

Program
jednolitych studiów magisterskich
dla kierunku weterynaria (veterinary medicine)
cykl kształcenia rozpoczęty od r.a.2019/2020

1.1 Dane ogólne

1.1.1. Profil studiów **ogólnoakademicki**
(ogólnoakademicki/praktyczny)

1.1.2. Forma/y studiów: **stacjonarna**
(stacjonarna/niestacjonarna)

1.1.3. Tytuł zawodowy **lekarz weterynarii**

1.1.4. Sylwetka absolwenta:

Absolwent nabywa wiedzę z zakresu weterynarii zgodnie z Ustawą z dnia 20 lipca 2018 r. – Prawo o szkolnictwie wyższym i nauce (tekst jednolity Dz. U. z 2020 poz. 85 ze zm.), ze standardem kształcenia określonym w Rozporządzeniu Ministra Nauki i Szkolnictwa Wyższego z dnia 17 lipca 2019 r. w sprawie standardu kształcenia przygotowującego do wykonywania zawodu lekarza weterynarii (Dz. U. 2019 r., poz.1364), z zasadami określonymi w Ustawie o zawodzie lekarza weterynarii i izbach lekarsko – weterynaryjnych, w Ustawie o inspekcji weterynaryjnej oraz w prawie Unii Europejskiej (dyrektywa 2005/36/WE Parlamentu Europejskiego i Rady z dnia 7 września 2005 r. w sprawie uznawania kwalifikacji zawodowych oraz na poziomie 7 Polskiej Ramy Kwalifikacji.

Absolwent posiada umiejętności wykonywania zawodu lekarza weterynarii z zachowaniem zasad etyki i deontologii weterynaryjnej. Absolwent posiada wiedzę umożliwiającą: badanie stanu zdrowia zwierząt oraz rozpoznawanie, zapobieganie, zwalczanie i leczenie chorób zwierząt, wykonywanie zabiegów chirurgicznych; wydawanie opinii i orzeczeń lekarsko-weterynaryjnych; wydawanie recept na leki i materiały medyczne; badanie zwierząt rzeźnych, mięsa i innych produktów pochodzenia zwierzęcego; nadzór sanitarno-weterynaryjny nad produktami pochodzenia zwierzęcego; sprawowanie nadzoru weterynaryjnego nad ochroną zdrowia publicznego i środowiska oraz zdrowia zwierząt w stadzie; sprawowanie nadzoru weterynaryjnego nad obrotem zwierzętami i miejscami ich gromadzenia; wykonywanie badań i weterynaryjnej oceny środków żywienia zwierząt i warunków ich wytwarzania; upowszechnianie wiedzy weterynaryjnej; zarządzanie w zakresie spraw weterynaryjnych oraz wykonywanie badań laboratoryjnych prowadzonych dla celówdiagnostycznych, profilaktycznych, leczniczych lub sanitarno-weterynaryjnych.

Absolwent jest przygotowany do pracy w: zakładach leczniczych dla zwierząt, laboratoriach diagnostycznych oraz przy produkcji i dystrybucji weterynaryjnych produktów leczniczych, wyrobów medycznych i materiałów medycznych, w administracji weterynaryjnej różnego szczebla, a także: w jednostkach naukowo - badawczych i ośrodkach badawczo-rozwojowych; jednostkach zajmujących się poradnictwem i upowszechnianiem wiedzy z zakresu weterynarii, gdy wymagane jest posiadanie tytułu zawodowego lekarza weterynarii; w szkolnictwie – po ukończeniu specjalności nauczycielskiej (zgodnie ze standardami kształcenia przygotowującego do wykonywania zawodu nauczyciela).

Absolwent powinien znać język obcy na poziomie biegłości B2+ Europejskiego Systemu Opisu Kształcenia Językowego Rady Europy oraz umieć posługiwać się językiem specjalistycznym z zakresu kierunku studiów.

Absolwent jest przygotowany do podjęcia kształcenia na poziomie 8 Polskiej Ramy Kwalifikacji.

1.1.5. Liczba: semestrów **11**; godzin **5204/20** (ogółem/w tym realizowanych z wykorzystaniem metod i technik kształcenia na odległość)

1.1.6. Liczba punktów ECTS (łącznie) **360**

1.1.7. Dopuszczalny deficyt punktów ECTS po poszczególnych semestrach:

Semestr	1	2	3	4	5	6	7	8	9	10	11
Deficyt punktów ECTS	4	5	4	4	3	3	3	4	3	0 (konieczność rozliczenia deficytu z lat poprzednich)	0 (konieczność rozliczenia deficytu z lat poprzednich)

1.1.8. Sekwencje przedmiotów

Semestr	Nazwa przedmiotu realizowanego	Nazwa przedmiotu poprzedzającego
2	Animal anatomy II	Animal anatomy I
2	Biochemistry I	Chemistry
2	Histology and embryology II	Histology and embryology I
2	Histology and embryology II	Cell biology
3	Veterinary microbiology I	Biochemistry I
3	Biochemistry II	Biochemistry I
3	Animal physiology I	Histology and embryology II
3	Animal physiology I	Animal anatomy II
4	Animal physiology II	Animal physiology I
4	Veterinary microbiology II	Veterinary microbiology I
4	Pathophysiology I	Biochemistry II
5	Veterinary pharmacology I	Veterinary immunology
5	Veterinary Epidemiology	Veterinary microbiology II
5	Veterinary pharmacology I	Animal physiology II
5	Pathophysiology II	Pathophysiology I
6	Clinical and laboratory diagnostics II	Clinical and laboratory diagnostics I
6	Pathomorphology II	Pathomorphology I
6	Veterinary pharmacology II	Veterinary pharmacology I
6	Pathomorphology II	Pathophysiology II
7	Diseases of farm animals	Clinical and laboratory diagnostics II
7	Diseases of farm animals	Veterinary pharmacology II
7	Diseases of farm animals	Pathomorphology II
8	Diseases of horses	Parasitology and invasiology II
8	Andrology and artificial insemination	Diseases of farm animals
8	Slaughter animals and meat hygiene II	Slaughter animals and meat hygiene I
9	Diseases of dogs and cats	Diseases of horses
9	Diseases of dogs and cats	Andrology and artificial insemination
9	Slaughter animals and meat hygiene III	Slaughter animals and meat hygiene II
9	Diseases of dogs and cats	Veterinary toxicology
10	Diseases of dogs and cats - Clinical internship I	Diseases of dogs and cats
10	Avian diseases – Clinical internship	Avian diseases
10	Hygiene of food processing II	Hygiene of food processing I
10	Hygiene of food processing II	Slaughter animals and meat hygiene III
10	Preventive veterinary medicine II	Preventive veterinary medicine I
11	Diseases of farm animals - Clinical internship II	Preventive veterinary medicine II
11	Diseases of farm animals - Clinical internship II	Hygiene of food processing II

