Module title:	Rotation equine diseases	**ECTS**	**6**
Polish translation:	Staż choroby koni		
Course:	**Veterinary Medicine**		

Module language: English		Stage: JM-FVM	
Form of studies: ☒ intramural ☐ extramural	Type of module: ☐ basic ☒ directional ☒ mandatory ☐ elective	Semester: 10	☐ winter semester ☒ summer semester
Academic year:	**2020/2021**	Catalogue number:	FVM-V-JMSS-10S-D17_20

Module coordinator:	dr Dominika Domańska
Teachers responsible for the module:	Academic teachers of the Institute of Veterinary Medicine; Department of Large Animal Disease and Clinic; Division of Veterinary Epidemiology and Economics; PhD students in accordance to the internal legal acts; visiting professors; other specialists in the field of study
Unit responsible for the module:	Institute of Veterinary Medicine, Department of Large Animal Diseases and Clinic , Division of Veterinary Epidemiology and Economics
Faculty in charge:	Faculty of Veterinary Medicine
Objectives of the module:	Students take part in field workshops on National Agricultural Support Center farms and horse studs with high number of animals. During workshops students apply knowledge from fields of herd management, reproduction, infectious diseases, internal diseases and surgery. The aim is to provide practical skills required to asses aetiology and pathogenesis of farm animals' diseases requiring surgical, internal or obstetrical treatment, perform clinical diagnosis and examination and apply proper therapeutic procedures.
Teaching forms, number of hours:	a) Clinical exercises: 90 hours
Teaching methods:	**Reproduction** Practical workshops in university clinic and in the field (farms and studs) with the application of veterinary equipment. **Surgery:** Practical workshop in cowshed Obory Detailed schedule will be defined by the coordinator of the course at the beginning of semester. Detailed organization of consultations will be defined by the coordinator of the course at the beginning of semester **Internal medicine:** Clinical/laboratory classes: conducting clinical examination of animals, treatment of clinical cases, analysis of test results Consultations for students - 1h / week. The manner of organizing consultations will be determined by the subject coordinator at the beginning of the semester Detailed schedule will be defined by the coordinator of the course at the beginning of semester. Detailed organization of consultations will be defined by the coordinator of the course at the beginning of semester. **Infectious diseases:** Introduction in the horse farm organization, herd management (biosecurity protocols, deworming and prophylaxis protocols). Work with documentation: farm veterinary documentation, horse passport and health documents Direct contact with horses: clinical examination of animals, collection of material for laboratory tests, performing veterinary procedures Consultations (1h/week) Detailed schedule of rotation and detailed organization of consultations will be defined by the coordinator of the course at the beginning of semester.
Formal prerequisites and initial requirements:	Passing the courses: Animal anatomy, Animal physiology, Veterinary pharmacology, Pathomorphology, Diagnostic imaging, Veterinary microbiology, Animal pathophysiology, Clinical and laboratory diagnostics, General surgery and anaesthesiology, Equine diseases Knowledge of basics of handling of animals, safety rules, general examination of the animal

Learning outcomes:	Knowledge: Students knows; - the physiological and pathological mechanisms of horses - the clinical manifestations of diseases and knows other diseases with similar clinical appearance	Skills: Student is able to; - describe the mechanisms of equine diseases - plan the diagnostic procedures (including differential diagnosis) in	Competences: Student: - critically analyzes the results of research and is ready to use them for diagnostics, treatment and eradication of diseases of horses

	- the diagnostic schemes and protocols (including differential diagnosis) for equine diseases -the therapeutic schemes and protocols recommended for equine diseases, pharmacodynamics properties of recommended products and the interactions among medicinal products - the principles of conducting clinical trials and monitoring the health status of horses - anatomopathological lesions typical for particular diseases of horses - procedures and applicable legal provisions in the event of suspected or confirmed diseases that are subject of eradication or registration/w mandatory and notifiable	equine diseases - plan, implement and monitor the treatment strategies -diagnose diseases of horses using laboratory diagnostic methods -conduct a full clinical examination of horses - collect, secure and properly mark biological samples - implement appropriate procedures in the event of a disease j/w that is subject to eradication or registration -properly conduct an epizootic investigation and eradicate infectious diseases of horses -supplement and maintain documentation related to veterinary practice in accordance with applicable law - describe radiographs and correctly interpret the findings, diagnose the most common equine diseases that require surgical intervention	- presents an attitude consistent with veterinary deontology and the Veterinary Doctor's Code of Ethics - is ready to take responsibility for his actions and decisions - is aware of the continuous development of science and is ready to expand and update knowledge - works in field conditions and effectively cooperates with co-workers and personnel
Assessment methods:	**Reproduction** observations of student's activity and knowledge during internship, project, medical history card, oral examination, project and practical abilities assessment **Surgery** Observations of student's activity and knowledge during internship, written project, oral examination and practical abilities assessment. No extra assessment methods are anticipated. In case of unforeseen, unusual circumstances mandatory remote teaching and remote assessment methods might be adopted. **Internal diseases** Assessment resulting from the observation of the student's activity and knowledge during classes, internship project, preparation of a patient's medical history card and checking of practical skills. Classes are held once for each group. The student has the opportunity to make up for the absence with another group but due to the limited number of people who can participate in clinical classes, doing the classes is possible only after prior consultation with the subject coordinator. 100% attendance is required from the student. The final grade in the subject is issued based on the activity in the classroom. The evaluation on a 0-1 point scale covers elements of clinical and laboratory classes, and preparation of an internship project. Maximum number of points 10, weight 100%. Clinical classes (0-5 points) - student's active participation in animal examination - discussion of clinical cases - performing medical and veterinary activities - completing medical and veterinary documentation - collecting material (blood, urine, faeces, swabs) for laboratory tests - the ability to choose the right treatment method for the disease cases in question - filling out the patient's medical card Laboratory classes (0-2 points) - active work in carrying out laboratory tests - discussion of clinical cases Preparation of internship project (0-3 points) - preparation of an internship project on a topic accepted by teacher. No extra assessment methods are anticipated. In case of unforeseen, unusual circumstances mandatory remote teaching and remote assessment methods might be adopted. **Infectious diseases** Attendance in rotation is mandatory. In case of absence student can participate in rotation with another group. However, due to the limited number of people which may participate in rotation it is necessary to contact the course coordinator. The obligatory condition for participation in the rotation are:		

