Załącznik na 1 do uchwały nr ... z dnia Senatu SGGW w Warszawie w sprawie ustalenia programów studiów dla kierunku weterynaria

STUDY PROGRAMME – VETERINARY MEDICINE

Field of studies:	Veterinary Medicine
Level of study:	Long-cycle Master's degree programme
Profile of study:	general academic
Form of study:	intramural, extramural
Duration of degree programme:	11 semesters (5.5 YEAR)
The total number of ECTS required	
for graduation:	360
Professional title:	lekarz weterynarii (eq. of: veterinary surgeon doctor of veterinary medicine)
ISCED code for study programme	0841

Study programme is assigned to following discipline/disciplines:

LP	Discipline	Leading discipline (YES/NO)	Percentage of learning outcomes related to discipline
1.	WETERYNARIA (VETERINARY MEDICINE)	YES	100%
Total:			100%

LEARNING OUTCOMES

Based on the Regulation of the Ministry of Science and Higher Education from July 17th 2019, regarding education standards for veterinary profession.

GENERAL LEARNING EFFECTS

Regarding basic knowledge graduate knows and understands:

- rules and mechanisms governing animal health, disease and therapy, from the cellular level, through the organs, organisms, herds to the whole population of animals;
- development, structure, functioning behaviour and physiological mechanisms of animals in physiological conditions and mechanisms of disorders in pathology;
- aetiology, pathogenesis and clinical symptoms of disease in various animal species and measures of therapeutic action;
- diagnostic (including differential diagnostics) and therapeutic procedures specific for animal diseases;
- 5) guidelines for prescription of veterinary medical products for prophylaxis and therapy of animals and towards the food chain safety and environmental protection;
- biology of infectious agents inducing diseases transmitted between animals, animals and humans, including mechanisms of the disease transmission and macro-organism defence systems;
- guidelines of clinical evaluation according to the clinical evaluation plan, analysis of clinical symptoms and patomorphological changes;
- guidelines for animal husbandry and breeding, including guidelines for animal feeding, animal well-being and production economics;
- 9) guidelines for use and utilisation of animal by-products and waste;
- 10) guidelines for ante-mortem and post-mortem examination of animals and products of animal origin;
- 11) guidelines for protection of consumer health;
- 12) guidelines for monitoring of production of food of animal origin;
- norms, guidelines and conditions of animal production technology and of the hygiene of the technological process;
- 14) appropriate law regulations concerning veterinary practice;

15) basic information technologies and biostatistic methods utilised in veterinary practice.

Regarding professional skills graduate knows how to:

- 1) conduct clinical evaluation, according to the principals of medical practice;
- analyse and interpret clinical symptoms, patomorphological changes, results of laboratory tests and other diagnostic methods, formulate diagnosis based on the principles of differential diagnostics, and conduct therapeutic or preventive actions;
- 3) formulate diagnostic plan;
- monitor herd health and implement official epizootic procedures in case of the lawregulated diseases;
- 5) perform ante-mortem and post-mortem examination and examination of meat and other products of animal origin;
- 6) perform actions concerning veterinary supervision, including animal trade, conditions of animal facilities and manufacture of products of animal origin;
- 7) issue official opinion and veterinary verdict;
- 8) use Latin medical nomenclature to accurately understand and describe medical procedures, animal health conditions, diseases and pathological changes;
- use basic computer systems for management of veterinary clinic and animal herd, and for the analysis of epizootic situation;
- 10) conduct basic statistical analyses and utilise appropriate methods to propagate their results;
- 11) utilise nomenclature and grammatic structure of foreign language, considered a language of international communication, to formulate and understand written and spoken expression of both general and veterinary nature;
- 12) maintain physical prowess required for work with selected animal species.

Regarding social competences, graduate is prepared to:

- 1) take responsibility for his decisions concerning humans, animals and environment;
- act within the current standards and ethical obligations, perform actions based on the code of professional ethics, show tolerance to beliefs and behaviour influenced by different sociological and cultural background;
- show competence in solving of conflicts and pliability in the reactions for sociological changes;
- 4) utilise unbiassed sources of information;
- 5) formulate conclusions from personal measurements or observations;

- 6) formulate opinions regarding various aspects of professional conduct;
- perform critical self-evaluation, formulate constructive criticism regarding veterinary practice, accept criticism regarding postulated solutions, factual respond to that criticism based on the current scientific knowledge;
- 8) constantly update knowledge and skills for professional development;
- 9) communicate with co-workers and share the knowledge;
- 10) operate under stress and duress;
- 11) collaborate with specialists of other professions for the protection of public health;
- 12) engage in the operations of professional and territorial organisations.

DETAILED EFFECTS OF LEARNING

A. BASIC ACADEMIC EDUCATION

Regarding basic knowledge graduate knows and understands:

- A.W.1. morphology of the animal organism: cells, tissues, organs and systems;
- A.W.2. structure, functions, regulatory mechanisms and integration of the systems of the animal organism (respiratory, gastrointestinal, cardiovascular, urinary, nervous, reproductive, endocrine, immune and skin);
- A.W.3. development of organs and the whole organism in relation to the adult organism;
- A.W.4. metabolic processes on the molecular, cellular, organ and organism level;
- A.W.5. mechanisms of homeostasis, water management and acid-base balance;
- A.W.6. basic chemical reactions in water solutions;
- A.W.7. laws of hydrodynamics and factors influencing vascular blood flow;
- A.W.8. physical-chemistry regarding sensory functions;
- A.W.9. mechanisms of neurohormonal regulation, reproduction, ageing and death;
- A.W.10. mechanisms underlining animal health, disease and their therapy from the cellular level, through organs, organism, herd to the whole population of animals;
- A.W.11. relationship between factors influencing homeostasis of biological processes and physiological, and pathological changes;
- A.W.12. patophysiological changes in the organs and systems, biological mechanisms (including immunological) and therapeutical actions facilitating recovery;
- A.W.13.biology of infectious agents inducing diseases transmitted between animals, animals and humans, including mechanisms of the disease transmission and organism defence systems;
- A.W.14. genetic mechanisms, genetic disorders and bases of the genetic engineering;
- A.W.15. basics of microbiological diagnostics;