1.1.9. Liczba punktów ECTS, którą student uzyska na zajęciach wymagających bezpośredniego udziału nauczycieli akademickich i studentów lub innych osób prowadzących zajęcia: **194**

1.1.10. Liczba punktów ECTS, którą student uzyska w ramach zajęć z obszarów nauk humanistycznych lub nauk społecznych: **5 ***)

1.1.11. Liczba punktów ECTS, którą student uzyska za zajęcia wybieralne: **22**

1.1.12. Liczba punktów ECTS, którą student uzyska za zajęcia związane z prowadzonymi badaniami naukowymi w dziedzinie nauki związanej z tym kierunkiem studiów **191**

1.1.13. Liczba godzin wychowania fizycznego: **60 **)**

1.1.14. Liczba punktów ECTS przyporządkowana zajęciom kształtującym umiejętności praktyczne: **105**

1.1.15. Wymiar (liczba godz. i punktów ECTS), zasady i forma odbywania praktyk:

L.p.	Rodzaj praktyki	Okres realizacji	Czas trwania		ECTS
			tygodnie	godziny	
1	Praktyka hodowlana	po 4 semestrze	2	80	4
2	Praktyka kliniczna	po 8 semestrze	4	160	8
3	Praktyka w inspekcji weterynaryjnej	po 8 semestrze	2	80	4
4	Praktyka kliniczna	po 10 semestrze	4	160	8
5	Praktyka w inspekcji weterynaryjnej	po 10 semestrze	2	80	4
Razem			14	560	28

Praktyki zawodowe służą osiągnięciu wymaganych efektów uczenia się.

Praktyki zawodowe obejmują poznanie praktycznych aspektów postępowania lekarsko-weterynaryjnego w gospodarstwach hodowlanych, w zakładach leczniczych dla zwierząt, rzeźniach oraz w zakładach przetwórstwa produktów pochodzenia zwierzęcego i produkcji pasz, a także w zakresie unasienniania zwierząt.

Studenckie praktyki zawodowe mają na celu poszerzenie wiedzy zdobytej na studiach i rozwijanie umiejętności jej wykorzystania, poznanie praktycznych aspektów postępowania lekarsko - weterynaryjnego na fermach produkcji zwierzęcej, w zakładach leczniczych dla zwierząt, rzeźniach oraz zakładach przetwórstwa produktów pochodzenia zwierzęcego i produkcji środków żywienia zwierząt, a także w zakresie unasienniania zwierząt.

Formy organizacyjne praktyk:

Student podczas odbywania praktyki wykonuje czynności lekarsko – weterynaryjne (w zależności od rodzaju praktyki) pod nadzorem opiekuna, zgodnie z programem praktyki. Opiekun ma obowiązek

potwierdzenia w „Dzienniku praktyk studenta” obecności na praktyce oraz zakres czynności, wykonanych podczas praktyki.

Pełnomocnicy dziekana ds. praktyk są odpowiedzialni:

- przygotowanie sylabusów przedmiotów
- przygotowanie programów i zasad odbywania praktyk
- zawarcie porozumień z podmiotami gospodarczymi, w których studenci odbywają praktyki
- wydanie skierowań na praktykę oraz na badania lekarskie (sanitarno-epidemiologiczne) dla studentów
- kontrolę praktyk i rozliczenie kosztów delegacji
- rozstrzyganie sporów pomiędzy podmiotem, w którym odbywa się praktyka a studentem
- zaliczenie odbytej praktyki

Dziekan może zaliczyć jako praktykę, wykonywaną przez studenta pracę zarobkową, jeżeli jej charakter spełnia wymagania programu praktyki. Może to być również praca za granicą, jednakże musi ona być realizowana na zasadach porozumienia między uczelnią a instytucją przyjmującą.

1.1.16. Zasady/organizacja procesu dyplomowania:

- Podstawą obliczenia ostatecznego wyniku studiów magisterskich jednolitych jest średnia arytmetyczna wszystkich ocen uzyskanych z poszczególnych przedmiotów, w tym praktyk, z zaokrągleniem do dwóch miejsc po przecinku.

- Na dyplomie ukończenia studiów magisterskich wpisuje się ostateczny wynik studiów w skali pięciostopniowej: 3,0; 3,5; 4,0; 4,5; 5,0, ustalony wg zasady:

od 4,60 do 5,00 – bardzo dobry (5,0); from 4.60 to 5.00 – very good (5.0);

od 4,20 do 4,59 – dobry plus (4,5); from 4.20 to 4.59 – good plus (4.5);

od 3,80 do 4,19 – dobry (4,0); from 3.80 to 4.19 – good (4.0);

od 3,40 do 3,79 – dostateczny plus (3,5); from 3.40 to 3.79 – satisfactory plus (3.5);

od 3,00 do 3,39 – dostateczny (3,0); from 3.00 to 3.39 – unsatisfactory (3.0).

- Datą ukończenia studiów jest data złożenia ostatniego wymaganego programem studiów egzaminu.

