



SZKOŁA GŁÓWNA
GOSPODARSTWA
WIEJSKIEGO

Farm animal diseases - infectious diseases

Educational subject description sheet

Basic information

Field of study Veterinary Medicine	Didactic cycle 2023/24	
Speciality -	Subject code WETFVMS_D.540.04006.23	
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	Iwona Markowska-Daniel	
Teacher	Iwona Markowska-Daniel, Jarosław Kaba, Marcin Mickiewicz, Agata Moroz	
Period Semester 7	Examination Exam	Number of ECTS points 4
	Activities and hours Lecture: 30 Seminar exercises: 45	

Goals

Code	Goal
C1	During the course students acquire theoretical knowledge necessary to understand the biology, etiology, pathogenesis, epidemiology, clinical symptoms, pathological lesions, diagnosis including differential diagnosis, eradication and importance of infectious diseases listed below.
C2	Moreover, they acquire practical skills in diagnosing, treating and controlling these infections.

Entry requirements

Veterinary epidemiology, Microbiology 2, Immunology, Pathomorphology 2, Pathophysiology, General surgery and anaesthesiology, Veterinary pharmacology 2, Clinical and laboratory diagnostics 2

Subject's learning outcomes

Code	Outcomes in terms of	Effects	Examination methods
Knowledge - Student knows and understands:			
W1	knowledge and understanding of epidemiological nomenclature	B.W6	Written exam, Written credit
W2	the rules of conducting epidemiological investigation	B.W8	Written exam, Written credit
W3	the mechanisms of infectious disease	B.W1, B.W2, B.W3	Written exam, Written credit
W4	the routes of transmission of infectious diseases	B.W4, B.W5, B.W6, B.W8	Written exam, Written credit
W5	the rules of treatment of infected animals	B.W4, B.W6	Written exam, Written credit
W6	the rules of prevention of infectious diseases (general and specific)	B.W4, B.W9	Written exam, Written credit
W7	the global and national databases containing information on the occurrence of infectious diseases subject to notification	B.W8	Written exam, Written credit
Skills - Student can:			
U1	diagnose particular infectious disease of livestock	B.U2, B.U20, B.U6	Written exam, Written credit
U2	plan and implement appropriate treatment of infectious diseases	B.U13, B.U19	Written exam, Written credit
U3	plan and implement proper general and specific prevention of infectious diseases	B.U21	Written exam, Written credit
U4	the ability to eradicate infectious diseases of farm animals	B.U1, B.U13, B.U19, B.U21	Written exam, Written credit
U5	use scientific resources in solving clinical problems	B.U19, B.U2, B.U20	Written exam, Written credit
Social competences - Student is ready to:			
K1	perform differential diagnosis of infectious diseases of farm animals	KS.1, KS.11, KS.2, KS.4, KS.5	Written exam, Written credit
K2	eradicate infectious diseases in accordance with legal regulations	KS.1, KS.4	Written exam, Written credit
K3	is aware of his/her knowledge, understands the necessity of consultancy and is prepared to share the competencies with the veterinary team and the animals' owner	KS.3, KS.7, KS.9	Written exam, Written credit
K4	is aware of the necessity of constant education	KS.4, KS.8	Written exam, Written credit

