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Course title: PATHOMORPHOLOGY I

ECTS credit allocation (and other scores): 5

Semester: spring

Level of study: ISCED-7- long-cycle programmes (EQF-7)

Branch of science: Agricultural sciences

Language: English

Number of hours per semester: 75

Course coordinator/ Department and e-mail: dr hab. Iwona Otrocka-Domagala, Department of Pathological Anatomy, i.otrocka-domagala@uwm.edu.pl

Type of classes: classes and lectures

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#### Substantive content

**CLASSES:** During the laboratory classes the student becomes familiar with the morphological changes in the tissues and internal organs, during infectious, parasitic and non-infectious diseases in animals. Student performs histopathologic examination and learns to recognize pathological changes in organs and tissues of cattle, horses, dogs, cats, sheep and pigs, characteristic for certain developmental anomalies, circulatory disturbances, inflammatory disorders and neoplasms. Furthermore, student becomes familiar with tumour classifications, grading, and the main principles of oncological pathology.

**LECTURES:** Lectures in pathology include morphological changes observed microscopically in animals, resulting from genetic disorders, metabolic diseases, infectious and non-infectious diseases. Furthermore, lectures also include ethiology and pathogenesis of the morphological abnormalities and the application of the histopathological examination. Neoplastic diseases will be also discussed, with the special emphasis on carcinogenesis/tumorigenesis, classification of tumours in domestic animals, detailed histology of different tumour types, advantages and limitations of both cytological and histopathological examination. )

**Learning purpose:** The recognition of morphological changes in animal tissues during various disease processes.

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**Knowledge:** Recognizing of microscopic changes in tissues during various diseases of animals.

**Skills:** Sampling, fixing and sending the biological material to the histopathological laboratory.

**Social Competencies:** Using of pathomorphological terminology in dealing with other veterinarians or professional organisations.

#### Basic literature:

- 1) J.F. McGavin, M.D. Zachary, Pathologic Basis of Veterinary Disease 5th ed., Mosby, 2012
- 2) Kumar V., Abbas AK, Aster J. Robbins Basic Patology, 10<sup>th</sup> ed., Elsevier 2017.
- 3) Maxie MG, Jubb, Kennedy & Palmer's Pathology of Domestic Animals (6<sup>th</sup> Ed.), Elsevier, t.1-3, 2015.

#### Supplementary literature:

- 1) Withrow, Withrow and MacEwens's Small Animal Clinical Oncology, Elsevier, 2012
- 2) S.A. Geller, L.M. Petrovic, Biopsy interpretation of the liver, Lippincott Williams & Wilkins, 2009



- 3) J. Rothuizen et al., WSAVA Standards for Histological and Clinical Diagnosis of Canine and Feline Liver Diseases, Elsevier, 2006
  - 4) R.L. Cowell, R.D. Tyler, J.H. Meinkoth, D.B. De Nicola, Diagnostic cytology and hematology of the dog and cat, Mosby, 2008
  - 5) Meuten DJ, ed, Tumors in Domestic Animals. 5th ed., Blackwell, 2017
  - 6) R.L. Cowell, R.D. Tyler, Diagnostic Cytology and Hematology of the Horse. 2nd ed. Mosby, 2002
  - 7) F. Cian, K. Freeman, Veterinary Cytology: Dog, Cat, Horse and Cow (Self-Assessment Colour Review) 2nd ed. , CRC Press, 2017
  - 8) G. Kanel, J. Korula , Atlas of Liver Pathology 3rd ed. Saunders, 2010
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The allocated number of ECTS points consists of:

Contact hours with an academic teacher: 75

Student's independent work: 28