



SZKOŁA GŁÓWNA
GOSPODARSTWA
WIEJSKIEGO

Farm animal diseases - reproduction

Educational subject description sheet

Basic information

Field of study Veterinary Medicine	Didactic cycle 2023/24
Speciality -	Subject code WETFVMS_D.540.04663.23
Organizational unit Faculty of Veterinary Medicine	Lecture languages english
Study level long-cycle	Mandatory Obligatory subjects
Study form full-time studies	Block Major subjects
Education profile General academic	Disciplines Veterinary medicine
Coordinator	Bartosz Pawliński
Teacher	Bartosz Pawliński
Period Semester 7	Examination Exam
	Activities and hours Lecture: 30 Field exercises: 9 Ćwiczenia kliniczne: 36
	Number of ECTS points 4

Goals

Code	Goal
C1	Program includes lectures and practical exercises in farm animals reproduction in comparison to other farm animals species. During the course students gain knowledge and practical abilities in this discipline. The content of the lectures supplements the content of the laboratory classes.

Entry requirements

Animal anatomy 2, Topographic anatomy, Animal physiology 2, Pathomorphology 2, Pathophysiology, Veterinary pharmacology 2, Microbiology 2, General surgery and anesthesiology, Clinical and laboratory diagnostics 2
 Student should have holistic knowledge and ability to connect and extrapolate previously learned topics into coherent ideas regarding prevention, diagnosis, therapy and management of animal condition.

Subject's learning outcomes

Code	Outcomes in terms of	Effects	Examination methods
Knowledge - Student knows and understands:			
W1	farm animals' reproductive physiology and main hormonal regulation regarding reproduction	B.W1, B.W12, B.W2, B.W3, B.W4, B.W5, B.W6	Written exam, Written credit, Assessment of activity during classes
W2	diagnostic options and treatment methods used for farm animals repro tract	B.W1, B.W12, B.W3, B.W4, B.W5, B.W6	Written exam, Written credit, Assessment of activity during classes
W3	proper methods of selected reproductive tract disease examination	B.W1, B.W12, B.W3, B.W4, B.W5, B.W6	Written exam, Written credit, Assessment of activity during classes
Skills - Student can:			
U1	executes anamnesis with the aim of gathering detailed information about single animal, stud and their environment,	B.U21, B.U3, B.U7	Written credit, Assessment of activity during classes
U2	proceed general and systemic clinical examination regarding the reproductive system, both manually and with the of use appropriate additional methods e.g. instruments and utensils,	B.U13, B.U3, B.U7	Assessment of activity during classes
U3	used additional metodes in clinical examination i.e. USG	B.U13, B.U3, B.U7	Assessment of activity during classes
U4	proper methods for pregnancy diagnosis and its stages	B.U13, B.U3, B.U7	Written credit, Assessment of activity during classes
U5	proper metods for assesment of repro trackt during puerperal period, diagnose problems and propose its treatment	B.U13, B.U3, B.U7	Written credit, Assessment of activity during classes
U6	proper methods and instruments to examine, diagnose and treat the mammary gland	B.U13, B.U3, B.U7	Written credit, Assessment of activity during classes
Social competences - Student is ready to:			
K1	to work as the team member	KS.2, KS.3, KS.6, KS.7, KS.9	Assessment of activity during classes
K2	to communicate with animal owner	KS.2, KS.3, KS.6	Assessment of activity during classes
K3	update knowledge and ethics norm due to codex	KS.12, KS.2, KS.4, KS.8	Assessment of activity during classes
K4	critically evaluate knowledge and use scientific sources to supplement it	KS.2, KS.3, KS.4, KS.6, KS.7, KS.8, KS.9	Assessment of activity during classes