*) – dotyczy kierunków innych niż przypisane do dyscyplin nauk humanistycznych lub nauk społecznych

**) – dotyczy studiów pierwszego stopnia i jednolitych studiów magisterskich realizowanych w formie stacjonarnej

1.2. Zajęcia i grupy zajęć *)

1.2.1. Przedmioty obowiązkowe:

KOD	NAZWA
MWW-AJ>Agronomy	Agronomy
MWW-AJ>Anatomy1	Anatomy of Animals I
MWW-AJ>Anatomy2	Anatomy of Animals II
MWW-AJ>Andrology	Andrology and Artificial Insemination
MWW-AJ>Breeding	Animal Breeding
MWW-AJ>Hygiene	Animal Hygiene
MWW-AJ>Nutrition	Animal Nutrition and Feed Quality
MWW-AJ>Physio1	Animal Physiology I
MWW-AJ>Physio2	Animal Physiology II
MWW-AJ>AvianDiseas	Avian Diseases
MWW-AJ>InterAvian	Avian Diseases - Clinical Internship
MWW-AJ>BenefInsects	Beneficial Insects Disease
MWW-AJ>Biochem1	Biochemistry I
MWW-AJ>Biochem2	Biochemistry II
MWW-AJ>Biology	Biology
MWW-AJ>Biophysics	Biophysics
MWW-AJ>Biostatistics	Biostatistics and Methods of Data Collection
MWW-AJ>Cellbiol	Cell Biology
MWW-AJ>Chemistry	Chemistry
MWW-AJ>Clinica2	Clinical and Laboratory Diagnostics II
MWW-AJ>Clinica1	Clinical and Laboratory Diagnostics I
MWW-AJ>ClinicalImmu	Clinical Immunology
MWW-AJ>Diaging	Diagnostic Imaging
MWW-AJ>DogsCats	Diseases of Dogs and Cats
MWW-AJ>InterDogs	Diseases of Dogs and Cats - Clinical Internship I
MWW-AJ>InterDogs2	Diseases of Dogs and Cats - Clinical Internship II
MWW-AJ>FarmAnimals	Diseases of Farm Animals
MWW-AJ>InterFarm	Diseases of Farm Animals - Clinical Internship I
MWW-AJ>InterFarm2	Diseases of Farm Animals - Clinical Internship II
MWW-AJ>HorsesDis	Diseases of Horses
MWW-AJ>InterHorse	Diseases of Horses - Clinical Internship I
MWW-AJ>InterHorse2	Diseases of Horses - Clinical Internship II
MWW-AJ>Ecology	Ecology of Game Animals
MWW-AJ>Environment	Environmental Protection
MWW-AJ>ERGONOMICS	Ergonomics, Intellectual Protection nad Work Safety
MWW-AJ>Etology	Ethology and Animal Welfare
MWW-AJ>Fish	Fish Diseases
MWW-AJ>FodderHyg	Fodder Hygiene
MWW-AJ>FoodLaw	Food Sanitary Law
MWW-AJ>Forensic	Forensic Veterinary Medicine
MWW-AJ>Furcovered	Diseases of fur animals
MWW-AJ>Genetics	General and Veterinary Genetics

MWW-AJ>Histology1	Histology and Embryology I
MWW-AJ>Histology2	Histology and Embryology II
MWW-AJ>HygFood1	Hygiene of Food Processing I
MWW-AJ>HygFood2	Hygiene of Food Processing II
MWW-AJ>Ittechn	IT Technology
MWW-AJ>LabAnalyt	Laboratory analytics
MWW-AJ>Latin	Latin
MWW-AJ>MilkHyg	Milk Hygiene
MWW-AJ>Parasit1	Parasitology and Invasiology I
MWW-AJ>Parasit2	Parasitology and Invasiology II
MWW-AJ>Pathomo1	Pathomorphology I
MWW-AJ>Pathomo2	Pathomorphology II
MWW-AJ>Pathop1	Pathophysiology I
MWW-AJ>Patho2	Pathophysiology II
MWW-AJ>Prev1	Preventive Veterinary Medicine I
MWW-AJ>Prev2	Preventive Veterinary Medicine II
MWW-AJ>Etics	Professional Ethics
MWW-AJ>PubHealth	Public Health Protection in State of Disaster
MWW-AJ>SFeedstuff	Safety of Feedstuff
MWW-AJ>Slaughter1	Slaughter Animals and Meat Hygiene I
MWW-AJ>Slaughter2	Slaughter Animals and Meat Hygiene II
MWW-AJ>Slaughter3	Slaughter Animals and Meat Hygiene III
MWW-AJ>PracCl10	Summer Practical Training: Animal Clinics
MWW-AJ>PracCl8	Summer Practical Training: Animal Clinics
MWW-AJ>Farmpractice	Summer Practical Training: Farm practice
MWW-AJ>PracticSI10	Summer Practical Training: Slaughterhouses
MWW-AJ>PracticSI8	Summer Practical Training: Slaughterhouses
MWW-AJ>Surgery	Surgery and Anaesthesiology
MWW-AJ>TechProd	Technologies in Animal Production
MWW-AJ>Tophic	Topographical Anatomy
MWW-AJ>AdmLAW	Veterinary Administration and Law
MWW-AJ>Dietetics	Veterinary Dietetics
MWW-AJ>Economics	Veterinary Economics
MWW-AJ>Epidemiology	Veterinary Epidemiology
MWW-AJ>History	Veterinary History and Deontology
MWW-AJ>Immunology	Veterinary Immunology
MWW-AJ>Microbiol1	Veterinary Microbiology I
MWW-AJ>Microbiol2	Veterinary Microbiology II
MWW-AJ>Pharma1	Veterinary Pharmacology I
MWW-AJ>Pharma2	Veterinary Pharmacology II
MWW-AJ>Phar	Veterinary Pharmacy
MWW-AJ>Toxogy	Veterinary Toxicology
MWW-AJ>Zoonoses	Zoonoses
MWW-AJ>ACENT	Academic entrepreneurship (Project)
	Social science I – chosen from the subject offer