- A.W.16. mechanisms of drug action, their fate in the organism, adverse actions and drug-todrug interactions of veterinary pharmaceuticals in target animal species;
- A.W.17. the uses of anti-microbial and anti-parasitic chemotherapy;
- A.W.18. mechanisms of antibiotic resistance, including multi-antibiotic resistance by microorganisms and cancer cells;
- A.W.19. procedures and elements required to issue prescription for veterinary pharmaceuticals;
- A.W.20. English and Latin medical nomenclature;
- A.W.21. types of animal poisonings, diagnostic and therapeutic strategies in poisoning cases;
- A.W.22. code of ethics of veterinary surgeon;
- A.W.23. laws governing intellectual property;

Regarding basic skills graduate knows how to:

- A.U.1. utilise knowledge of physics to explain the influence of external factors (temperature, pressure, electromagnetic force, ionizing radiation) on animal organism;
- A.U.2. utilise basic laboratory techniques, such as: qualitative analysis, titration, colorimetry, pH measurement, chromatography and protein, and nucleic acid electrophoresis;
- A.U.3. calculate molar and percent concentration of substances and compounds in the isoosmotic solutions;
- A.U.4. describe changes in the function of the organism occurring upon alteration of homeostasis;
- A.U.5. predict direction of biochemical processes depending on the energetic status of the cell;
- A.U.6. describe anatomical bases of veterinary evaluation regarding inter-species variations;
- A.U.7. define physiological status of the animal as an adaptive process to environmental variability;
- A.U.8. under optical microscopy, differentiate and describe histological structures characteristic to organs, tissues and cells, relate their structure to function regarding inter-species variations;
- A.U.9. analyse genetic crosses and individual trait pedigrees from different species;
- A.U.10. conduct basic microbiological evaluation;
- A.U.11. select and implement rational, direct and conceptual antimicrobial chemotherapy regarding target animal species;

A.U.12. effectively communicate with clients and veterinary surgeons;

- A.U.13. listen and explain in the language that is understandable and appropriate for the situation;
- A.U.14. formulate clear case studies and how to create documentation according to the current laws and regulations, in the form understandable for the owner of the animal and clear for other veterinary surgeons;
- A.U.15. operate in the interdisciplinary team;
- A.U.16. appropriately interpret responsibility of the veterinary surgeon towards animal, its owner, society and the environment;
- A.U.17. evaluate toxicological risk related to various technological directions of animal production;
- A.U.18. evaluates economical and sociological implications of the veterinary practice;
- A.U.19. implement professional skills in order to enhance the quality of veterinary care, animal welfare and public health;
- A.U.20. organise and maintain veterinary practice, calculate fees, issue official invoices, maintain fiscal records and use computer systems for effective communication, accumulation, processing, analysis and propagation of information;
- A.U.21. understand the need of continuous education for professional development;
- A.U.22. adapt professional offer to the dynamically changing situation on the work market;
- A.U.23. use the professional advice and help of the specialists or specialised units in difficult cases;

B. PROFESSIONAL EDUCATION

Regarding professional knowledge graduate knows and understands:

- B.W.1. disorders on the cellular, tissue, organ, system and organism levels occurring in the course of the disease;
- B.W.2. mechanisms of the organ and system pathologies;
- B.W.3. causes and symptoms of patomorphological changes, procedures for therapy and prevention in the particular diseases;
- B.W.4. diagnostic (including differential diagnostics) and therapeutic procedures;
- B.W.5. rules of clinical evaluation and animal health monitoring;

- B.W.6. how to interpret clinical data, results of the laboratory tests and other diagnostics techniques;
- B.W.7. appropriate law regulations, rules governing issuing of the verdicts and official opinions for the law courts, state, local and veterinary administration;
- B.W.8. official epizootic procedures in case of the law-regulated diseases;
- B.W.9. conditions of animal welfare;
- B.W.10. the interaction between parasite and host, general symptoms and patomorphological changes induced by parasites in the host organism;
- B.W.11. breeds within animal species, describes rules of animal husbandry and breeding;
- B.W.12. rules for animal selection for breeding, methods of breeding, reproductive biotechnology and husbandry selection;
- B.W.13. rules of animal feeding according to the species specifics and age;
- B.W.14. elaborate and analyse diet compositions;
- B.W.15. conditions for appropriate utilisation and disposal of animal by-products and management of waste from animal production;
- B.W.16. functioning of the State Veterinary Service, also in the aspect of public health prevention;
- B.W.17. rules of consumers health protection by the appropriate organ responsible for the production of foods of animal origin;
- B.W.18. HACCP (Hazard Analysis and Critical Control Points) procedures;
- B.W.19. procedures of ante-mortem and post-mortem examination of animals;
- B.W.20. conditions of hygiene and technology of animal production;
- B.W.21. regulations governing food production;
- B.W.22. rules of animal production economics.

