

Code of subject	M_WE_SEM1 HE 1 ANG
Field of study	Veterinary
Name of the training module including the Polish name	Histology and embryology 1 Histologia i embriologia 1
Language of instruction	English
Module type	Mandatory
Level of studies	Long-cycle master's degree studies
Form of study	Full-time
Location in the programme (year)	I
Location in the programme (semester)	1
Number of ECTS credits with a division into contact/noncontact	5 (2,8/ 2,2)
Name and surname of the person in charge	dr Karol Rycerz
Unit offering the subject	Department of Animal Histology and Embryology
Aim of the module	The aim of the subject is to: 1) familiarize students with the microscopic structure of animal tissues, their localisation and functions; 2) mastering the skills of microscopic analysis of animal tissues. 3) familiarize students with the stages of embryonic development of birds and mammals. The content of the module is an introduction to the implementation of further stages of studies. It is necessary and related to many theoretical and clinical subjects in the field of veterinary medicine.
Learning outcomes – the total number of learning outcomes may not exceed (4-8) for the module. The description of the intended learning outcomes that a student should achieve after the completion of the module should be provided. The outcomes for all forms of classes used should be presented.	Knowledge:
	K1 knows the classification of animal tissues, their microscopic structure in connection with the functions, localisation in animal organisms
	K2 knows and describes the stages of embryonic development of birds and mammals
	K3 knows the terminology of histology and embryology
	Skills:
	S1 is able to use of microscopic equipment in order to recognize the microscopic structure of animal tissues
	S2. uses medical nomenclature in the field of histology and embryology
	S3. understands the necessity of lifelong self-learning in the field of Histology and embryology
	Social competence:
C1 has a habit of constantly expanding knowledge in the field of histology and embryology and improving skills	
Preliminary and additional requirements	No requirements
Contents of the training module – a compact description	The subject is conducted in the form of lectures and classes. The topics of the lectures include familiarisation with: oogenesis in birds and mammals, sexual cycle in the context of cyclical changes in the structure of female reproductive organs,

	<p>spermatogenesis, fertilization in birds and mammals, cleavage, gastrulation, formation of primary and final organs in birds and mammals, foetal membranes in birds and mammals and congenital defects.</p> <p>The topics of the classes include familiarisation with: structure and handling with the microscope, selected methods of histological examination, cellular polymorphism, microscopic structure of single and stratified epithelia and exocrine glands, connective tissue proper, supporting connective tissues, blood and haematopoiesis, skeletal and cardiac striated muscle tissue, smooth muscle tissue, nerve and glial tissue and nerve endings.</p>
<p>Recommended and obligatory reading list</p>	<ol style="list-style-type: none"> <li>1. Samuelson, Don A. Textbook of veterinary histology. St. Louis : Saunders Elsevier, cop. 2007.</li> <li>2. Dellmann H., Brown E.M. Textobook of veterinary histology. Philadelphia : Lea &amp; Febiger, 1981.</li> <li>3. McGeady T.A., Quinn P.J., et. al. Veterinary embryology. Wiley Blackwell, 2017.</li> <li>4. Hyttel P., Sinowatz F., Vejlsted M. Essentials of domestic animal embryology. Edinburgh [etc.] : Saunders Elsevier, 2016.</li> </ol>
<p>The intended forms/activities/ teaching methods</p>	<p>Lectures: multimedia presentations prepared by employees of the Department of Histology and Embryology,</p> <p>Classes: multimedia presentations prepared by employees of the Department of Histology and Embryology, microscopic analysis of histological preparations, discussion, showcases with slides, website of the Department, oral and test repetitions, student's own work documented with figures in exercise books,</p> <p>Oral individual or group consultations conducted outside the planned classes.</p>
<p>Methods of verification and documentation forms of the achieved learning outcomes</p>	<p>Knowledge:</p> <ul style="list-style-type: none"> <li>- An oral test of the theoretical preparation for the subject of the classes is conducted during the classes.</li> <li>- In the semester there are 4 partial tests (15 questions) in the form of a single-choice test.</li> </ul> <p>Criteria for evaluating a test:</p> <ul style="list-style-type: none"> <li>15 correct answers - 5.0</li> <li>14 correct answers - 4.0</li> <li>12-13 correct answers - 3.0</li> <li>11 and below - 2.0</li> </ul> <p>The student has 2 retake dates. Unexcused absence is tantamount to the loss of this term.</p> <p>Skills:</p> <p>Assessment of students' independent work and drawings of histological preparations drawn in exercise books and a discussion.</p> <p>Social competences: There is a discussion during the exercises.</p>

Balance of ECTS credits	Form	Contact hours	ECTS
	Lectures	30	1,2
	Classes	30	1,2
	Consultations	5	0,2
	Test/retake test	6	0,2
		Non-contact hours	
	Preparation to auditory and laboratory classes	28	1,1
Preparation to tests	28	1,1	
Sum	127	5	
Number of contact hours	<ul style="list-style-type: none"> <li>- participation in lectures - 30 hours</li> <li>- participation in auditorium and laboratory classes - 30 hours</li> <li>- participation in consultations - 5 hours</li> </ul> <p>A total of 71 hours, which corresponds to 2,8 ECTS points</p>		
Relationship between subject learning outcomes and veterinary studies learning outcomes	<p>K1 – A.W1. ++  K2 – A.W1. ++, A.W2. ++  K3 – A.W3. ++  K4 – A.W20. +  S1 – A.U8. ++  S2 – A.U21. +  Sc1 – K5) +  Sc2 – K8) +</p>		
Impact of selected compounds to final grade	<p>Elements and weights influencing the grade of the subject in 1 semester (100%)</p> <ul style="list-style-type: none"> <li>- average of test grades (ATG) - 95%</li> <li>- oral test grade (OTG) - 5%</li> </ul> <p>Calculation of the final grade (SG1) for the subject in semester 1:  <math>SG1 = (0.95 \times ATG) + (0.05 \times OTG)</math></p>		