	• valid life and accident insurance (ubezpieczenie NNW in Polish) • awareness of health and safety rules during any contact with animals • awareness of biosecurity rules The final evaluation depends on attendance and student's activity during rotation: clinical examinations of horses, cases discussion, horse passport and health documents and clinical cases discussion during the rotation – the scale 0-2 points 0-5 points – 2.0 6 points - 3.0 7 points - 3.5 8 points - 4.0 9 points - 4.5 10 points - 5.0 No extra assessment methods are anticipated. In case of unforeseen, unusual circumstances mandatory remote teaching and remote assessment methods might be adopted.
Formal documentation of learning outcomes:	eHMS entry. Records collected in the course portfolio i.e. individual records of student results, presence lists, database of oral and written questions, written assessments of the students.
Elements impelling final grade:	**Reproduction** oral examination and practical abilities assessment 50%, observations of student's activity and knowledge 25%, project, medical history cards 25 % **Surgery** oral examination and practical abilities assessment 50%, observations of student's activity and knowledge 25%, written project 25 %. **Internal diseases** The assessed activity during classes and the internship project constitutes 100% of the final grade. **Infectious diseases**: The final evaluation depends on the number of points received during the rotation – 100% **Final grade is the weighted mean result of grades from all four subjects where weights are: reproduction- 0,3; internal diseases- 0,25; surgery -0,35; infectious diseases- 0,1.**
Teaching base:	Department of Large Animal Disease with Clinic, horse farms, horse clinics and horse events.

Obligatory and supportive materials[23]:

1. Handbook of Veterinary Obstetrics / Peter G. G. Jackson ; il. John Fuller ; Saunders Ltd.;
2. Veterinary Reproduction and Obstetrics. D.E. Noakes, T.J. Parkinson, G.C.W. England 9th ed. Sauders, Elsevier,
3. Large Animal Theriogenology. R.F. Youngquist, W.L. Threlfall. 2nd ed. Saunders, Elsevier.
4. Manual of Diagnostic Tests and Vaccines for Terrestial Animals. OIE,
5. Veterinary Medicine 10th Edition, O. M. Radostits, C.C. Gay, K. W. Hinchcliff, P. D. Constable. Saunders Elsevier,
6. Equine Medical Disorders, A.M. Johnston .Second Edition, Blackwell Scientific Publication, 1994
7. Practical Equine Dermatology D.H. Lloyd, J.D. Littlewood, J. M. Craig and L.R. Thomsett:. Blackwell Science, 2003
8. Equine Neurology. M. Furr, S. Reed: Blackwell Publishing, 2008
9. Equine Cardiology M. Patteson, Blackwell Science, 1996
10. Equine Neonatal Medicine M. R. Paradis:. Saunders Elsevier, 2006
11. Veterinary Medicine 10th Edition O. M. Radostits, C.C. Gay, K. W. Hinchcliff, P. D. Constable:, Saunders Elsevier, 2007
12."Equine infectious diseases 2nd edition, D. C. Sellon & M. T. Long, Saunders, 2013
13. Infectious Diseases of the Horse: Diagnosis, pathology, management, and public health, JH van der Kolk & EJB Veldhuis Kroeze, Oxford University Press USA, 2013
14. Infectious Diseases of the Horse Tim S. Mair, R. E. Hutchinson, Equine Veterinary Journal Ltd., 2009
15. H.E. Veterinary Anatomy Domestic Mammals - Textbook and Color Atlas, Koenig. Blackwell Science. 2006.
16. Textbook of Veterinary Anatomy K.M. Dyce, Wolfgang O. Sack, C. J. G. Wensing:, 3rd edition. Elsevier. 2002.
17. Clinical anatomy of the horse H.M. Clayton, P.F. Flood, D.S. Rosenstein: Mosby, Elsevier. 2005.
18. Illustrated atlas of clinical equine anatomy and common disorders of the horse. R.J. Riegel, S.E. Hakolan: 1999, Equiston publication, vol.1 and 2.
19. The equine distal limb. J.M. Denoix:, Manson Publishing, 2002.
20. Lameness of the horse M. Ross, S. Dyson:. 2003.
21. Equine surgery, J. Auer, J. Stick, Saunders Elsevier, 2006.
22. Lameness in horses T.S. Stashak Adams. Lea and Febiger, 1987.
23. www.oie.int
24. www.aaep.org
25. www.defra.gov.uk
26. www.isid.org
27. www.thehorse.com
28. www.beva.org.uk