Regarding professional skills graduate knows how to:

- B.U.1. handle animals in safe and humane way, and instructs others to do alike;
- B.U.2. conduct anamnesis in order to acquire precise information on animal or group of animals (heard), and their environment;
- B.U.3. carry out full clinical evaluation;

- B.U.4. perform first aid procedures for all animal species for haemorrhage, wounds, respiratory disorders, eye and ear injuries, loss of consciousness, cahexia, burns, tissue injuries, internal injuries and heart block;
- B.U.5. evaluate nutritional state of the animal and ordains information on proper animal nutrition;
- B.U.6. collect and safeguard the biological material, conduct basic laboratory analyses, properly evaluate and interpret results of laboratory analyses;
- B.U.7. use diagnostic devices including x-ray, ultrasound, endoscopy, according to its manuals and health and safety regulations concerning animals and humans, interpret the results obtained from those diagnostic devices;
- B.U.8. implement according official epizootic procedures in case of the law-regulated diseases;
- B.U.9. acquire and use information on registered veterinary pharmaceuticals;
- B.U.10. prescribe and use veterinary pharmaceuticals and medical materials, including their safe storage and utilisation;
- B.U.11. use methods of safe sedation, general and local anaesthesia, and methods for pain evaluation and relief;
- B.U.12. monitor patient status during surgery and intensive care upon the basic life parameters;
- B.U.13. chose the treatment adequate for the diagnosed disease;
- B.U.14. implement rules of aseptic and antiseptic surgery procedures, and use proper methods of tools sterilisation;
- B.U.15. evaluate the need for euthanasia, properly informs the owner of the animal and carry out the euthanasia procedure according to rules and obligations of professional ethics and proper care and utilisation of the body;
- B.U.16. carry out patomorphological examination, prepare proper protocol, collect samples and safeguard them for transport;
- B.U.17. conduct ante-mortem and post-mortem examination of animals;
- B.U.18. evaluate quality of the products of animal origin;
- B.U.19. conduct epizootic investigation to establish onset and source of the infectious disease on farm before its diagnosis, identification of other involved farms, routes of

communication of people, animals, and farm implements that may facilitate disease transmission to or from the affected farm;

- B.U.20. use documentation of the health, welfare and, in certain cases, the productivity of animals (herd);
- B.U.21. prepare the preventive schemes according to the species specifics;
- B.U.22. evaluate the risk of chemical and biological contamination of foods of animal origin;
- B.U.23. collect samples for monitoring of presence of prohibited substances, chemical, biological, pharmaceutical and radioactive traces from animals, their secretions and excretions, tissues, products of animal origin, food, feed and water;
- B.U.24. evaluate the conditions of slaughter animal protection concerning various slaughter systems;
- B.U.25. evaluate the risk and prepare the procedures minimising the risk of contamination, cross-species infection and accumulation of the disease agents in veterinary facilities and the environment.

C. SUPPLEMENTARY EDUCATION

Regarding general knowledge graduate knows and understands:

- C.W.1. nomenclature and grammatic structure of at least one foreign language, considered a language of international communication on the minimal level of B2+ (Common European Framework of Reference for Languages, CEFR), including specialised nomenclature required for professional veterinary practice;
- C.W.2. functioning of institutions associated with veterinary profession and social role of veterinary surgeon;
- C.W.3. occupational health and safety regulations in veterinary practice.

Regarding general skills graduate knows how to:

- C.U.1. use at least one foreign language, considered a language of international communication, to formulate and understand written and spoken expression of both general and veterinary nature on the minimal level of B2+ (Common European Framework of Reference for Languages, CEFR), including specialised nomenclature required for professional veterinary practice;
- C.U.2. critically analyse veterinary literature and formulate conclusions based on available literature;
- C.U.3. utilise computer systems and current sources of veterinary knowledge for effective use

and process of information;

C.U.4. effectively communicate with authorities of control offices and local, and national government.

ASSESSMENT OF LEARNING OUTCOMES

Verification of learning outcomes requires varied formal assessment methods, appropriate to categories of knowledge, skills and social competences to which these outcomes refer to.

The achievement of learning outcomes in regard to knowledge can be evaluated with written and oral exams, review papers, dissertations and presentations.

Appropriate forms of written exams are as follows: essays, reports, short structured questions, multiple choice tests, multiple answer tests, true/false choice tests or answer matching tests.

The aim of oral exams is not merely to evaluate basic knowledge, but to verify the competences and skills in comprehension, analysis, information synthesis, problem solving and communication.

The verification of learning outcomes in regard to communication and procedural (manual) skills requires direct observation of the student performing certain task during exam.

CONCEPT OF EDUCATION

The concept and education aims for veterinary medicine are direct representation of policy for quality learning and strategy of WULS-SGGW formulated until 2020 and strategical aims of education. The five major strategic aims: *Improve education, Improve scientific research, Collaboration and internationalisation, Development of technology transfer, Finances and administration* formulate the guiding path which coherently, yet on multiple levels allow the concept of modern teaching and scientific activity in the scope of agricultural sciences in the discipline if veterinary medicine.

Study offering in veterinary medicine at the Faculty of Veterinary Medicine, WULS-SGGW formulates an answer to current social situation and challenges of global professional market. According to Strategy of development of WULS-SGGW, quality of education, "a guarantee for knowledgeable and skill-full graduate useful for the economic and intellectual development of the country", results from systematic verification and improvement of study offering fulfilled within a wide collaboration with internal and external stakeholders.

Warsaw University of Life Sciences – SGGW "conducts scientific research within widelydefined frame of natural sciences as well as economical, humane and technical sciences" (Mission of WULS-SGGW). Constant enhancement of scientific research, development of study offering, popularisation of research results, international collaboration via joint research actions and joint educational programs which coincides with the progress of the level of graduate – are the main aims of the University. Graduating students are knowledgeable and skill-full within distinct taught WULS-SGGW disciplines, as well as widely educated towards open opinion, tolerance, patriotism, honesty, scientific integrity and respect for all the people.