	Social science II – chosen from the subject offer
	Foreign language I – chosen from the subject offer
	Foreign language II – chosen from the subject offer
	Foreign language III - chosen from the subject offer
	Foreign language IV - chosen from the subject offer
	Physical education-Sport I – chosen from the subject offer
	Physical education-Sport II – chosen from the subject offer

1.2.2. Przedmioty do wyboru:

KOD	NAZWA
MWW-AJ>BehPharm	F7. Behavior Pharmacotherapy
MWW-AJ>AnatPropedeut	F7. Anatomical propedeutics in hippiatry
MWW-AJ>ReprodPigs	F7. Management of the reproduction sector in pigs farms
MWW-AJ>PhysBasisNeph	F7. Physiological basis of nephrology and renal replacement therapies
MWW-AJ>Mycology	F7. Laboratory diagnostics in veterinary mycology
MWW-AJ>Neonatology	F7. Veterinary neonatology
MWW-AJ>Immunhist	F7. Immunohistochemistry in pathomorphology and cancer diagnostics
MWW-AJ>FORTHHORSE	F10. Orthopedic diseases in horses
MWW-AJ>EXOTIC	F10. Exotic animal diseases
MWW-AJ>VetDerm	F10. Veterinary dermatology
MWW-AJ>VirallnfHors	F10. Laboratory diagnosis of viral infection of horses
MWW-AJ>SwineDiseases	F10. Swine diseases
MWW-AJ>Hematology	F10. Diagnostic hematology, hemostasis and cytology in horses
MWW-AJ>PoultryMeat	F10. Poultry meat and egg hygiene and technology
MWW-AJ>AdviceLarge	F10. Veterinary advisement in large farms
MWW-AJ>BasVetHem	F10. Basis of veterinary haematology
MWW-AJ>OncDC	F10. Oncology of dogs and cats
MWW-AJ>VetNeuro	F10. Veterinary neurology
MWW-AJ>Managemen	F10. Management in Veterinary Practice
MWW-AJ>MarketingA	F10. Marketing in Veterinary Practice
MWW-AJ>F2.EqClinPh	F10. Equine Clinical Pharmacology
MWW-AJ>FishRaw	F10. Hygiene and technology of fish raw materials and fish products
MWW-AJ>Innov	F.10. Innovations (project)
MWW-AJ>CaseBasPhysio	F11. Case based physiology
MWW-AJ>ForensicEx	F11. Veterinarian as a veterinary forensic expert
MWW-AJ>FSIOGIHDAC	F11. Selected issues of gastroenterology in horses, dogs and cats
MWW-AJ>FSIOPIDAC	F11. Selected issues of pulmonology in dogs and cats
MWW-AJ>FOPHTAL	F11. Veterinary ophtalmology
MWW-AJ>ClinPatho	F11. Clinical pathomorphology of dogs and cats
MWW-AJ>Pigeondis	F11. Pigeon diseases
MWW-AJ>FDIAGULTRASMA	F11. Diagnostic ultrasound of small animals
MWW-AJ>VCORIB	F11. Veterinary care on reproduction in breeding dogs and cats

MWW-AJ>F10Audit	F11. Auditing of quality management systems in food industry
MWW-AJ>IntMedFoals	F.11. Internal medicine of foals
MWW-AJ>VetCareExo	F.11. Veterinary care for exotic pets
MWW-AJ>DiagTreatRum	F.11. Diagnostics and treatment of ruminant diseases
MWW-AJ>F3ClinPharnDC	F.11. Clinical pharmacology of dogs and cats
MWW-AJ>ClinPatho	F.11. Clinical pathomorphology of dogs and cats

*) – należy wskazać wraz z kodem przedmiotu w USOS

1.3 Opis efektów uczenia się

Efekty uczenia się

Dyscyplina naukowa wiodąca, do której odnoszą się efekty uczenia się*): **weterynaria**

Dyscyplina/y dodatkowa/e: **nie dotyczy**

Opis efektów uczenia się uwzględnia: uniwersalne charakterystyki studiów jednolitych magisterskich, zawartych w charakterystykach drugiego stopnia**) dla kwalifikacji na poziomie 7 Polskiej Ramy Kwalifikacji.

Opis efektów uczenia się uwzględnia efekty uczenia się opisane w standardzie, stanowiącym załącznik do Rozporządzenia Ministra Nauki i Szkolnictwa Wyższego z dnia 17 lipca 2019 r. w sprawie standardu kształcenia przygotowującego do wykonywania zawodu lekarza weterynarii (Dz. U. z 2019 r., poz.1364) w zakresie wiedzy, umiejętności i kompetencji społecznych.

1. GENERAL EDUCATIONAL OUTCOMES			
Symbol of the outcome	After completion of the studies, a graduate: 1.1. KNOWLEDGE	Previous symbol of the outcome	Symbol of the outcome for PRK
O.W1	knows to an extensive degree and describes in detail the principles and mechanisms underlying animal health, disease formation and their treatment - from the level of cells, through the organ, animal, to the entire animal population	Wet_WO_01	P7S_WG

O.W2	knows to an extensive degree, describes in detail and explains the development, structure, functioning, behaviours and physiological mechanisms of animals in normal conditions, as well as the mechanisms of disorders in pathological conditions	Wet_ WO_02	P7S_WG
O.W3	explains and interprets the etiology, pathogenesis and clinical symptoms of diseases occurring in individual animal species, and knows the principles of therapeutic procedure	Wet_ WO_03	P7S_WG
O.W4	explains and interprets the methods of diagnostic and therapeutic procedure appropriate for the diseases occurring in animals	Wet_ WO_03	P7S_WG
O.W5	characterises in detail the methods of using veterinary medicinal products, aimed at prophylaxis and treatment of animals, as well as at guaranteeing food chain safety and environmental protection	Wet_ WO_04	P7S_WG
O.W6	presents the biology of infectious factors that cause diseases transmitted between animals, as well as anthroozoonoses, taking into account the mechanisms of disease transmission and defense mechanisms of the macroorganism	Wet_ WO_05	P7S_WG
O.W7	specifies the principles of conducting clinical examination, in accordance with the plan of clinical examination, analysis of clinical symptoms and anatomopathological changes	Wet_ WO_06	P7S_WG
O.W8	knows to an extensive degree and distinguishes the principles of animal raising and husbandry, taking into account the principles of animal nutrition, principles of maintaining their welfare and principles of production economics	Wet_ WO_07	P7S_WG