Study content

No.	Course content	Subject's learning outcomes	Activities
1.	<p>Lecture topics:</p> <ol style="list-style-type: none"> 1. Introduction to the subject: the most important epidemiological terminology, the significance of infectious diseases for effective animal production and public health protection. The ways of infectious diseases spreading. The rules of disease eradication. The role of OIE in controlling of infectious diseases [2 hrs.] 2. OIE-listed (actual list) and other notifiable diseases of swine: African swine fever - occurrence, etiology, pathogenesis, clinical picture, pathological lesions, diagnosis, differential diagnosis, eradication, legal regulations [2 hrs.] 3. OIE-listed (actual list) and other notifiable diseases of swine: classical swine fever and other pestiviruses - occurrence, etiology, pathogenesis, clinical picture, pathological lesions, diagnosis, differential diagnosis, eradication, legal regulations [2 hrs.] 4. OIE-listed (actual list) and other notifiable diseases of swine: porcine reproductive and respiratory syndrome - occurrence, etiology, pathogenesis, clinical picture, pathological lesions, diagnosis, differential diagnosis, eradication, legal regulations [2 hrs.] 5. OIE-listed (actual list) and other notifiable diseases of swine: Aujeszky' disease, transmissible gastroenteritis, Nipah virus encephalitis - occurrence, etiology, pathogenesis, clinical picture, pathological lesions, diagnosis, differential diagnosis, eradication, legal regulations [2 hrs.] 6. OIE-listed (actual list) and other notifiable diseases of cattle: bovine tuberculosis, enzootic bovine leukosis - occurrence, etiology, pathogenesis, clinical picture, pathological lesions, diagnosis, differential diagnosis, eradication, legal regulations [2 hrs.] 7. OIE-listed (actual list) and other notifiable diseases of cattle: infectious bovine rhinotracheitis, contagious bovine pleuropneumonia - occurrence, etiology, pathogenesis, clinical picture, pathological lesions, diagnosis, differential diagnosis, eradication, legal regulations [2 hrs.] 8. OIE-listed (actual list) and other notifiable diseases of cattle: bovine spongiform encephalopathy, scrapie - occurrence, etiology, pathogenesis, clinical picture, pathological lesions, diagnosis, differential diagnosis, eradication, legal regulations [2 hrs.] 9. OIE-listed (actual list) and other notifiable diseases of cattle: lumpy skin disease, bovine viral diarrhoea - occurrence, etiology, pathogenesis, clinical picture, pathological lesions, diagnosis, differential diagnosis, eradication, legal regulations [2 hrs.] 10. OIE-listed (actual list) and other notifiable diseases of small ruminants: contagious agalactia, infection with Chlamydia abortus (enzootic abortion of ewes, ovine chlamydiosis), ovine epididymitis, salmonellosis (S. abortusovis), border disease - occurrence, etiology, pathogenesis, clinical picture, pathological lesions, diagnosis, differential diagnosis, eradication, legal regulations [2 hrs.] 11. OIE-listed (actual list) and other notifiable diseases of small ruminants: caprine arthritis-encephalitis, Maedi-visna, contagious caprine pleuropneumonia, Nairobi sheep disease - occurrence, etiology, pathogenesis, clinical picture, pathological lesions, diagnosis, differential diagnosis, eradication, legal regulations [2 hrs.] 12. OIE-listed (actual list) and other notifiable multispecies diseases: paratuberculosis, anthrax, rinderpest, peste des petits ruminants - occurrence, etiology, pathogenesis, clinical picture, pathological lesions, diagnosis, differential diagnosis, eradication, legal regulations [2 hrs.] 13. OIE-listed (actual list) and other notifiable multispecies diseases: bluetongue, Rift valley fever, Crimean Congo haemorrhagic fever, West Nile fever, epizootic haemorrhagic disease, Japanese encephalitis - occurrence, etiology, pathogenesis, clinical picture, pathological lesions, diagnosis, differential diagnosis, eradication, legal regulations [2 hrs.] 14. OIE-listed (actual list) and other notifiable multispecies diseases: foot and mouth disease - occurrence, etiology, pathogenesis, clinical picture, pathological lesions, diagnosis, differential diagnosis, eradication, legal regulations [2 hrs.] 15. OIE-listed (actual list) and other notifiable multispecies diseases: Q fever, brucellosis - occurrence, etiology, pathogenesis, clinical picture, pathological lesions, diagnosis, differential diagnosis, eradication, legal regulations [2 hrs.] <p>The content of lectures is complementary to the content of classes. The topics of exercises, as well as their form and number of hours may change depending on the current external conditions determined by the published legal acts.</p>	W1, W2, W3, W4, W5, W6, W7, U1, U2, U3, U4, U5, K1, K2, K3, K4	Lecture