Study content

No.	Course content	Subject's learning outcomes	Activities
1.	<p>1. Fundamentals of clinical endocrinology in reproduction of livestock reproduction. 2. Hormonal regulation of oestrous cycle. 3. Physiology and endocrinology of pregnancy. 4. Embryo mortality and pathology of pregnancy. 5. Physiology of parturition. 6. Pregnancy disorders. 7. Physiology and pathology of the postpartum period. 8. Physiology and pathology of the newborn development. 9. Ovarian disorders. 10. Uterine and oviduct disorders. 11. Pig reproduction. 12. Reproduction in Small Ruminants 13. Etiology, pathogenesis and treatment of mastitis in cattle. 14. Mastitis in cattle - prevention and control. 15. Biotechnology of reproduction in livestock animals.</p>	W1, W2, W3	Lecture
2.	<p>1. Morphological evaluation of the reproductive organs of non-pregnant and pregnant females. Technique of clinical examination of reproductive organs in farm animals (rectal palpation, per vaginam, speculum examination). 2. Anatomy of the udder, its suitability for mechanical milking, preparation of the cow and udder for mechanical milking, milking hygiene. Selected aspects of milking machines and milking parlours. Mechanical milking as a cause of teat damaging and udder diseases. 3. Estrus cycle physiology in farm animals (cattle, pigs, small ruminants). Estrus and ovulation detection. Pharmacologic cycle regulation and hormonal protocols. 4. Clinical and laboratory diagnosis of pregnancy in farm animals. 5. Dystocia- practical classes. Pharmacological parturition induction and parturition assistance in farm animals 6. Management of dystocia, obstetric equipment, cesarean section and fetotomy. 7. Anesthesia in obstetrics. Newborns and congenital defects. 8. Postpartum period, diseases of vagina and uterus. 9. Diseases of ovaries and oviducts in farm animals. Use of ultrasonography in gynecology and obstetrics-sonograms analyses. 10. Surgical procedures in reproductive tract. Surgery of udder. 11. Laboratory diagnosis of infection and inflammation of udder (milk sampling, storing, culturing, pathogen identification, antibiograms). Clinical diagnosis and diagnostic tools for mastitis. 12. Mastitis treatment in farm animals 13. Clinical examination of reproductive tract-practical classes. 14. Use of ultrasonography in cattle and pigs reproduction 15. Clinical examination of udder in cattle, diagnosis of udder diseases (general examination, detailed examination of udder, field tests).</p>	W1, W2, W3, U1, U2, U3, U4, U5, U6, K1, K2, K3, K4	Field exercises, Ćwiczenia kliniczne

Course advanced

Activities	Methods of conducting classes
Lecture	Lecture, E-learning - lecture part
Field exercises	Discussion, Inference, Teamwork, Individual work, Interpreting the results, Laboratory (experiment), learning by experiment, Field measurements, Field observations
Ćwiczenia kliniczne	Case study, Discussion, Presentation, E-learning - exercises part, Laboratory (experiment), learning by experiment, Observation, Measurement

Activities	Examination method	Percentage
Lecture	Written exam	60%
Field exercises	Assessment of activity during classes	10%
Ćwiczenia kliniczne	Written credit	30%

Activities	Credit conditions
Lecture	<p>To take the exam you must have completed partial tests Written exam covering all content of subject education, 20 open questions, for 2 points each. The score on the exam is: 40-36 points. - grade 5.0; 35-32 points - grade 4.5; 31-28 points - grade 4.0; 27-26 points - grade 3.5; 25-24 points - grade 3.0; 23 points and less - grade 2.0. No extra assessment methods are anticipated. In case of unforeseen, unusual circumstances mandatory remote teaching and remote assessment methods might be adopted.</p>
Field exercises	<p>To pass the course you must have no more than 20% of absences or in accordance with current study regulations and preparation for classes and active participation.</p>
Ćwiczenia kliniczne	<p>Partial tests - written tests containing 3 open questions, for each maximum 2 points. Scoring on each of tests: 6 points - 5.5 points - grade 5.0; 5 points - grade 4.5; 4.5 points - grade 4.0; 4 points - grade 3.5; 3.5 points - rating 3.0; 3 points and less - 2.0. Number of partial tests - 2; dates I and II take place in the same form. The final grade of the labs is the arithmetic average of grades from I and II test. The final grade of the labs is issued according to The following scale: < 3,0 - grade 2,0 3,0 - 3,25 - grade 3,0 3,26 - 3,75 - grade 3,5 3,76 - 4,25 - grade 4,0 4,26 - 4,50 - grade 4,5 4,51 - 5,0 - grade 5,0</p>

Literature

Obligatory

1. Veterinary Reproduction and Obstetrics. D.E. Noakes, T.J. Parkinson, G.C.W. England 9th ed. Saunders, Elsevier, 2009
2. Large Animal Theriogenology. R.F. Youngquist, W.L. Threlfall. 2nd ed. Saunders, Elsevier. 2007
3. Pig diseases. D.J. Taylor, St Edmundsbury Press Ltd, Bury St Edmunds, Suffolk 2006

