


<b>Updated On</b>	2024/04/08																																								
<b>Curricular Year / Period</b>	2023/24 / S2																																								
<b>Course</b>	Equiniculture																																								
<b>Curricular Unit</b>	Cytology and Animal Histology																																								
<b>Language(s) of Instruction</b>	Português Inglês																																								
<b>ECTS/tempo de trabalho (horas)</b>	<table border="1"> <thead> <tr> <th rowspan="2">ECTS</th> <th rowspan="2">Total</th> <th colspan="9">Horas de contacto semestral</th> </tr> <tr> <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 rowspan="2">6</td> <td rowspan="2">160</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> <tr> <td>0</td> <td>0</td> <td>0</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									T	TP	PL	S	TC	E	O	OT	EC	6	160	32	0	32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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<b>Teacher in charge (GDPR consent)</b> <small>[complete name, email]</small>	Filipa Rosa Esgueira Cabecinhas / filipacabecinhas@ippportalegre.pt																																								
<b>Prerequisites</b> <small>[Curricular Units that must precede and specific entry competences]</small>																																									
<b>Learning outcomes</b> <small>[Description of the overall and specific objectives] [Knowledge, skills and competences to be developed by students]</small>	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.																																								
<b>Sustainable Development Goals</b>																																									
<b>Syllabus</b>	<p><b>THEORETICAL CLASSES:</b></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><b>PRACTICAL CLASSES:</b></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>																																								
<b>Teaching methodologies (including assessment)</b> <small>[Specify the types of assessment and the weights and evaluation criteria]</small>	<p><b>1 - Teaching methodologies</b></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>As didactic support, demonstrative videos of practical activities and the use of Web tools that facilitate the acquisition of knowledge and learning can be made available.</p> <p><b>2 - Period assessment</b></p>																																								

	<p>THEORETICAL - Written assessment at the time of intermediate assessment (2 frequencies) (70%). PRACTICE - Mandatory attendance at 75% of practical classes, and written exam on laboratory techniques and diagnostic methods, as well as carrying out reports of laboratory activities (30%). The final grade must be equal to or higher than 9.5 points in the theoretical assessment as well as the practical evaluation to complete the course.</p> <p><b>3 - Examination assesement</b></p> <p>THEORETICAL - Written assessment during the exam period (70%). PRACTICE - Mandatory attendance at 75% of practical classes, and written assessment on laboratory techniques and diagnostic methods (30%). The final grade should be equal to or greater than 9.5 values in the theoretical assessment as well as in the practical assessment for completion of the curricular unit.</p>
<p><b>Bibliography</b></p>	<p><b>1 - Main Bibliography</b></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 &amp; Wilkins. USA.</p> <p>DELLMANN, H.-Dieter, CARITHERS, Jeanine R. (1996). Cytology and microscopic anatomy. Williams &amp; 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><b>2 - Complementary Bibliography</b></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. Avaiable at <a href="http://eclinpath.com/">http://eclinpath.com/</a></p>
<p><b>Special Situations</b> [Students with special status]</p>	<p><b>1 - Period assessment - Students with special status</b></p> <p>In addition to the previous methodology of evaluation, the student worker who has no chance to attend the practical classes may take the written exam to assess knowledge about laboratory techniques and diagnostic methods (30%).</p> <p><b>2 - Examination assesement - Students with special status</b></p> <p>In addition to the previous methodology of evaluation, the student worker who has no chance to attend the practical classes may take the written exam to assess knowledge about laboratory techniques and diagnostic methods (30%).</p>