No.	Course content	Subject's learning outcomes	Activities
2.	<p>Class topics:</p> <ol style="list-style-type: none"> 1. Introduction to the subject: Epidemiological investigation. Sampling and shipment of materials for laboratory examinations. Laboratory diagnosis [3 hrs.] 2. Skin and mucosal diseases of swine: pox, vesicular exanthema of swine, exudative epidermitis, malignant oedema, foot and mouth disease, vesicular disease, vesicular stomatitis, porcine dermatitis and nephropathy syndrome, erysipelas - differential diagnosis, occurrence, etiology, pathogenesis, clinical picture, pathological lesions, diagnosis, eradication [3 hrs.] 3. Respiratory diseases of swine: porcine respiratory disease complex, swine influenza, PRRS, circovirus infection, pleuropneumonia, mycoplasmosis, atrophic rhinitis, streptococcosis - differential diagnosis, occurrence, etiology, pathogenesis, clinical picture, pathological lesions, diagnosis, eradication [3 hrs.] 4. Enteric diseases of swine: colibacteriosis, clostridiosis, adenomatosis, swine dysentery, salmonellosis, porcine epidemic diarrhoea, rotavirus infection - differential diagnosis, occurrence, etiology, pathogenesis, clinical picture, pathological lesions, diagnosis, eradication [3 hrs.] 5. Reproductive disorders of swine: parvovirus, porcine reproductive respiratory syndrome, circovirus, swine influenza, SMEDI, brucellosis, leptospirosis, chlamydiosis - differential diagnosis, occurrence, etiology, pathogenesis, clinical picture, pathological lesions, diagnosis, eradication [3 hrs.] 6. Nervous system disorders of swine: Teschovirus encephalomyelitis, vomiting and wasting disease, rabies, congenital tremors, listeriosis, tetanus, botulism, streptococcosis, Glässer disease, oedema disease - differential diagnosis, occurrence, etiology, pathogenesis, clinical picture, pathological lesions, diagnosis, eradication [3 hrs.] 7. Periodic test (infectious diseases of swine) [3 hrs.] 8. Respiratory diseases of cattle: enzootic bronchopneumonia, pasteurellosis - differential diagnosis, occurrence, etiology, pathogenesis, clinical picture, pathological lesions, diagnosis, eradication [3 hrs.] 9. Enteric diseases of cattle: viral and bacterial diarrheas - differential diagnosis, occurrence, etiology, pathogenesis, clinical picture, pathological lesions, diagnosis, eradication [3 hrs.] 10. Nervous system diseases of cattle: rabies, BSE, malignant catarrhal fever - differential diagnosis, occurrence, etiology, pathogenesis, clinical picture, pathological lesions, diagnosis, eradication [3 hrs.] 11. Reproductive system diseases of cattle: bovine genital campylobacteriosis, trichomonosis, Schmallenberg virus infection - differential diagnosis, occurrence, etiology, pathogenesis, clinical picture, pathological lesions, diagnosis, eradication [3 hrs.] 12. Nervous system diseases of small ruminants: listeriosis, border disease - differential diagnosis, occurrence, etiology, pathogenesis, clinical picture, pathological lesions, diagnosis, eradication. <p>Respiratory diseases of small ruminants: enzootic pneumonia, ovine pulmonary adenomatosis, enzootic nasal tumor - differential diagnosis, occurrence, etiology, pathogenesis, clinical picture, pathological lesions, diagnosis, eradication [3 hrs.]</p> <ol style="list-style-type: none"> 13. Skin diseases and lameness of small ruminants: sheep pox and goat pox, contagious ecthyma, foot root - differential diagnosis, occurrence, etiology, pathogenesis, clinical picture, pathological lesions, diagnosis, eradication [3 hrs.] 14. Clostridial diseases of small ruminants: enterotoxemia, lamb dysentery, infectious necrotic hepatitis, bradsot, tetanus - differential diagnosis, occurrence, etiology, pathogenesis, clinical picture, pathological lesions, diagnosis, eradication Wasting diseases of small ruminants: caseous lymphadenitis, Morel's disease - differential diagnosis, occurrence, etiology, pathogenesis, clinical picture, pathological lesions, diagnosis, eradication [3 hrs.] 15. Periodic test (infectious diseases of ruminants) [3 hrs.] <p>The content of lectures is complementary to the content of classes. The topics of exercises, as well as their form and number of hours may change depending on the current external conditions determined by the published legal acts.</p>	W1, W2, W3, W4, W5, W6, W7, U1, U2, U3, U4, U5, K1, K2, K3, K4	Seminar exercises

Course advanced

Activities	Methods of conducting classes
Lecture	Lecture, Problem lecture, Conversation lecture
Seminar exercises	Case study, Discussion, Brainstorm, Presentation, Problem solving, Problem method, Interpreting the results

Activities	Examination method	Percentage
Lecture	Written exam	60%
Seminar exercises	Written credit	40%

Activities	Credit conditions
Lecture	<p>The necessary condition for participation in classes is the possession of accident insurance (in Polish: ubezpieczenie NNW).</p> <p>Lectures are voluntary.</p> <p>At the end of the semester final written exam covering the information provided during lectures and classes will be organized (30 descriptive and single- or multiple choice questions evaluated as mentioned above). Student will receive a positive grade from the exam if they receive a minimum of 60% of maximal score (max. = 60 points; min. = 36 points).</p> <p>The final grade from the course is based on the total score from both periodic as well as final exams.</p> <p>The final evaluation depends on the number of points received:</p> <p>0-60 points - 2.0 61-68 points - 3.0 69-76 points - 3.5 77-84 points - 4.0 85-92 points - 4.5 93-100 points - 5.0</p> <p>Only one retake is allowed.</p>
Seminar exercises	<p>Student is allowed to miss 9 hours of classes (3 classes).</p> <p>Conditions of receiving positive final score:</p> <p>2 periodic exams will be conducted:</p> <ol style="list-style-type: none"> 1. infectious diseases of swine - written exam (10 descriptive and single- or multiple choice questions); 2. infectious diseases of ruminants - written exam (10 descriptive and single- or multiple choice questions); <p>Both exams will be based on the information provided during the classes.</p> <p>Each question will be evaluated using a scale: 0, 1 and 2. The max points in each exam = 20.</p> <p>For students with justified absence on the one or both exams an extra exam will be organized. After the second chance no additional exams will be organized.</p> <p>Student will receive a positive grade from periodic exams if they receive a minimum of 60% of maximal score (max. = 20 points.; min. = 12 points). Students who do not get 12 points will not be allowed to take the final exam.</p> <p>The final grade from the course is based on the total score from both periodic as well as final exams.</p>