O.W9	identifies and describes in detail the principles of management and utilisation of animal by-products and waste associated with animal production	Wet_ WO_08	P7S_WG
O.W10	presents in detail the principles of examination of the slaughter animals, meat and other animal products	Wet_ WO_09	P7S_WG
O.W11	explains in detail the principles of consumer health protection	Wet_ WO_10	P7S_WG
O.W12	explains in detail the principles of appropriate supervision over the production of foodstuffs of animal origin	Wet_ WO_10	P7S_WG
O.W13	knows to an extensive degree the standards, principles and conditions of animal production technology and maintaining the hygiene of technological process	Wet_ WO_11	P7S_WG
O.W14	describes legal standards associated with the activities of veterinary physicians	Wet_ WO_12	P7S_WK
O.W15	presents the basic IT and biostatistic methods used in veterinary medicine	Wet_ WO_13	P7S_WK
Symbol of the outcome	1.2. SKILLS	Previous symbol of the outcome	Symbol of the outcome for PRK
O.U1	conducts clinical examination of the animal in accordance with the principles of medical art	Wet_ UO_01	P7S_UW P7S_UK

O.U2	analyses and interprets pathological changes and results of laboratory tests and additional tests, formulates the diagnosis of given disease, taking into account the differential diagnostics, and undertakes therapeutic or prophylactic actions	Wet_UO_02	P7S_UW
O.U3	plans the diagnostic procedure	Wet_UO_03	P7S_UW
O.U4	monitors health of the herd, as well as undertakes action in the case of a disease that is subject to the obligation of disease eradication or its registration	Wet_UO_04	P7S_UW
O.U5	performs pre- and post-mortem inspection of slaughter animals and examination of meat, as well as other products of animal origin	Wet_UO_05	P7S_UW P7S_UK
O.U6	performs activities that are associated with the veterinary supervision, including trade in animals, as well as sanitary and veterinary conditions of animal gathering locations and processing products of animal origin	Wet_UO_06	P7S_UW
O.U7	issues veterinary medical opinion and certificate	Wet_UO_07	P7S_UW P7S_UK
O.U8	uses Latin medical nomenclature to the extent necessary to understand and describe medical activities, as well as state of animal health, diseases, pathological changes and conditions	Wet_UO_08	P7S_UW P7S_UK
O.U9	applies IT systems used to support the health facility for animals, herd and analysis of epizootic situation	Wet_UO_09	P7S_UW P7S_UK

O.U10	performs basic statistical analysis and uses appropriate methods for presentation of the results	Wet_UO_10	P7S_UW P7S_UK
O.U11	uses vocabulary and grammatical structures of a foreign language, which constitutes the language of international communication, in the scope of creating and understanding written and oral statements, both general and specialised in the scope of veterinary	Wet_UO_10	P7S_UK
O.U12	maintains physical fitness that is required for the work with certain animal species	Wet_UO_11	P7S_UO
Symbol of the outcome	1.3. SOCIAL COMPETENCE	Previous symbol of the outcome	Symbol of the outcome for PRK
O.K1	exhibits responsibility for his/her decisions made in regard to the people, animals and the natural environment	Wet_KS_01	P7S_KO P7S_KR
O.K2	has an attitude consistent with ethical principles and undertakes actions based on the code of ethics in professional practice, as well as exhibits tolerance for attitudes and behaviours resulting from various social and cultural conditions	Wet_KS_02	P7S_KR
O.K3	participates in resolution of the conflicts and exhibits flexibility in reactions to social changes	Wet_KS_03	P7S_KK
O.K4	uses the objective sources of information	Wet_KS_04	P7S_KK

O.K5	formulates conclusions from own measurements or observations	Wet_ KS_05	P7S_KK
O.K6	formulates opinions regarding various aspects of professional activity	Wet_ KS_05	P7S_KK
O.K7	is ready for reliable self-assessment, formulating constructive criticism in the scope of veterinary practice, accepting criticism of presented solutions, reacting to such criticism in a clear and material manner, also with the use of arguments referring to the available scientific achievements in the discipline	Wet_ KS_06	P7S_KK
O.K8	deepens his/her knowledge and improves skills	Wet_ KS_07	P7S_KK
O.K9	communicates with the co-workers and shares knowledge	Wet_ KS_08	P7S_KO
O.K10	is ready to act in the conditions of uncertainty and stress	Wet_ KS_09	P7S_KO
O.K11	cooperates with representatives of other professions in the scope of public health protection	Wet_ KS_10	P7S_KK P7S_KO P7S_KR
O.K12	gets involved in the activities of professional and local government organisations	Wet_ KS_11	P7S_KO P7S_KR
2. DETAILED EDUCATIONAL OUTCOMES			
A. IN THE SCOPE OF BASIC SCIENCES			