Concept of education for veterinary sciences and learning effects acquired during studies are based on the Regulation of the Ministry of Science and Higher Education from July 17th 2019, regarding education standards for veterinary profession, Faculty Teaching Quality Assurance and Improvement System for 2013-2020, requirements of the EAEVE (European Association of Establishments for Veterinary Education) and general European Guidelines for Higher Education.

Mission of the Faculty is to conduct actions promoting social development through state-of-theart scientific research and constant development of professional staff. Furthermore, study offering for veterinary medicine reflects fluctuating needs and changes of the professional market through permanent collaboration with the socio-economic environment in the field of teaching and research activities.

Study offering for veterinary medicine through the careful and competent selection of programme content provides students of long-cycle Master's degree programme with:

- knowledge required to describe rules and mechanisms underlining animal health, disease and therapy, from the cellular level, through tissue, organ, organism to the whole animal population and ecosystem;
- competence in analysis and interpretation of clinical symptoms, patomorphology changes, and results of laboratory and supplementary diagnostics;
- competence in disease diagnosis (with specific impact on differential diagnostics);
- skills in therapeutic and prophylactic actions;
- competences in soft skills: problem solving, accumulation, elaboration and propagation of knowledge, working in the multidisciplinary team.

This concept predicts that graduate is at a basic competence level to conduct scientific and analytical tasks, and knows how to utilise acquired competences to adapt to the constantly changing global professional market in both private and public sectors.

ELECTIVE MODULES, CLINICAL ROTATIONS AND WORK PRACTICES IN THE EDUCATION PROGRAMME OF VETERINARY SCIENCES

According to the Regulation of the Ministry of Science and Higher Education from July 17th 2019, regarding education standards for veterinary profession (Dz. U. z 2019, poz. 1364), veterinary education is realised through the student participation in three distinct types of classes: lectures; practical classes;

clinical rotations and work practices. Basic and directional subjects are taught as mandatory and elective modules. Recruitment to the elective modules is realised through the eHMS system and are carried out within last two weeks prior to the new semester (including 1st semester). Student may pick any of the single (not blocked) modules or is obliged to pick one of the offered elective blocks (10th and 11th semesters).

Type of the rotation	hours	ECTS
Avian diseases	30	2
Farm animal diseases	90	6
Equine diseases	90	6
Dog and cat diseases	90	6

Minimal clinical rotations included in the Ministry of Science and Higher Education regulations:

Farm animal diseases rotation and Equine diseases rotation are realised within single modules of 90 curricular hours each, similarly Avian diseases rotation is realised as a single module of 30 hours. The rotation in dog and cat diseases is split into two modules: Rotation – dog and cat diseases of 85 curricular hours and Rotation – veterinary laboratory diagnostics of 15 hours. Exceeding Ministry regulations, following consultations with external stakeholders, the Rotation – laboratory class of parasitology was introduced with 15 curricular hours. All rotations excluding Rotation – veterinary laboratory diagnostics (which is realised at 11th semester) are scheduled for 10th semester.

Work practices:

According to the Regulation of the Ministry of Science and Higher Education from July 17th 2019 work practices in the veterinary education programme consider mandatory modules, of 15 ECTS total, oriented towards practical aspects of functioning and the role of veterinarian on animal production / reproduction farms, veterinary clinics, slaughterhouses and food of animal origin production facilities.

Type of yearly practice	Period -	Ti	ne	ECTS
Type of work practice	renou	weeks	hours	ECIS
Husbandry practice	after 4 th semester	2	80	1
Clinical practice module 1	after 8 th semester	4	160	5
Vet. inspection practice, slaughter house	after 8 th semester	2	80	2
Clinical practice module 2	after 10 th semester	4	160	5
Vet. inspection, meat hygiene	after 10 th semester	2	80	2

Considering the weight of the subject, from the 15 Ministry-regulated ECTS, the clinical practices

received highest number of the ECTS, followed by veterinary inspection practice and husbandry practice. All work practices are realised by external stakeholders. During work practice, student is obliged to fill in the summer practice diary, which must be authenticated by the external stakeholder. Within first two weeks of semester following the summer work practice, student undergoes examination with designated University teachers to obtain the grade which will be recorded in the eHMS system.

STUDY OFFERING SUCCEEDS FROM THE FOLLOWING ACTIONS:

- broad discussions within the staff of the Faculty of Veterinary Medicine (from the level of Division, Department, through Faculty Committee for Education to Faculty Council);
- adaptation of the programme to the current legal provisions;
- regular supervision of classes, semester analysis of learning outcomes, systematic discussions on class improvement;
- consultations with external stakeholders (employers, practice and rotation supervisors);
- regular monitoring of professional fate of graduates, meetings and consultations, and permanent communication with the WULS-SGGW Careers Office.

SKILLS AND COMPETENCES OF THE GRADUATE OF LONG-CYCLE MASTER'S DEGREE PROGRAMME IN VETERINARY MEDICINE

Graduate of long-cycle master's degree programme in veterinary medicine knows and understands disorders at the level of cell, tissue, organ, system and organism, knows the the factors underlying therapeutic and preventive actions in various diseases. He knows and understands legal acts and law regulations, rules governing issuing of the verdicts and official opinions for the law courts, state, local and veterinary administration as well as professional self-government. Knows how to conduct and implement official epizootic procedures in case of the law-regulated diseases and rules regarding wellbeing of animals. Possesses, general knowledge regarding animal selection for breeding, methods of breeding, reproductive biotechnology and husbandry selection. Knows the rules of animal feeding according to the species specifics and age. Understands conditions for appropriate utilisation and disposal of animal by-products and management of waste from animal production. Recognizes the State Veterinary Inspection, also in the aspect of public health prevention. Knows rules of consumers health protection by the appropriate organ responsible for the production of foods of animal origin and HACCP (Hazard Analysis and Critical Control Points) procedures.

