year of study	2	Level	1-2
Type	Semestral	Semester	2	ECTS credits	5.0
Code	9995-550-2206-00-22				
Workload (hours)	135	Contact hours	T -	TP 22,5	PL 30
			TC -	S -	E -
			OT 7,5	O -	

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)

Learning outcomes and competences

At the end of the course unit the learner is expected to be able to:

1. Understand the importance and the current function of the autopsy in its legal, social and ethical dimension, making a historical connection of the evolution of this procedure over time
2. Realize the size of the autopsy as a tool or the service of teaching and scientific investigation, and as effective method of quality control of health services to the community.
3. Recognize the categorization of the various types of autopsy and its specifications both in the forensic expert dimension and in the field of anatomic-clinical diagnosis
4. Know the four classic techniques of autopsy, their advantages and disadvantages, knowing how to use and adapt them to specific circumstances.
5. Idealize an autopsy unit, respecting the legal specifications currently required and taking into account biosafety standards.
6. Recognize the importance of Embryotopopathology as an area of specialization in Pathological Anatomy, and how it constitutes a useful tool in the service of maternal and child health
7. To explain the main causes of early and late spontaneous abortion, realizing the importance of its systematic anatomopathological study.
8. Perceber a metodologia e os protocolos utilizados no estudo dos produtos de abortamento, da placenta, do feto e lactente, estando sensibilizado para as principais patologias e complicações obstétricas

Prerequisites

Before the course unit the learner is expected to be able to:
Correlate knowledge of Embryology, Anatomy and Human Physiology

Course contents

Thanatology - The historical and current importance of the autopsy. The various types of autopsy and the distinction between clinical autopsy and medical-legal. The various techniques of autopsy and dissection. Techniques for the preservation and conditioning of cadavers and anatomical pieces. The autopsy room, legal specifications and biosafety standards. Embryotopopathology - Human, embryonic and fetal development. The placenta, normal anatomy and physiology. Fetal pathology. Fetal and peri-natal autopsy.

Course contents (extended version)

1. Historical and current importance of the autopsy. Autopsy, legal, social and ethical framework
2. Categorize of autopsies. Clinical autopsy and medical autopsy.
3. Autopsy - Evaluation of external habit. Tanatognosis and chronotanatognosis.
4. Autopsy - Evaluation of the internal habit. Autopsy techniques in adults and children.
5. The autopsy room: legal specifications. Hygiene and safety. Biosafety
6. Embryotopopathology: concepts and nomenclature. First trimester pregnancy. Notions of Embryology.
7. The placenta: anatomy and normal physiology.
8. Placental pathology: Placental configuration abnormalities. Pathology of membranes.
9. Pathology of the umbilical cord. Infectious pathology of the placenta.
10. Placental disc lesions. Protocols and recording techniques. Histological harvesting
11. The fetus. - Fetal development. Late Abortion. Fetal autopsy.
12. Dismorfology.
13. Congenital pathology of the central nervous system.
14. Congenital tumor pathology - Neuroblastoma.
15. Fetal hydrops and cystic hygroma.
16. Chromosomal abnormalities. Main congenital syndromes.
17. The Twin Pregnancy.
18. The twin placenta.
19. Twin-Twin Transfusion Syndrome.

Recommended reading

1. Langman, (2001). Embriologia Médica (8ª ed.). T. W. Sadler
2. Kaplan, C. (2007). Color Atlas of Gross Placental Pathology (2nd. ed.). Springer
3. Keeling, J. W. & Khong, T. Y. (2007). Fetal and Neonatal Pathology (4th. ed.). London: Springer-Verlag.
4. Burton, J. , & Ruty, G. N. (2010). the Hospital Autopsy Practice (3rd. ed.). London: Hodder Arnold.
5. Saukko, P. , & Knight, B. (2015). Knight's Forensic Pathology (4th. ed.). New York: CRC Press.

Teaching and learning methods

The classes are TP and PL, and the expository method is applied, using audiovisual and multimedia resources. Dialogue and debate are motivated to better understand knowledge. One of the classes of PL, takes place in the autopsy room of the National Institute of Forensic Medicine and Forensic Sciences with the observation "in loco" of a medical-legal autopsy and its procedures.

Assessment methods

1. Fractional evaluation: two moments of evaluation - (Regular, Student Worker) (Final, Supplementary, Special)
2. Final evaluation: a moment of evaluation - (Regular, Student Worker) (Supplementary, Special)
- Final Written Exam - 100% (Tests contain an evaluation of the TP and PL contents with the weighting: 50%TP 50%PL)

Language of instruction

Portuguese, with additional English support for foreign students.

Electronic validation

Jose Pedro dos Santos Neves	Carina de Fatima Rodrigues	Josiana Adelaide Vaz	Adília Maria Pires da Silva Fernandes
01-06-2023	02-06-2023	02-06-2023	03-06-2023