



Histology and embryology II

ECTS: 5.00

SUBJECT MATTER CONTENT

TEACHING OBJECTIVE

The aim of the course/subject is to lead the student to understand: 1) the structure of the body (birds and mammals) at the level of light and electron microscopy, 2) correlations between histological structure of the organ and its function, 3) embryological development in birds and mammals. This course is an introduction to subsequent subjects on the higher levels of veterinary faculty and allow the student to obtain an integrated knowledge about structure and function of the animal organism.

DESCRIPTION OF THE LEARNING OUTCOMES OF THE COURSE IN RELATION TO THE DESCRIPTION OF THE CHARACTERISTICS OF THE SECOND LEVEL LEARNING OUTCOMES FOR QUALIFICATIONS AT LEVELS 6-8 OF THE POLISH QUALIFICATION FRAMEWORK IN RELATION TO THE SCIENTIFIC DISCIPLINES AND THE EFFECTS FOR FIELDS OF STUDY:

Symbols for outcomes related to the discipline:

R/WA_P7S+++

Symbols for outcomes related to the field of study:

A.W3. +, A.W2. +, K.4.+ , A.W1. +, A.U8. +++, K.8.+

LEARNING OUTCOMES:

Knowledge:

W1 – Student knows and describes structures of healthy animal organism: cells, tissues and organs at the level of light and electron microscopy. Student is able to define role of specific cells in healthy tissues and organs.

Skills:

U1 – Student is able to identify all kinds of animal tissues and most of mammalian and avian organs under the light microscope. Student is also able to name and indicate structures forming the organs (layers, tissues, cells) on microscopic images.

U2 – Student uses diagnostic equipment – is able to operate an optical microscope and computer software for analysis of digital images of histological sections.

U3 – Student uses the medical terminology in the field of histology and embryology.

Social competence:

K1 – Student has the habit of constant development of knowledge and improvement of the skills using objective sources of information.

TEACHING FORMS AND METHODS:

Lecture(W1;U1;U3;K1;):Lecture with multimedia presentation.

Practical classes(W1;U1;U2;U3;K1;):Observation of histological slides with the use of light microscope and computer software.

Legal acts specifying learning outcomes:

682/2020

Disciplines: Veterinary science

Status of the course:Obligatoryjny

Group of courses:A - przedmioty podstawowe

Code: ISCED 0841

Field of study:Veterinary Medicine

Scope of education:

Profile of education: General academic

Form of studies: full-time

Level of studies: uniform master's studies

Year/semester: 1/2

Types of classes: Lecture, Practical classes

Number of hours in

semester:Lecture: 20.00, Practical classes: 40.00

Language of instruction:Polish

Introductory subject: Cell biology, Histology and embryology I

Prerequisites: Participation in "Histology and embryology I" and receiving of positive final note.

Name of the organisational unit conducting the course:Katedra Histologii i Embriologii

Person responsible for the realization of the course:prof. dr hab. wet. Bogdan Lewczuk

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Additional remarks:

FORM AND CONDITIONS OF VERIFYING LEARNING OUTCOMES:

Lecture (Oral exam) - Students identifies histological slides using an optical microscope as well as described and pointed the structure on a virtual slide -

Lecture (Written exam) - Students answers 10 questions , prepared on basis of a list of exam issues published on the Faculty web site. Duration time - 1 hour. In the case of on-line exam, the theory exam takes place orally on the MsTeams platform. -

Practical classes (Colloquium test) - Student answers questions about the material presented on lectures and classes as well as about the issues dedicated to oneself preparation -

Practical classes (Colloquium practical) - Identification of histological slides with the use of light microscope as well as indication and description of cells, tissues, layers, etc. on virtual slides. -

Practical classes (Oral test) - Student answers questions about the material presented on lectures and classes as well as about the issues dedicated to oneself preparation -

BASIC LITERATURE:

1. Junqueira LC, Carneir J, *Basic Histology, text and atlas*, Wyd. McGraw-Hill, R. 2013
2. Kuryszko J., Zarzycki J., *Anatomia mikroskopowa zwierząt domowych i człowieka*, Wyd. PWN Warszawa, R. 1995
3. Cichocki T., Litwin J., Mirecka J., *Kompendium Histologii*, Wyd. Wydawnictwo Uniwersytetu Jagiellońskiego, Kraków, R. 1996
4. Gartner LP, Hiatt JL, Strum JM, *Cell Biology and Histology*, Wyd. Harwal Publishing, R. 2011
5.) Ostrowski K.(red.), *Histologia*, Wyd. PZWL Warszawa, R. 1995
6. Gartner L.P., Hiatt J.L., *Color Textbook of Histology*, Wyd. W.B. Saunders Company, R. 2008

SUPPLEMENTARY LITERATURE:

1. Stevens A., Lowe J., (w tłumaczeniu M. Zabła), *Histologia człowieka*, Wyd. Wydawnictwo Medyczne Słotwiński Verlag, Brema, R. 1994
2. Dellmann H.D., Eurell J.A., *Textbook of Veterinary Histology*, Wyd. Wiley, John Sons, USA, R. 1998
3. Samuelson D.A., *Textbook of Veterinary Histology*, Wyd. W.B. Saunders Company, Philadelphia, R. 2007
4. Banks W. J., *Applied veterinary histology*, Wyd. Mosby-Year Book, St. Louis, R. 1993
5. Jura C., Klag J., *Podstawy embriologii zwierząt i człowieka*, Tom 1 i 2, Wyd. PWN, Warszawa, R. 1994
6. Bielańska-Osuchowska Z., *Embriologia*, Wyd. PWRiL, Warszawa, R. 2001