Regarding professional skills, graduate knows how to handle animals in safe and humane way, and instructs others to do alike, conduct anamnesis in order to acquire precise information on animal or group of animals (heard), and their environment, finally carry out full clinical evaluation. Graduate perform first aid procedures for all animal species for haemorrhage, wounds, respiratory disorders, eye

and ear injuries, loss of consciousness, cahexia, burns, tissue injuries, internal injuries and heart block, collects and safeguards the biological material, conducts basic laboratory analyses, properly evaluates and interprets results of laboratory analyses. He is competent in the use of diagnostic devices including x-ray, ultrasound, endoscopy, according to its manuals and health and safety regulations concerning animals and humans, interpret the results obtained from those diagnostic devices. Is capable of implementation of adequate official epizootic procedures in case of the law-regulated diseases, acquires and uses information on registered veterinary pharmaceuticals, prescribes and uses veterinary pharmaceuticals and medical materials, knows how to safe storage and utilise them. Graduate is skilled in methods of safe sedation, general and local anaesthesia, and methods for pain evaluation and relief, and is capable to monitor patient status during surgery and intensive care upon the basic life parameters. Skills include implementation of rules of aseptic and antiseptic surgery procedures, and use of proper methods of tools sterilisation. Graduate can evaluate the need for euthanasia, properly informs the owner of the animal and carry out the euthanasia procedure according to rules and obligations of professional ethics and proper care and utilisation of the body. Knows how to perform patomorphological examination, prepare formal dissection protocol, collect samples and safeguard them for transport, how to conduct ante-mortem and post-mortem examination of animals and evaluation of quality of the products of animal origin. He is able to conduct epizootic investigation to establish onset and source of the infectious disease on farm before its diagnosis, identification of other involved farms, routes of communication of people, animals, and farm implements that may facilitate disease transmission to or from the affected farm, use documentation of the health, welfare and, in certain cases, the productivity of animals (herd), and prepare the preventive schemes according to the species specifics.

Other skills of a graduate include use of at least one foreign language, considered a language of international communication, to formulate and understand written and spoken expression of both general and veterinary nature on the minimal level of B2+ (Common European Framework of Reference for Languages, CEFR), including specialised nomenclature required for professional veterinary practice, critically analysis of veterinary literature and ability to formulate conclusions based on available literature by utilisation of computer systems and current sources of veterinary knowledge in effective use and process of information. Finally, graduate knows how to effectively communicate with authorities of control offices and local, and national government.

STUDY OFFERING – attachment No 1
LEARNING OUTCOMES MATRIX – attachment No 2
OPINION OF THE STUDENT COUNCIL – attachment No 3
SYLLABI OF THE MODULES – attachment No 4

Unit: Faculty of Veterinary Medicine Field of studies: Veterinary Medicine

YEAR 1, SEMESTER 1

Level of study: Long-cycle Master's degree programme Profile of study: General Academic (GA)