Literature

Obligatory

1. Diseases of swine, wyd. 11, Wiley-Blackwell 2019, Ed. J.J. Zimmermann, L.A. Karriker, A. Ramirez, K.J. Schwartz, G.W. Stevenson, J. Zhang
2. Choroby świń, wyd. 1, Elsevier, 2009, Jackson P., Cockroft P., Ed. M. Fabisiak
3. Ochrona zdrowia świń, Z. Pejsak, PWR 2007
4. Infectious Diseases of Livestock, wydanie 2, Oxford University Press, Ed. J. A. W. Coetzer, R. C. Tustin
5. Atlas chorób bydła, Elsevier Urban & Partner, Wrocław 2008, Roger W. Blowey, A. David Weaver
6. Choroby zakaźne zwierząt z zarysem epidemiologii weterynaryjnej i zoonoz, PWRiL Warszawa, 2003, Zdzisław Gliński, Krzysztof Kostro

Optional

1. www.wetgiw.gov.pl
2. www.woah.org
3. www.pubmed.com
4. Medycyna Weterynaryjna
5. Życie Weterynaryjne
6. Lecznica Dużych Zwierząt
7. Magazyn Weterynaryjny
8. Weterynaria w terenie

Calculation of ECTS points

Activity form	Activity hours*
Lecture	30
Seminar exercises	45
Preparation for the exam	20
Preparation for the test	10
Preparation for exercises	10
Self-study on the content covered in class	5
Student workload	Hours 120
Number of ECTS points	ECTS 4

* hour means 45 minutes

Effects

Code	Content
KS.1	Absolwent jest gotów do wykazywania odpowiedzialności za podejmowane decyzje wobec ludzi, zwierząt i środowiska przyrodniczego
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.5	Absolwent jest gotów do formułowania wniosków z własnych pomiarów lub obserwacji
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.11	Absolwent jest gotów do współpracy z przedstawicielami innych zawodów w zakresie ochrony zdrowia publicznego
B.U1	Absolwent potrafi bezpiecznie i humanitarnie postępować ze zwierzętami oraz instruować innych w tym zakresie
B.U2	Absolwent potrafi przeprowadzić wywiad lekarsko-weterynaryjny w celu uzyskania dokładnej informacji o pojedynczym zwierzęciu lub grupie zwierząt oraz jego lub ich środowisku bytowania
B.U6	Absolwent potrafi pobierać i zabezpieczać próbki do badań oraz wykonywać standardowe testy laboratoryjne, a także prawidłowo analizować i interpretować wyniki badań laboratoryjnych
B.U13	Absolwent potrafi dobierać i stosować właściwe leczenie
B.U19	Absolwent potrafi przeprowadzić dochodzenie epizootyczne w celu ustalenia okresu, w którym choroba zakaźna zwierząt mogła rozwijać się w gospodarstwie przed podejrzeniem lub stwierdzeniem jej wystąpienia, miejsca pochodzenia źródła choroby zakaźnej zwierząt wraz z ustaleniem innych gospodarstw oraz dróg przemieszczania się ludzi, zwierząt i przedmiotów, które mogły być przyczyną szerzenia się choroby zakaźnej do lub z gospodarstwa
B.U20	Absolwent potrafi korzystać ze zgromadzonych informacji związanych ze zdrowiem i dobrostanem zwierząt, a w wybranych przypadkach również z produktywnością stada
B.U21	Absolwent potrafi opracowywać i wprowadzać programy profilaktyczne właściwe dla poszczególnych gatunków zwierząt
B.W1	Absolwent zna i rozumie zaburzenia na poziomie komórki, 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.W8	Absolwent zna i rozumie sposób postępowania w przypadku podejrzenia lub stwierdzenia chorób podlegających obowiązkowi zwalczania lub rejestracji

Code	Content
B.W9	Absolwent zna i rozumie zasady zapewniania dobrostanu zwierząt