Symbol of the outcome	After completion of the studies, a graduate: KNOWLEDGE	Previous symbol of the outcome	Symbol of the outcome for PRK
A.W1	knows to an extensive degree and understands the structure of the animal organism: cells, tissues, organs and systems	Wet_WSP_01	P7S_WG
A.W2	knows to an extensive degree, describes in detail and explains the structure, activity and regulation mechanisms of organs and systems of the animal organism (respiratory, digestive, circulatory, excretory, nervous, reproductive, hormonal, immune system and skin), as well as their integration at the organism level	Wet_WSP_02	P7S_WG
A.W3	presents the development of organs and the entire animal organism in relation to the mature organism	Wet_WSP_03	P7S_WG
A.W4	characterises in detail the metabolic processes at the molecular, cellular, organ and system levels	Wet_WSP_04	P7S_WG
A.W5	knows to an extensive degree and understands the principles of water and electrolyte metabolism, acid-base balance of animal organism, as well as the mechanism of system homeostasis	Wet_WSP_05	P7S_WG
A.W6	characterises the basic reactions of organic and inorganic compounds in aqueous solutions	Wet_WSP_06	P7S_WG
A.W7	presents the physical laws describing flow of fluids and factors affecting vascular resistance of blood flow	Wet_WSP_07	P7S_WG

A.W8	knows to an extensive degree and understands the physicochemical and molecular foundations of the operation of sensory organs	Wet_WSP_08	P7S_WG
A.W9	describes in detail the mechanism of neurohormonal regulation, reproduction, aging and death	Wet_WSP_09	P7S_WG
A.W10	knows to an extensive degree and understands the principles and mechanisms underlying animal health, disease formation and their treatment - from the level of cells, through the organ, animal, herd of animals, to the entire animal population	Wet_WSP_10	P7S_WG
A.W11	explains the correlation between factors that disturb the balance of biological processes of the animal body and physiological and pathophysiological changes	Wet_WSP_11	P7S_WG
A.W12	describes and interprets the pathophysiological changes occurring in cells, tissues, organs and systems of animals, as well as biological mechanisms, including immunological mechanisms, and therapeutic possibilities that allow recovery	Wet_WSP_12	P7S_WG
A.W13	knows to an extensive degree the biology of infectious factors that cause diseases transmitted between animals, as well as anthrozooses, taking into account the mechanisms of disease transmission and defense mechanisms of the organism	Wet_WSP_13	P7S_WG
A.W14	describes and characterises the principles and processes of inheritance, genetic disorders and the basics of genetic engineering	Wet_WSP_14	P7S_WG

A.W15	knows to an extensive degree and presents the basics of microbiological diagnostics	Wet_WSP_15	P7S_WG
A.W16	knows to an extensive degree and understands the mechanisms of operation, activity in the system, side effects and mutual interactions of the groups of veterinary medicinal products used in target animal species	Wet_WSP_16	P7S_WG
A.W17	describes in detail the application of antibacterial and antiparasitic chemotherapy	Wet_WSP_17	P7S_WG
A.W18	presents the mechanisms of drug resistance, including multi-drug resistance by microorganisms and cancer cells	Wet_WSP_18	P7S_WG
A.W19	knows to an extensive degree the procedures and elements necessary to issue a prescription for veterinary medicinal products	Wet_WSP_19	P7S_WG
A.W20	knows and understands the English and Latin medical nomenclature	Wet_WSP_20	P7S_WG
A.W21	describes and characterises the types of poisonings occurring in animals and the principles of diagnostic and therapeutic procedure in the case of poisonings	Wet_WSP_21	P7S_WG
A.W22	knows and understands the veterinary physician's code of ethics	Wet_WSP_22	P7S_WK
A.W23	presents the concepts in the scope of intellectual property protection	Wet_WSP_23	P7S_WK

Symbol of the outcome	SKILLS	Previous symbol of the outcome	Symbol of the outcome for PRK
A.U1	is able to use the knowledge of the laws of physics in order to explain the impact of external factors (temperature, pressure, electromagnetic field, ionizing radiation) on the animal body	Wet_USP_01	P7S_UW
A.U2	uses the basic laboratory techniques, such as: qualitative analysis, titration, colourimetry, pH-metry, chromatography and electrophoresis of proteins and nucleic acids	Wet_USP_02	P7S_UW
A.U3	calculates the molar and percentage concentrations of substances and compounds in isoosmotic solutions	Wet_USP_03	P7S_UW
A.U4	describes changes in functioning of the organism in the situation of homeostasis disorders	Wet_USP_04	P7S_UW
A.U5	predicts the direction of biochemical processes, depending on the energy state of the cells	Wet_USP_05	P7S_UW
A.U6	explains the anatomical basis of physical examination, taking into account the individual animal species;	Wet_USP_06	P7S_UW
A.U7	defines physiological state as the animal's adaptation to the changing environmental factors	Wet_USP_07	P7S_UW

A.U8	recognises (in the images from optical microscope) histological structures corresponding to organs, tissues and cells, and is able to formulate their description, interpret their structure and relations between their structure and activity, taking into account the animal species from which they originate	Wet_USP_08	P7S_UW
A.U9	analyses genetic crosses and pedigree of the characteristics of individuals from respective species	Wet_USP_09	P7S_UW
A.U10	performs basic microbiological diagnostics	Wet_USP_10	P7S_UW
A.U11	is able to choose and apply rational empirical and targeted antibacterial chemotherapy, taking into account the target species of animals	Wet_USP_11	P7S_UW
A.U12	communicates with the clients and other veterinary physicians	Wet_USP_12	P7S_UK
A.U13	is able to listen and provide answers with the use of understandable language, appropriate to the given situation	Wet_USP_13	P7S_UK
A.U14	prepares transparent case descriptions and keeps documentation, in accordance with regulations applicable in this scope, in the form understandable to the animal owner and legible to other veterinary physicians	Wet_USP_14	P7S_UK
A.U15	is able to work in a multidisciplinary team	Wet_USP_15	P7S_UO
A.U16	interprets the responsibility of veterinary physician in regard to the animal, its owner, society, as well as the natural environment	Wet_USP_16	P7S_UK