Journals:

Theriogenology, Animal Reproduction Science, Reproduction of Domestic Animals, Biology of Reproduction, Reproduction, Fertility and Sterility, Reproductive BioMedicine Online, Archives of Andrology, Internatiomal Journal of Andrology, Andrology

ANNOTATIONS

During clinical and laboratory classes, protective clothing is required: apron and covered footwear.

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:	**100 h**
Total ECTS points, accumulated by students during contact learning:	**4 ECTS**

Learning outcomes of the module relative to the learning outcomes of the subject:

Outcome category	Learning outcomes:	Learning outcomes relative to the course outcomes	Impact on the each for course outcomes
Knowledge – K.1	Students knows the physiological and pathological mechanisms of horses	B.W.1;B.W.2 B.W.3	3 2
Knowledge – K.2	Students knows the clinical manifestations of diseases and knows other diseases with similar clinical appearance	B.W.4; B.W.5 B.W.6; B.W.9 B.W.13	3
Knowledge – K.3	Students knows the diagnostic schemes and protocols (including differential diagnosis) for equine diseases	B.W.4 B.W.5; B.W.6; B.W.9	3
Knowledge – K.4	Students knows the therapeutic schemes and protocols recommended for equine diseases, pharmacodynamics properties of recommended products and the interactions among medicinal products	B.W.6	2
Knowledge – K.5	Students knows the principles of conducting clinical trials and monitoring the health status of horses	B.W. 4, B.W.5, B.W. 6, C.W. 3	3
Knowledge – K.6	Students knows anatomopathological lesions typical for particular diseases of horses	B.W. 3, B.W. 1	3
Knowledge – K.7	Students knows procedures and applicable legal provisions in the event of suspected or confirmed diseases that are subject of eradication or registration/w mandatory and notifiable	B.W. 7, B.W. 8, B.W. 16, C.W. 3, C.W.2	3
Skills –S.1	Student is able to describe the mechanisms of equine diseases	A.U. 12, B.U.3, B.U. 2,	3
Skills –S.2	Student is able to plan the diagnostic procedures (including differential diagnosis) in horses	A.U. 12, B.U.6, B.U. 1, B.U. 3	3
Skills –S.3	Student is able to plan, implement and monitor the treatment strategies	A.U. 11, A.U. 12, B.U. 1, B.U. 9, B.U. 13	3
Skills –S.4	Student is able to diagnose diseases of horses using laboratory diagnostic methods	A.U. 12, B.U.2, A.U. 19, B.U. 1, B.U. 3, B.U.6, B.U.20, C.U. 2	3
Skills –S.5	Student is able to conduct a full clinical examination of horses	A.U. 12, B.U.6, B.U. 1, B.U. 3	3
Skills –S.6	Student is able to collect, secure and properly mark biological samples	B.U.8, B.U. 1, B.U.6, A.U. 10	3
Skills – S.8	Student is able to properly conduct an epizootic investigation and eradicate infectious diseases of horses	A.U. 12, B.U. 1, B.U.13, B.U. 19, B.U.20, B.U. 21	2
Skills – S.9	Student is able to supplement and maintain documentation related to veterinary practice in accordance with applicable law	A.U. 14, A.U. 23, C.U. 4	3
Skills – S.10	Student is able to describe radiographs and correctly interpret the findings, diagnose the most common equine diseases that require surgical intervention	B.U.14, B.U.13, B.U.11, B.W.4, B.W.3	3
Competences –C.1	Student critically analyzes the results of research and is ready to use them for diagnostics, treatment and eradication of diseases of horses	K.S.4, K.S.5, K.S.7	3
Competences-C.2	Student presents an attitude consistent with veterinary deontology and the Veterinary Doctor's Code of Ethics	KS.2	1
Competences-C.3	Student is ready to take responsibility for his actions and decisions	KS.1	2
Competences-C.4	Student is aware of the continuous development of science and is ready to expand and update knowledge	KS.4	1
Competences-C.5	Student works in field conditions and effectively cooperates with co-workers and personnel	KS.9, KS.10	3