	YEAR 1,	SEMEST	ER 1			Ш	ш										
No	Year	Sem.	Old catalogue number	New catalogue number	Type of the module (Basic/ Directional/ Social sciences)	Mandatory	General academic / Practical	Module	Lectures	Practicals	Seminars	Field exercices	e-learning	ECTS	ECTS_k	Estimated hours for ECTS	Curricular hours
1	1	1	B7/1	FVM-V-JMSS-01W-B07/1_19	В	m	GA	Animal anatomy module 1	30	60				8	4	4 240	
2	1	1	B6/1	FVM-V-JMSS-01W-B06/1_19	В	m	GA	Histology and embroylogy module 1	15	15				5	2	2 190	30
3	1	1		FVM-V-JMSS-01W-B02_19	В	m	GA	Cell biology	15					2	1	45	
4	1	1		FVM-V-JMSS-01W-B01_19	В	m	GA	Biology	30					2	1	30	
5	1	1		FVM-V-JMSS-01W-A03_19	В	m		Information technology		30				2	1	52	
6	1	1		FVM-V-JMSS-01W-B04_19	В	m	GA	Biophysics	30					2	1	42	
7	1	1		FVM-V-JMSS-01W-A04_19	В	m		Latin		30				2	1	L 30	
8	1	1		FVM-V-JMSS-01W-B05_19	В	m	GA	Chemistry	15					3	2	2 75	-
9	1	1		FVM-V-JMSS-01W-A07/1_19	В	m		Physical education module 1		30				0	0	0 0	55
10	1	1	A8	FVM-V-JMSS-01W-A08_19	S	m	GA	Copyrights in academia	15					1	1	L 30	
11	1	1	A2	FVM-V-JMSS-01W-A02_19	В	е	GA	Molecular cell physiology	30					2	1	45	
12	1	1	E6	FVM-V-JMSS-01W-E06_19	S	е		Intercultural communication	30					2	1	L 45	
13	1	1	E65	FVM-V-JMSS-01W-E65_19	B	е	GA	Calculus	/	8				1	1	30	-
14	1	1	A6/2	FVM-V-JMSS-01W-A06/2_19	B	e		English language for university student	15	15				1	1	30	
15	1	1	E95 E96	FVM-V-JMSS-01W-E95_19	S	е		Successful learning	15					1	1	1 30 1 30	
16 17	1	1	A6/1	FVM-V-JMSS-01W-E96_19 FVM-V-JMSS-01W-A06/1 19	S S	e		Critical thinking	15	30				2	1	L 30	
17	1	1	A6/1	FVIVI-V-JIVISS-01VV-A06/1_19	5	е		Polish language Sum of hours:	: 247			0	0	2	1	45	30
	YEAR 1,	SEMEST	'ER 2				S for student:	ECTS social sciences: ECTS social sciences:			CTS electives: CTS electives:		ECTS total: ECTS total:	37 37	21 21	hours:	510
	-				1	11	III		1	1	1	•					
No	Year	Sem.	Old catalogue number	New catalogue number	Type of the module (Basic/ Directional/ Social sciences)	Mandatory Elective	General academic / Practical	Module	Lectures	Practicals	Seminars	Field exercices	e-learning	ECTS	ECTS_k	Estimated hours for ECTS	Curricular hours
18	1	2	B7/2	FVM-V-JMSS-02S-B07/2 19	В	m	GA	Animal anatomy module 2	30	60				8	4	¥ 370	90
19	1	2		FVM-V-JMSS-02S-B06/2_19	В	m	GA	Histology and embryology Module 2	30					5	3	3 190	60
20	1	2	B3/1	FVM-V-JMSS-02S-B03/1_19	В	m	GA	Biochemistry module 1	15	45				4	3	3 100	60
21	1	2	B12	FVM-V-JMSS-02S-B12_19	В	m	GA	General and veterinary genetics	15	15				2	1	L 45	30
22	1	2	B18	FVM-V-JMSS-02S-B18_19	В	m		Environmental protection	30					2	1	L 60	
23	1	2	B19	FVM-V-JMSS-02S-B19_19	В	m	GA	Biostatistics and methods of documentation	15	15				2	1	L 60	
24	1	2	D29	FVM-V-JMSS-02S-D29_19	D	m	GA	History of veterinary and deontology	30					2	1	L 60	
25	1	2	D1	FVM-V-JMSS-02S-D01_19	D	m		Agronomy	15					1	1	28	
26	1	2	A7/2	FVM-V-JMSS-02S-A07/2_19	В	m		Physical education module 2		30				0	0	-	50
27	1	2	A5/1	FVM-V-JMSS-02S-A05/1_19	S	m		Polish language module 1		30				2	1	L 35	
28	1	2	E7	FVM-V-JMSS-02S-E07_19	D	е	GA	Aquaculture and exotic animals care	30					2	1	45	
29	1	2	E68	FVM-V-JMSS-02S-E68_19	D	е	GA	Breeds and varieties of dogs and cats	15					1	1	L 30	15
								Sum of hours:								Curricular	450
								ECTS social sciences:	: 2	E/	CTS electives:		ECTS total:	31	18	,	

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No	Year	Sem.	Old catalogue number	New catalogue number	Type of the module (Basic/ Directional/ Social sciences)	Mandatory Elective	General academic / Practical	Module		Lectures	Practicals	Seminars	Field exercices	e-learning	ECTS	ECTS_k	Estimated hours for ECTS	Curricular hours
30	2	3	B3/2	FVM-V-JMSS-03W-B03/2_19	В	m	GA	Biochemistry module 2		30	45				6	3	150	75
31	2	3	B9/1	FVM-V-JMSS-03W-B09/1_19	В	m	GA	Animal physiology module 1		30	39	6			6	4	89	75
32	2	3	D2	FVM-V-JMSS-03W-D02_19	D	m	GA	Animal husbandry and breeding		30	15				3	2	60	45
33	2	3	D3	FVM-V-JMSS-03W-D03_19	D	m	GA	Technologies in animal production		30					2	1	36	30
34	2	3	D6	FVM-V-JMSS-03W-D06_19	D	m		Ethology		30					2	1	50	30
35	2	3	D8	FVM-V-JMSS-03W-D08_19	D	m		Veterinary economics		15					1	1	25	15
36	2	3	B13	FVM-V-JMSS-03W-B13_19	В	m	GA	Veterinary epidemiology			30				2	1	60	30
37	2	3	A5/2	FVM-V-JMSS-03W-A05/2_19	S	m		Polish language module 2			60				2	1	65	60
38	2	3	B10/1	FVM-V-JMSS-03W-B10/1_19	В	m	GA	Veterinary microbiology module 1		30					5	4	150	75
39	2	3	A1	FVM-V-JMSS-03W-A01_19	В	е	GA	Comparative anatomy			45				4	2	120	45
40	2	3	E69	FVM-V-JMSS-03W-E69_19	D	е	GA	Medical botany	Sum of hours:	15 210		6	0	0	1	1	30	15
	YEAR 2,	SEMEST	'ER 4		1	ECT	S for student:		ECTS social sciences: ECTS social sciences:	2		CTS electives: CTS electives:		ECTS total: ECTS total:	34 34		hours: Hours:	
No	Year	Sem.	Old catalogue number	New catalogue number	Type of the module (Basic/ Directional/ Social sciences)	Mandatory Elective	General academic / Practical	Module		Lectures	Practicals	Seminars	Field exercices	e-learning	ECTS	ECTS_k	Estimated hours for ECTS	Curricular hours
41	2	4	B9/2	FVM-V-JMSS-04S-B09/2_19	В	m	GA	Animal physiology module 2		30	39	6			6	4	89	75
42	2	4	B10/2	FVM-V-JMSS-04S-B10/2_19	В	m	GA	Veterinary microbiology module 2		30	45				5	4	150	75
43	2	4	D4	FVM-V-JMSS-04S-D04_19	D	m	GA	Animal nutrition and feeding		30	20	6	4		4	2	109	60
44	2	4	A5/3	FVM-V-JMSS-04S-A05/3_19	S	m		Polish language module 3			60				2	1	65	60
45	2	4	B11	FVM-V-JMSS-04S-B11_19	В	m	GA	Immunology		15	15	15			4	3	97	45
46	2	4	B8	FVM-V-JMSS-04S-B08_19	В	m	GA	Topographic anatomy		15	24	6			4	2	120	45
47	2	4	E8	FVM-V-JMSS-04S-E08_19	В	е	GA	Physiology of exercise		30					2	1	50	30
48	2	4	E97	FVM-V-JMSS-04S-E97_19	D	е	GA	Principles of animal handling			30				2	1	60	30
49	2	4	WP1	FVM-V-JMSS-04S-WP1_19	D	sp	GA	Husbandry practice (summer practice)					80		1	0	80	80
									Sum of hours:	150	233	33	84	0				

