

Updated On	2024/03/21																																	
Curricular Year / Period	2023/24 / S2																																	
Course	Veterinary Nursing																																	
Curricular Unit	Animal Cytology and Histology																																	
Language(s) of Instruction	Português Inglês																																	
ECTS/tempo de trabalho (horas)	<table border="1"> <thead> <tr> <th>ECTS</th><th>Total</th><th colspan="9">Horas de contacto semestral</th></tr> <tr> <th>6</th><th>160</th><th>T</th><th>TP</th><th>PL</th><th>S</th><th>TC</th><th>E</th><th>O</th><th>OT</th><th>EC</th></tr> </thead> <tbody> <tr> <td></td><td></td><td>32</td><td>0</td><td>32</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> </tbody> </table> <p>T - Theoretical; TP - Theoretical and practical; LP - Laboratory Practice; S - Seminar; TG - Tutorial guidance; FW - Fieldwork; T - Training; ; EC - Clinical teaching; O* - Other hours typified as Clinical Training under the Directive 77/453/EEC of June 27, adapted by Directive 2005/36/EC.</p>	ECTS	Total	Horas de contacto semestral									6	160	T	TP	PL	S	TC	E	O	OT	EC			32	0	32	0	0	0	0	0	0
ECTS	Total	Horas de contacto semestral																																
6	160	T	TP	PL	S	TC	E	O	OT	EC																								
		32	0	32	0	0	0	0	0	0																								
Teacher in charge (GDPR consent) [complete name, email]	Jacinto José Carneiro Gomes / jacinto.gomes@ipportalegre.pt																																	
Teacher in charge (GDPR consent) [complete name, email]	Elvira Matilla Pinto / elvirapinto@ipportalegre.pt																																	
Prerequisites [Curricular Units that must precede and specific entry competences]																																		
Learning outcomes [Description of the overall and specific objectives] [Knowledge, skills and competences to be developed by students]	Students are expected to acquire basic knowledge of cell and molecular biology and to become familiar with the normal histological characteristics of different tissues, organs and organ systems from a morphofunctional perspective. It is also intended that they acquire practical skills in terms of obtaining and processing cytological and histological preparations and become familiar with the different techniques of microscopy in the scope of diagnosis and research.																																	
Sustainable Development Goals																																		
Syllabus	<p>THEORETICAL CLASSES:</p> <p>1. Fundamentals of cell and molecular biology, cell differentiation, methodologies for cell study; 2. Methodologies for the study of tissues; 3. Epithelial tissue; 4. Connective tissue; 5. Bone and cartilage; 6. Muscle tissue; 7. Nervous tissue; 8. Circulatory system, blood cells and hematopoiesis; 9. Digestive tract and associated organs; 10. Respiratory apparatus; 11. Skin; 12. Urinary tract; 13. Sense organs.</p> <p>PRACTICAL CLASSES:</p> <p>1. Introduction to microscopy; 2. Sample collection for cytology; 3. Staining techniques for cytological preparations; 4. Preparation and observation of blood smears and other cytological preparations; 5. Blood smears: red blood cells and white blood cells; 6. Preparation, processing and staining of histological samples; 7. Observation of histological preparations on the circulatory system; 8. Observation of histological preparations on the immune system and hematopoiesis; 9. Observation of histological preparations on the digestive apparatus; 10. Observation of histological preparations on the respiratory apparatus; 11. Observation of histological preparations on the skin; 12. Observation of histological preparations on the urinary system and endocrine glands.</p>																																	
Teaching methodologies (including assessment) [Specify the types of assessment and the weights and evaluation criteria]	<p>1 - Teaching methodologies</p> <p>Theoretical classes in which the concepts will be introduced and explained with the desired level of detail, and laboratory practical classes in which students will have the opportunity to apply the theoretical concepts.</p> <p>Because of the exceptional situation related to the SARS-CoV-2 pandemic, teaching will be made by distance learning, through video conferencing platforms (Zoom-Colibri), providing videos with demonstrations of practical activities and using Web tools as teaching support.</p>																																	

	<p>2 - Period assessment</p> <p>3 - Examination assesement</p>
<p>Bibliography</p>	<p>1 - Main Bibliography</p> <p>JUNQUEIRA, LC; CARNEIRO, J. 2017. Histologia Básica 13ª Ed. Guanabara Koogan. Rio de Janeiro, Brasil.</p> <p>BACHA, William J., BACHA, Linda M. (2000). Color atlas of veterinary histology (2nd ed.). Lippincott Williams & Wilkins. USA.</p> <p>DELLMANN, H.-Dieter, CARITHERS, Jeanine R. (1996). Cytology and microscopic anatomy. Williams & Wilkins. USA.</p> <p>WELLMAN, Maxey L., RADIN, M. Judith (2014). Hematology and Cytology (8th edition). Missouri. USA.</p> <p>Notes provided by the teacher</p> <p>2 - Complementary Bibliography</p> <p>Banks, William J. (1993). Applied Veterinary Histology (3rd ed.) Mosby, inc. London. UK.</p> <p>Cornell University College of Veterinary Medicine (2013). ECLINPATH - leave the textbook. Available at http://eclinpath.com/</p>
<p>Special Situations</p> <p>[Students with special status]</p>	<p>1 - Period assessment - Students with special status</p> <p>2 - Examination assesement - Students with special status</p>