Optional

1. Large animal internal medicine. Bradford P. Smith , MOSBY St.Louis London Philadelphia Sydney Toronto, 2005.
2. Handbook of Pig Medicine, Elsevier 2007, Jackson P., Cockcroft P
3. Sheep and goat medicine. Pugh D.G, W.B. Saunders Company. Philadelphia, Pennsylvania, 2002.
4. Diseases of swine, 10th edition, John Wiley and Sons Inc. 2012, Ed. J.J. Zimmermann, L.A. Karkker, A. Ramirez, K.J. Schawrtz, G.W. Stevenson
5. Biotechnologia rozrodu zwierząt udomowionych. A. Bielański i M. Tischner. Drukrol S.C., 1998

Calculation of ECTS points

Activity form	Activity hours*
Lecture	30
Field exercises	9
Ćwiczenia kliniczne	36
Self-study on the content covered in class	15
Preparation for the test	15
Preparation for the exam	15
Student workload	Hours 120
Number of ECTS points	ECTS 4

* hour means 45 minutes

Effects

Code	Content
KS.2	Absolwent jest gotów do prezentowania postawy zgodnej z zasadami etycznymi i podejmowania działań w oparciu o kodeks etyki w praktyce zawodowej oraz do wykazywania tolerancji dla postaw i zachowań wynikających z odmiennych uwarunkowań społecznych i kulturowych
KS.3	Absolwent jest gotów do udziału w rozwiązywaniu konfliktów, a także wykazywania się elastycznością w reakcjach na zmiany społeczne
KS.4	Absolwent jest gotów do korzystania z obiektywnych źródeł informacji
KS.6	Absolwent jest gotów do formułowania opinii dotyczących różnych aspektów działalności zawodowej
KS.7	Absolwent jest gotów do rzetelnej samooceny, formułowania konstruktywnej krytyki w zakresie praktyki weterynaryjnej, przyjmowania krytyki prezentowanych przez siebie rozwiązań, ustosunkowywania się do niej w sposób jasny i rzeczowy, także przy użyciu argumentów odwołujących się do dostępnego dorobku naukowego w dyscyplinie
KS.8	Absolwent jest gotów do pogłębiania wiedzy i doskonalenia umiejętności
KS.9	Absolwent jest gotów do komunikowania się ze współpracownikami i dzielenia się wiedzą
KS.12	Absolwent jest gotów do angażowania się w działalność organizacji zawodowych i samorządowych
B.U3	Absolwent potrafi przeprowadzać pełne badanie kliniczne zwierzęcia
B.U7	Absolwent potrafi stosować aparaturę diagnostyczną, w tym radiologiczną, ultrasonograficzną i endoskopową, zgodnie z jej przeznaczeniem i zasadami bezpieczeństwa dla zwierząt i ludzi oraz interpretować wyniki badań uzyskane po jej zastosowaniu
B.U13	Absolwent potrafi dobierać i stosować właściwe leczenie
B.U21	Absolwent potrafi opracowywać i wprowadzać programy profilaktyczne właściwe dla poszczególnych gatunków zwierząt
B.W1	Absolwent zna i rozumie zaburzenia na poziomie komórek, tkanki, narządu, układu i organizmu w przebiegu choroby
B.W2	Absolwent zna i rozumie mechanizmy patologii narządowych i ustrojowych
B.W3	Absolwent zna i rozumie przyczyny i objawy zmian anatomopatologicznych, zasady leczenia i zapobiegania w poszczególnych jednostkach chorobowych
B.W4	Absolwent zna i rozumie zasady postępowania diagnostycznego, z uwzględnieniem diagnostyki różnicowej, oraz postępowania terapeutycznego
B.W5	Absolwent zna i rozumie zasady przeprowadzania badania klinicznego i monitorowania stanu zdrowia zwierząt
B.W6	Absolwent zna i rozumie sposób postępowania z danymi klinicznymi i wynikami badań laboratoryjnych i dodatkowych
B.W12	Absolwent zna i rozumie założenia doboru zwierząt do kojarzeń, metody zapładniania i biotechnologii rozrodu oraz selekcji hodowlanej