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No	Year	Sem.	Old catalogue number	New catalogue number	Type of the module (Basic/ Directional/ Social sciences)	Mandatory Elective	General academic / Practical	Module	Lectures	Practicals	Seminars	Field exercices	e-learning	ECTS	ECTS_k	Estimated hours for ECTS	Curricular hours
50	3	5	B14	FVM-V-JMSS-05W-B14 19	В	m	GA	Animal pathophysiology	60	39	6			10	6	300	105
51	3	5	B15/1	FVM-V-JMSS-05W-B15/1 19	В	m	GA	Veterinary pharmacology module 1	30	30			1	4	2	175	60
52	3	5	D13/1	FVM-V-JMSS-05W-D13/1_19	D	m	GA	Parasitology and invasiology module 1	30	30				5	2	100	60
53	3	5	D11/1	FVM-V-JMSS-05W-D11/1_19	D	m	GA	Pathomorphology module 1	30	45				8	3	200	75
54	3	5	A5/4	FVM-V-JMSS-05W-A05/4_19	S	m		Polish language module 4		30				2	1	35	30
55	3	5	D10/1	FVM-V-JMSS-05W-D10/1_19	D	m	GA	Clinical and laboratory diagnostics Module 1	30	30				3	2	90	60
56	3	5	E11	FVM-V-JMSS-05W-E11_19	D	е	GA	Veterinary virology	15					1	1	25	15
57	3	5	E10	FVM-V-JMSS-05W-E10_19	D	е	GA	Bacteriological and mycological laboratory diagnostics of skin infections in dogs and cats		15				1	1	30	15
58	3	5	E77	FVM-V-JMSS-05W-E77 19	D	е	GA	One Health in veterinary practice	15					1	1	30	15
					•			Sum of hours:	210	219	6	0	0				
								ECTS social sciences:	2	E	TS electives:	3	ECTS total:	35	19	Curricular hours:	435
						FCT	S for student:	ECTS social sciences:	2	F	TS electives:	3	ECTS total:	35	19	Hours:	
	YEAR 3,	SEMEST	FER 6														
	YEAR 3,	SEMEST	FER 6		ı	Ш	ш										
No	YEAR 3, Year	SEMEST Sem.	Old catalogue number	New catalogue number	l Type of the module (Basic/ Directional/ Social sciences)	II Mandatory Elective	III General academic / Practical	Module	Lectures	Practicals	Seminars	Field exercices	e-learning	ECTS	ECTS_k	Estimated hours for ECTS	Curricular hours
			Old catalogue	New catalogue number FVIM-V-JMSS-065-B15/2_19	module (Basic/ Directional/ Social		General academic /	Module Veterinary pharmacology module 2	Lectures				e-learning	ECTS 4	ECTS_k	hours for	hours
No	Year	Sem.	Old catalogue number	Ĵ	module (Basic/ Directional/ Social sciences)	Elective	General academic / Practical GA			45			e-learning		ECTS_k	hours for ECTS	hours 60
No 59	Year 3	Sem. 6	Old catalogue number B15/2	FVM-V-JMSS-06S-B15/2_19	module (Basic/ Directional/ Social sciences) B	Elective	General academic / Practical GA	Veterinary pharmacology module 2	15	45			e-learning		ECTS_k	hours for ECTS 175	hours 60 75
No 59 60 61 62	Year 3 3	Sem. 6 6 6 6	Old catalogue number B15/2 D11/2 B16 D12	FVM-V-JMSS-06S-B15/2_19 FVM-V-JMSS-06S-B15/2_19 FVM-V-JMSS-06S-B16_19 FVM-V-JMSS-06S-B16_19	module (Basic/ Directional/ Social sciences) B D B D D D	Elective m m	General academic / Practical GA GA GA	Veterinary pharmacology module 2 Pathomorphology module 2	15 30 15 15	45 45 30			e-learning		ECTS_k	hours for ECTS 175 200 25 90	hours 60 75 15 45
No 59 60 61 62 63	Year 3 3 3	Sem. 6 6 6 6 6 6	Old catalogue number B15/2 D11/2 B16 D12 D9	FVM-V-JMSS-06S-B15/2_19 FVM-V-JMSS-06S-D11/2_19 FVM-V-JMSS-06S-B16_19 FVM-V-JMSS-06S-D12_19 FVM-V-JMSS-06S-D02_19	module (Basic/ Directional/ Social sciences) B D B D D D	Elective m m m	General academic / Practical GA GA GA GA	Veterinary pharmacology module 2 Pathomorphology module 2 Veterinary pharmacy General surgery and anesthesiology Diagnostic imaging	15 30 15 15 15	45 45 30 45			e-learning		ECTS_k	hours for ECTS 175 200 25 90 118	hours 60 75 15 45 60
