Module title:	Rotation - Avian Diseases	ECTS	2
Polish translation:	Staż - choroby ptaków		
Course:	Veterinary Medicine		

Module language: English		Stage: JM-FVM	
Form of studies: ☒ intramural ☐ extramural	Type of module: ☐ basic ☒ directional ☒ rotation ☒ mandatory ☐ elective	Semester: 10	☐ winter semester ☒ summer semester
Academic year:	**Intake 2021/2022**	Catalogue number:	FVM-V-JMSS-10S-R01_23

Module coordinator:	Dr Artur Żbikowski
Teachers responsible for the module:	Academic teachers of the Institute of Veterinary Medicine, Department of Pathology and Veterinary Diagnostics, Division of Avian, Exotic Animals and Fish Diseases; PhD students in accordance to the internal legal acts; visiting professors; other specialists in the field of study
Course Description:	An intensive course of avian diseases: students practice their skills in avian necropsy, embryopathology, lesion-scoring (coccidiosis), vaccination and treatment of birds, collecting samples, estimation of biosecurity strategies in poultry farm. Students learn how to interpret the results of histopathology, serological monitoring. The course focuses on the ambulatory-domestic and petbirds, perlustration of poultry farm and hatchery problems. Students get practical knowledge of therapy, molecular and virological methods in diagnosis of avian diseases, welfare of poultry. Topics of Rotation: Introduction to Avian rotation. Worksafety and Hygiene rules. Sampling for Salmonella testing in poultry production Avian histopathology and sampling Welfare of poultry Ambulatory-pet birds Avian embryopathology Ambulatory-domestic birds Serology and serological monitoring in poultry production Poultry Farm Antibiotics and treatment of poultry Scoring in diagnosis of coccidiosis Vaccination techniques in poultry Molecular diagnostics in avian veterinary medicine Estimation of biosecurity in poultry farm Pathology of birds of prey Differential diagnosis in avian diseases
Teaching forms, number of hours:	a) Practicals: 40 h
Teaching methods:	Clinical course: courses in farm, ambulatory, laboratory and necropsy room; presentations showing the clinical and pathological symptoms of diseases. Consultations outside the time reserved for regular classes (1 hour/week) - date and time will be arrange by the course coordinator at the beginning of the semester. Detailed schedule will be defined by the coordinator of the course at the beginning of semester.
Formal prerequisites and initial requirements:	Passing the courses: Avian diseases, Animal anatomy, Animal physiology, Microbiology, Immunology, Pathomorphology, Veterinary pharmacology, Animal husbandry and breeding, Pathophysiology.

Learning effects		Course outcomes:	Learning outcomes relative to the course outcomes	Impact on the course outcomes*
Knowledge:	1	Student has a knowledge about poultry embryopathology	A.W.1, A.W.2, A.W.3	2
	2	Student has a knowledge about necropsy lesions in course of avian infectious and metabolic diseases	A.W.11, A.W.13, B.W.1, B.W.2, B.W.5	2
	3	Student has a knowledge about avian infectious and non-infectious diseases	A.W.11, A.W.13, B.W.1, B.W.2, B.W.5	2
	4	Student has a knowledge of pharmacodynamics and pharmacokinetics of drugs used in birds	A.W.10, A.W.16, A.W.18, B.W.3, B.W.4	2
Skills:	1	Student can perform complete veterinary history interview of cases	B.U.2, A.U.13	3 2

			A.U.12, A.U.16, B.U.20	1
	2	Student can carry out clinical investigation of farm and pet birds and can perform basic laboratory tests	A.U.13, B.U.3, B.U.13 A.U.10	2 1
	3	Student can perform necropsy of birds carcasses and can prepare and interpret results	B.U.16 B.U.19	3 2
	4	Student can collect samples for laboratory tests and interpret results	B.U.6	2
Competences:	1	Student is prepared to undertake the diagnosis of the most common infectious and non-infectious diseases in birds.	K.S.1, K.S.2, K.S.4, K.S.5, K.S.10	2
	2	Student is prepared to perform proper therapy of avian diseases	K.S.3, K.S.4, K.S.7	2
Objectives of the module required to obtain learning effects:		Students acquire practical skills in the field of avian diseases. Students learn how to correctly diagnose diseases of avian patients on the base of the clinical examination, laboratory tests and necropsy. They learn about therapy, preventive measures, biosecurity on poultry farm and hatchery operation. Students actively participate in field classes: perform perlustration of poultry farm, evaluate biosecurity on farm and learn about welfare requirements of farm birds. Students train vaccination techniques used in poultry, prepare therapy schedules of poultry diseases and collect samples for auxiliary tests. Students perform necropsy of birds and embryos. Students use in practice diagnostic methods of coccidiosis evaluation (scoring). Students analyse results of auxiliary tests, learn principles of serological monitoring.		
Assessment methods:		Clinical training card (documented student attendance and activity) + protocols (properly prepared referrals, necropsy reports, research forms, etc.) + short essay of and PowerPoint presentation on selected topic + oral examination at the end of Rotation. Credit is awarded for correct completion of the forms, answering the questions, demonstrating knowledge acquired during the rotation, and presenting the topic of the essay. Classes are conducted in thematic sections. In the event of an absence from a given topic, the student is required to make up the missed work. It is permissible to make up the missed work at another time (with a different group) during the rotation. Two terms for Avian Rotation credit are anticipated (I -first term, II -retake). Both terms have the same form and grade 3,0 is required to pass. The retake is for Students who failed first term and Students who were absent in the first term (absence must be excused within 7 days). All details will be found in the rules and regulations which will be given to Students during Avian Rotation. No extra assessment methods are anticipated. In case of unforeseen circumstances at the University mandatory remote teaching and remote assessment methods (or other) might be adopted.		
Detail description of assessment methods; Formal documentation of learning outcome:		Records collected in the course portfolio (individual records of student results, presence lists, course schedule, rules and regulations), the final grade in eHMS. Records in the Student's Daybook of Summer Practice and Clinical Training.		
Elements impelling final grade:		The final grade (entered into the eHMS) is used to verify learning outcomes. The weights of the final grade: 1. Evaluation of protocols – 33% 2. Evaluation of essay and oral presentation – 33% 3. Evaluation of the knowledge, skills and competencies acquired during the rotation - 34%		
Teaching base:		Division of Avian, Exotic Animals and Fish Diseases (IMW; necropsy room of the Division of Animal Pathomorphology (IMW), poultry farm (eg. Obory, WULS-SGGW), Clinic for Small Animals (IMW)		

