Module title:	Rotation equine reproduction	**ECTS**	**1**
Polish translation:	Staż rozród koni		
Course:	**Veterinary Medicine**		

Module language: English		Stage: JM-FVM	
Form of studies: ☒ intramural ☐ extramural	Type of module: ☐ basic ☒ directional ☒ mandatory ☐ elective	Semester: 11	☐ winter semester ☒ summer semester
Academic year:	**2020/2021**	Catalogue number:	FVM-V-JMSS-10S-D17/3_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; 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 Small Animal Dieases and Clinic
Faculty in charge:	Faculty of Veterinary Medicine
Objectives of the module:	The course will provide the knowledge of the specificity of equine reproduction in comparison to other animal species. Content of the curriculum will be implemented in two groups of issues: 1) physiology of reproduction, 2) pathology of reproduction and obstetrics. The program is conducted in the form of practical training. Topics of practical training include diagnostics of estrous cycle phases, pregnancy detection, physical examination, complementary diagnostic methods used in gynaecology and obstetrics, contraception (including gonadectomy), identification of the causes of infertility, basic therapeutic methods and procedures, surgical treatment in gynaecology, obstetrics and diseases of mammary gland.
Teaching forms, number of hours:	a) Clinical exercises :25 hours
Teaching methods:	• Methods aimed on teaching practical skills: • - review medical history, • - perform a thorough physical examination, • - select diagnostic and therapeutic procedure, • - collect and interpret laboratory data, • - perform basic surgery procedures and anaesthesia protocols • - choose the right treatment and follow-up protocol • Consultations (1h/week) The internship takes place in horse clinic and in the farms and horse studs The internship takes place in horse clinic, farms and horse studs. During internship students actively participate (under the supervision of academic teacher) in current veterinary procedures, execute clinical examination with the focus on reproductive tract, use appropriate instruments and utensils, apply proper methods to diagnose pregnancy both clinically (manually, ultrasonography) and with laboratory methods, recognise physiological and pathological conditions of reproductive tract organs in the aspect of postpartum period and oestrus cycle phase and propose treatment strategies of those conditions, analyse causes of infertility and reproductive disorders in stud, asses reproduction efficiency indicators (insemination index, interpregnancy period, fertility, fecundity) and propose solutions to increase reproduction efficiency, gain practical skills in oestrus detection, oestrus cycle control, define ideal time for insemination, withdraw appropriate biological material for clinical and laboratory diagnostics. Knowledge of prophylactic programs for domestic animals and livestock. Principles of using biopreparations (sera, vaccines) and chemotherapeutics in animals. Herd management. Bio-security. Operational plans. Detailed schedule of the classes 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 Knowledge of basics of handling of animals, safety rules, general examination of the animal

Learning outcomes:	Knowledge: Students knows; - differentiates the normal and abnormal reproductive mechanisms	Skills: Student is able to; - describe the mechanisms of reproductive diseases	Competences: Student formulate; - responsible clinical decisions based primarily on the animal welfare

	- the clinical manifestations of reproductive mediated diseases and knows other diseases with similar clinical appearance - the diagnostic schemes and protocols (including differential diagnosis) for reproductive diseases -the therapeutic schemes and protocols recommended for reproductive diseases, pharmacodynamics properties of recommended products and the interactions among medicinal products	- to use the current nomenclature - plan the diagnostic procedures (including differential diagnosis) in the reproductive diseases - plan and monitor the treatment strategies	- his opinion about understand the onset of the disease, clinical appearance and therapeutic process in the context of normal and abnormal reproductive functions - the necessity of constant education using scientific sources
Assessment methods:	observations of student's activity and knowledge during internship, project, medical history card, oral examination, project and practical abilities assessment 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 (general rules of the course)		
Elements impelling final grade:	oral examination and practical abilities assessment 50%, observations of student's activity and knowledge 25%, project, medical history cards 25 %		
Teaching base:	Laboratories and surgery room of the Veterinary Medicine Institute		

Mandatory and supportive materials :

Textbooks:

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.
5.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

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:	**25 h**
Total ECTS points, accumulated by students during contact learning:	**1 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	- Student knows and differentiates the normal and abnormal reproductive mechanisms	B.W.1;B.W.2 B.W.3	3 2
Knowledge – K.2	- Student knows the clinical manifestations of reproductive and knows other diseases with similar clinical appearance	B.W.4; B.W.5 B.W.6; B.W.9	3 2
Knowledge – K.3	- Student knows the diagnostic schemes and protocols (including differential diagnosis) for reproductive diseases	B.W.4 B.W.5; B.W.6; B.W.9	3 2
Knowledge – K.4	-Student knows the therapeutic schemes and protocols recommended for reproductive diseases, pharmacodynamic	B.W.6	2

	properties of recommended products and the interactions among medicinal products		
Skills –S.1	Student is able to describe the mechanisms of reproductive diseases	B.U.4 B.U.7; B.U. 9	3 2
Skills – S.2	-Student is able to use the current nomenclature	B.U.2, B.U.9 B.U.5; B.U.7	3 2
Skills – S.3	- Student is able to plan the diagnostic procedures (including differential diagnosis) in the reproductive diseases	B.U.2 B.U.1; B.U.7	2 1
Skills – S.4	- plan and monitor the treatment strategies	B.U.10; B.U.13 B.U.15; B.U.20	3 2
Competences – C.1	Student formulate responsible clinical decisions based primarily on the animal welfare	KS.1; KS.2; KS.3; KS.6; KS.7; KS.9	2
Competences –C.2	-Student formulate his opinion about understand the onset of the disease, clinical appearance and therapeutic process in the context of normal and abnormal immune functions	KS.4; KS.5; KS.6; KS.8	2
Competences-C.3	Student formulate the necessity of constant education using scientific sources	KS.4; KS.5; KS.6;KS.7; KS.8	2