A.U17	estimates the toxicological danger in specific technological groups of farm animals	Wet_USP_17	P7S_UK
A.U18	assesses the economic and social conditions, in which the profession of veterinary physician is performed	Wet_USP_18	P7S_UW P7S_UK
A.U19	uses his/her professional skills to improve the quality of veterinary care, animal welfare, as well as public health	Wet_USP_19	P7S_UW P7S_UK
A.U20	organises and conducts veterinary practice (including calculation of the fees), as well as issues invoices, keeps financial and medical documentation, and uses IT systems for effective communication, collection, processing, transmission and analysis of information	Wet_USP_20	P7S_UW P7S_UK
A.U21	understands the need of continuing education, in order to ensure continuous professional development	Wet_USP_21	P7S_UU
A.U22	adapts to the changing situation on the labour market;	Wet_USP_22	P7S_UW P7S_UU
A.U23	is able to use the advice and help of specialised organisational units or persons in the scope of problem solving	Wet_USP_23	P7S_UW P7S_UO
B. IN THE SCOPE OF CLINICAL SCIENCES			

Symbol of the outcome	After completion of the studies, a graduate: KNOWLEDGE	Previous symbol of the outcome	Symbol of the outcome for PRK
B.W1	knows to an extensive degree as well as understands disorders at the level of the cell, tissue, organ, system and organism, in the course of the disease	Wet_WSK_01	P7S_WG
B.W2	explains the mechanisms of organ and systemic pathologies	Wet_WSK_02	P7S_WG
B.W3	describes the causes and symptoms of anatomopathological changes, principles of treatment and prophylaxis in individual disease entities	Wet_WSK_03	P7S_WG
B.W4	knows and understands the principles of diagnostic procedure, taking into account the differential diagnostics and therapeutic procedure	Wet_WSK_04	P7S_WG
B.W5	presents the principles of conducting clinical examination and monitoring animal health	Wet_WSK_05	P7S_WG
B.W6	explains the method of handling clinical data, as well as results of laboratory tests and additional tests	Wet_WSK_06	P7S_WG
B.W7	knows and interprets the regulations of the law, rules for issuing judgments and preparing opinions for the needs of courts, state, local government and professional administration bodies	Wet_WSK_07	P7S_WG P7S_WK
B.W8	knows to an extensive degree the method of procedure in the case of suspicion or diagnosing diseases that are subject to the obligation of disease eradication or its registration	Wet_WSK_08	P7S_WG

B.W9	describes the principles of ensuring animal welfare	Wet_WSK_10	P7S_WG
B.W10	knows and understands the principle of functioning of the parasite-host system, as well as basic disease symptoms and pathological changes caused by parasites in the host organism	Wet_WSK_09	P7S_WG
B.W11	characterises breeds within animal species, as well as principles of animal raising and husbandry	Wet_WSK_11	P7S_WG
B.W12	knows and understands the assumptions of animal pairing, methods of fertilization, reproduction biotechnology, as well as breeding selection	Wet_WSK_12	P7S_WG
B.W13	presents the principles of animal nutrition, taking into account the differences in species and age	Wet_WSK_13	P7S_WG
B.W14	presents the principles of planning and analysing the food doses	Wet_WSK_13	P7S_WG
B.W15	presents the methods of management and utilisation of animal by-products and waste associated with animal production	Wet_WSK_15	P7S_WG
B.W16	knows and describes the principles of functioning of the Veterinary Inspection, also in the aspect of public health	Wet_WSK_16	P7S_WG P7S_WK
B.W17	presents the principles of consumer health protection, which are ensured by appropriate supervision over the production of foodstuffs of animal origin	Wet_WSK_17	P7S_WG

B.W18	characterises the control systems in accordance with HACCP (<i>Hazard Analysis and Critical Control Points</i>) procedures	Wet_WSK_18	P7S_WG P7S_WK
B.W19	knows to an extensive degree the procedures of pre- and post-mortem inspection	Wet_WSK_19	P7S_WG
B.W20	knows and interprets the conditions of hygiene and technology of animal production	Wet_WSK_20	P7S_WG
B.W21	knows to an extensive degree, interprets and observes the principles of food law	Wet_WSK_21	P7S_WG P7S_WK
B.W22	knows and understands the principles of economics of the animal production	Wet_WSK_14	P7S_WG P7S_WK
Symbol of the outcome	SKILLS	Previous symbol of the outcome	Symbol of the outcome for PRK
B.U1	safely and humanely handles animals and instructs others in this scope	Wet_USK_01	P7S_UW
B.U2	conducts a medical-veterinary interview in order to obtain precise information regarding individual animal or group of animals and its or their living environment	Wet_USK_02	P7S_UW
B.U3	performs a full clinical examination of the animal;	Wet_USK_03	P7S_UW
B.U4	is able to provide first aid to animals in the case of haemorrhage, wounds, respiratory disorders, eye and ear injuries, loss of consciousness, cachexia, burns, tissue damage, internal injuries, cardiac arrest	Wet_USK_04	P7S_UW

B.U5	assesses the nutritional status of the animal and provides advice in this scope	Wet_USK_05	P7S_UW
B.U6	collects and secures the samples for tests, as well as performs standard laboratory tests, and correctly analyses and interprets the results of laboratory tests	Wet_USK_06	P7S_UW
B.U7	uses diagnostic equipment, including radiographic, ultrasound and endoscopic equipment, in accordance with its intended purpose and safety rules for animals and people, as well as interprets the results of tests obtained after its application	Wet_USK_07	P7S_UW
B.U8	implements the appropriate procedures in the case of diagnosing a disease subject to the obligation of eradication or registration	Wet_USK_08	P7S_UW P7S_UK
B.U9	obtains and uses information on authorised veterinary medicinal products	Wet_USK_09	P7S_UW
B.U10	is able to prescribe and use veterinary medicinal products and medical materials, taking into account their safe storage and utilisation	Wet_USK_10	P7S_UW
B.U11	uses the methods of safe sedation, general and local anaesthesia, as well as assessment and relief of pain	Wet_USK_11	P7S_UW
B.U12	monitors the patient's condition in the intra- and post-operative period on the basis of basic life parameters	Wet_USK_12	P7S_UW
B.U13	chooses and applies the appropriate treatment	Wet_USK_13	P7S_UW