Basic literature:

1. Boulianne M. (ed.) Avian Diseases Manual. 8th ed. AAAP-American Association of Avian Pathologists 2019. ISBN: 9781646333936
2. Harrison G. J., Lightfoot T. L.: Clinical avian medicine. Spix Publishing, Inc, Florida, USA, 2011. ISBN 10: 0975499408 ISBN 13: 9780975499405
3. Lucio-Martinez B., Korich J.A. Illustrated Guide to Poultry Necropsy and Diagnosis. Cornell University. 2010. ISBN: 978-0-615-39605-7
4. Samour J. Avian Medicine 3rd Edition. Elsevier. 2015. ISBN: 978-0-7234-3832-8
5. Schmidt R.E., Struthers J.D., Phalen D.N.: Pathology of Pet and Aviary Birds, 3rd Ed. John Wiley & Sons Inc. 2024. ISBN: 978-1-119-65048-5
6. Swayne D.E.: Diseases of Poultry. 14 ed. Willey-Blackwell. 2019 doi:10.1002/9781119371199

Supplementary/additional literature:

1. Burkett G.: Preventative Health Care for Pet Birds, Bublish, Inc., 2020. ISBN 10: 1647041457 ISBN 13: 9781647041458
2. Campbell T.W., Grant K.R.: Exotic Animal Hematology and Cytology. 5 ed. John Wiley & Sons, Inc.2022. ISBN:9781119660231 DOI:10.1002/9781119660293
3. Capua I., Alexander D. J.: Avian influenza and Newcastle Disease. A field and laboratory manual. Springer, Italy, 2009 DOI: 10.1007/978-88-470-0826-7
4. Carpenter J.W., Harms C. (eds.): Carpenter's Exotic Animal Formulary. 6th edition. Elsevier, USA, 2022. ISBN: 9780323833929.
5. Chitty J., Lierz M. (eds.): BSAVA manual of raptors, pigeons and passerine birds. BSAVA. 2008. ISBN: 978-1-905319-0-46
6. Doneley B.: Avian Medicine and Surgery in Practice. Taylor & Francis Group. 2016. ISBN: 978-1-4822-6019-9
7. Graham J,. E. W. Blackwell. Blackwell/s 5 minute veterinary consult, Avian. 2016. ISBN: 9781118934593.
8. Harrison G. J., Lightfoot T. L.: Clinical avian medicine. Spix Publishing, Inc, Florida, USA, 2006. ISBN: 00-9754994-0-8
9. Hedley J. (ed.): BSAVA Small Animal Formulary. Part B: Exotic Pets. 10th ed. Wiley John & Sons. 2020. ISBN: 9781910443712
10. Kaspers B., Schat K.A., Goebel T., Vervelde L.(ed.): Avian immunology 3rd ed. Elsevier Science Publishing Co Inc. 2021. ISBN: 9780128187081
11. Koenig H.E., Korbel R., Liebich H-G, Klupiec C.: Avian Anatomy: Textbook and Colour Atlas, 2nd Ed. 5M Publishing Ltd, UK. 2016. ISBN 978-1-910455-60-9
12. Lourens S., Holleman J., van Schie T.: Hatchery Signals: A Practical Guide to Improving Hatching Results. R Publishers B.V. 2021. ISBN: 978-90-8740-333-1
13. Majo N., Dolz R.: Atlas of avian necropsy. Microscopic diagnosis sampling. Grupo Asís Biomedia, SL. 2019. ISBN: 978-84-17225-90-2
14. McLelland J.: A colour atlas of avian anatomy. Wolfe Publishing Ltd., England, UK, 1990. ISBN: 0 7234 1575 7
15. Poland G., Raftery A. BSAVA Manual of Backyard Poultry Medicine and surgery. BSAVA. 2019 ISBN: 978-1-905319-43-5
16. Sturkie P.D., Whittow G.C.: Sturkie's Avian Physiology (7th Edition).Elsevier Inc. 2022. ISBN: 9780128197707
17. http://www.efsa.europa.eu/
18. http://www.oie.int/
19. http://www.who.int/en/
20. https://wababiosecurity.com/
21. https://eufarmbook.eu/en/projects/362281efdc36bb4ab0a3a870ff159fe6b7fa75387063ee3d42541bf3f5aa6c9e/contributions?projects=NETPOULSAFE
22. Quinn P. J.: Veterinary Microbiology and Microbial Diseases. John Wiley & Sons. 2011. ISBN: 9781405158237

And other relevant scientific publications, including those of the module coordinator.

ANNOTATIONS

Student's Daybook of Summer Practice and Clinical Training

* 3 – complete and detailed, 2 – moderate, 1 – basic.

Quantitative summary of the module:

Estimated number of work hours per student (contact and self-study) essential to achieve presumed learning outcomes of the module - base for quantifying ECTS:	**60 h**
Total ECTS points, accumulated by students during contact learning:	**2 ECTS**