B.U14	implements the principles of surgical antisepsis and asepsis, as well as applies appropriate methods of sterilising equipment	Wet_USK_14	P7S_UW
B.U15	assesses the need for performance of euthanasia of the animal and informs its owner about this fact in an appropriate manner, and euthanizes the animal in accordance with the principles of professional ethics and appropriate handling of corpses	Wet_USK_15	P7S_UW P7S_UK
B.U16	is able to perform an autopsy of the animal corpse, along with the description, as well as to take samples and secure them for transport	Wet_USK_16	P7S_UW
B.U17	is able to perform pre- and post-mortem inspection;	Wet_USK_22	P7S_UW
B.U18	assesses the quality of products of animal origin;	Wet_USK_23	P7S_UW
B.U19	performs an epizootic investigation in order to determine the period of time, during which a contagious disease may have developed on the farm before suspecting or establishing its occurrence, place of origin of the source of the animal contagious disease, along with determination of other farms and the pathways of movement of people, animals and objects that could cause the spread of an infectious disease to or from the farm	Wet_USK_17	P7S_UW P7S_UK P7S_UO
B.U20	uses the collected information associated with the health and welfare of animals, and in selected cases also with productivity of the herd	Wet_USK_21	P7S_UW P7S_UK P7S_UO

B.U21	develops and introduces preventive programs, which are appropriate for the individual animal species	Wet_USK_18	P7S_UW P7S_UO
B.U22	is able to estimate the risk of occurrence of chemical and biological hazards in food of animal origin	Wet_USK_24	P7S_UW
B.U23	is able to collect samples for monitoring tests for the presence of prohibited substances, chemical and biological residues, medicinal products and radioactive contamination in animals, in their secretions, excretions, tissues or organs, in products of animal origin, food, in water intended for animal drinking and in the feed	Wet_USK_19	P7S_UW
B.U24	assesses the fulfilment of requirements of the slaughter animals protection, taking into account the various methods of slaughter	Wet_USK_25	P7S_UW
B.U25	assesses the risk of contamination, cross-contamination and accumulation of pathogens in veterinary facilities and in the natural environment, as well as introduces recommendations that minimise such risk	Wet_USK_20	P7S_UW P7S_UK P7S_UO
C. EDUCATIONAL OUTCOMES (SUPPLEMENTARY CLASSES)			
Symbol of the outcome	After completion of the studies, a graduate: KNOWLEDGE	Previous symbol of the outcome	Symbol of the outcome for PRK

C.W1	knows and understands vocabulary and grammatical structures of at least one foreign language, which is a language of international communication, at the B2+ level of the Common European Framework of Reference for Languages, as well as specialised terminology in the scope of veterinary medicine, which is necessary in professional activity	Wet_WZU_01	P7S_WG
C.W2	presents the functioning of institutions associated with veterinary activities and the social role of a veterinary physician	Wet_WZU_02	P7S_WG P7S_WK
C.W3	describes the rules of occupational health and safety in veterinary activities	Wet_WZU_03	P7S_WG P7S_WK
Symbol of the outcome	SKILLS	Previous symbol of the outcome	Symbol of the outcome for PRK
C.U1	uses at least one foreign language, which is a language of international communication, at the B2+ level of the Common European Framework of Reference for Languages, including specialised terminology in the scope of veterinary, which is necessary in professional activity	Wet_UZU_01	P7S_UK
C.U2	critically analyses veterinary literature and draws conclusions on the basis of available literature	Wet_UZU_02	P7S_UW P7S_UU
C.U3	uses and processes information with the use of IT tools and modern sources of veterinary knowledge	Wet_UZU_03	P7S_UW P7S_UK P7S_UU

C.U4	effectively communicates with employees of control bodies and offices, as well as central and local government administration	Wet_UZU_04	P7S_UO P7S_UK
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Explanations of designations in the symbols

Wet – Veterinary

P7S – long-cycle studies

W – category of knowledge

WG - extent and scope

WK - creativity

U – category of skills

UW - use of knowledge

UK - communication

UO - work organisation

UU - learning

K – category of social competence

KK - critical approach

KO - responsibility

KR - professional role

1, 2 – subsequent number of the effect

1.4. Sposób weryfikacji osiągniętych efektów uczenia się

Weryfikacja osiągniętych efektów uczenia się wymaga zastosowania zróżnicowanych form sprawdzania, adekwatnych do kategorii wiedzy, umiejętności i kompetencji społecznych, których dotyczą te efekty.

Osiągnięcie efektów uczenia się w zakresie wiedzy sprawdza się za pomocą egzaminów pisemnych lub ustnych, prac przeglądowych, elaboratów i prezentacji.

Jako formy egzaminów pisemnych stosuje się: eseje, raporty, krótkie ustrukturyzowane pytania, testy wielokrotnego wyboru, testy wielokrotnej odpowiedzi, testy wyboru tak/nie lub testy dopasowania odpowiedzi.

Egzaminy ustne są ukierunkowane na sprawdzenie wiedzy na poziomie wyższym niż sama znajomość zagadnień (poziom zrozumienia zagadnień, umiejętność analizy i syntezy informacji oraz rozwiązywania problemów).

Weryfikacja osiągnięcia efektów uczenia się w zakresie umiejętności, które dotyczą komunikowania się i umiejętności proceduralnych (manualnych), wymaga bezpośredniej obserwacji studenta demonstrującego umiejętność w czasie egzaminu.

Skalę ocen oraz sposób obliczania oceny łącznej z przedmiotu określa Regulamin studiów UPWr.

*) – w przypadku kierunków przyporządkowanych do więcej niż jednej dyscypliny należy podać procentowy udział poszczególnych dyscyplin i wskazać dyscyplinę wiodącą, w ramach której będzie uzyskiwana ponad połowa efektów uczenia się

**) – dotyczy kierunków studiów, po których ukończeniu absolwent uzyskuje tytuł zawodowy inżyniera lub magistra inż.