No 59 60 61 62 63 64	Year 3 3 3 3 3 3 3 3 3	Sem. 6 6 6 6 6 6 6	Old catalogue number B15/2 D11/2 B16 D12 D9 D27	FVM-V-JMSS-06S-B15/2_19 FVM-V-JMSS-06S-D11/2_19 FVM-V-JMSS-06S-D12_19 FVM-V-JMSS-06S-D12_19 FVM-V-JMSS-06S-D09_19 FVM-V-JMSS-06S-D27_19	module (Basic/ Directional/ Social sciences) B D B D D D D D D	Elective m m m m	General academic / Practical GA GA GA GA GA GA	Veterinary pharmacology module 2 Pathomorphology module 2 Veterinary pharmacy General surgery and anesthesiology Diagnostic imaging Response to public health related disasters	15 30 15 15 15 15	45 45 30 45 15			e-learning		ECTS_k 2 3 1 2 2 2 1	hours for ECTS 200 25 90 118 56	hours 60 75 15 45 60 30
No 59 60 61 62 63 64 65	Year 3 3 3 3 3 3 3 3 3 3 3	Sem. 6 6 6 6 6 6 6	Old catalogue number B15/2 D11/2 B16 D12 D9 D27 D13/2	FVM-V-JMSS-065-B15/2_19 FVM-V-JMSS-065-D11/2_19 FVM-V-JMSS-065-B16_19 FVM-V-JMSS-065-D12_19 FVM-V-JMSS-065-D02_19 FVM-V-JMSS-065-D27_19 FVM-V-JMSS-065-D27_19	module (Basic/ Directional/ Social sciences) B D B D D D D D D D D	Elective m m m m m	General academic / Practical GA GA GA GA GA GA GA	Veterinary pharmacology module 2 Pathomorphology module 2 Veterinary pharmacy General surgery and anesthesiology Diagnostic imaging Response to public health related disasters Parasitology and invasiology module 2	15 30 15 15 15 15 15 15	45 45 30 45 15 30			e-learning		ECTS_k 2 3 1 2 2 1 2 2 1 2	hours for ECTS 2000 255 900 1188 566 800	hours 60 75 15 45 60 30 45
No 59 60 61 62 63 64 65 66	Year 3 3 3 3 3 3 3 3 3 3 3 3 3 3	Sem. 6 6 6 6 6 6 6 6 6 6	Old catalogue number D11/2 B16 D12 D9 D27 D13/2 D10/2	FVM-V-JMSS-065-B15/2_19 FVM-V-JMSS-065-D11/2_19 FVM-V-JMSS-065-B16_19 FVM-V-JMSS-065-D12_19 FVM-V-JMSS-065-D02_19 FVM-V-JMSS-065-D27_19 FVM-V-JMSS-065-D10/2_19 FVM-V-JMSS-065-D10/2_19	module (Basic/ Directional/ Social sciences) B D B D D D D D D D D D D	Elective m m m m m m m m	General academic / Practical GA GA GA GA GA GA GA	Veterinary pharmacology module 2 Pathomorphology module 2 Veterinary pharmacy General surgery and anesthesiology Diagnostic imaging Response to public health related disasters Parasitology and invasiology module 2 Clinical and laboratory diagnostics module 2	15 30 15 15 15 15 15 15 30	45 45 300 45 15 300 300			e-learning		ECTS_k 2 3 1 2 2 2 1 2 2 2 2 2	hours for ECTS 200 25 90 118 56 80 60	hours 60 75 15 45 60 30 45 60 60
No 59 60 61 62 63 64 65 66 67	Year 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	Sem. 6 6 6 6 6 6 6 6 6 6 6	Old catalogue number B15/2 D11/2 B16 D12 D9 D27 D13/2 D10/2 D21	FVM-V-JMSS-06S-B15/2_19 FVM-V-JMSS-06S-D11/2_19 FVM-V-JMSS-06S-B16_19 FVM-V-JMSS-06S-D09_19 FVM-V-JMSS-06S-D07_19 FVM-V-JMSS-06S-D13/2_19 FVM-V-JMSS-06S-D13/2_19 FVM-V-JMSS-06S-D01/2_19	module (Basic/ Directional/ Social sciences) B D D D D D D D D D D D D D D	Elective m m m m m m m m m m	General academic / Practical GA GA GA GA GA GA GA GA GA	Veterinary pharmacology module 2 Pathomorphology module 2 Veterinary pharmacy General surgery and anesthesiology Diagnostic imaging Response to public health related disasters Parasitology and invasiology module 2 Clinical and laboratory diagnostics module 2 Bee diseases	15 30 15 15 15 15 15 15	45 45 30 45 15 30		exercices	e-learning	4 8 1 3 3 2 3 4 1	ECTS_k 2 3 1 2 2 2 2 2 2 1 2 2 1	hours for ECTS 200 25 90 118 56 80 60 40	hours 60 75 15 45 60 30 45 60 30
No 59 60 61 62 63 64 65 66 67 68	Year 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	Sem. 6 6 6 6 6 6 6 6 6 6 6 6	Old catalogue number B15/2 D11/2 B16 D12 D9 D27 D13/2 D10/2 D21 E13	FVM-V-JMSS-06S-B15/2_19 FVM-V-JMSS-06S-D11/2_19 FVM-V-JMSS-06S-D12_19 FVM-V-JMSS-06S-D12_19 FVM-V-JMSS-06S-D12_19 FVM-V-JMSS-06S-D13/2_19 FVM-V-JMSS-06S-D10/2_19 FVM-V-JMSS-06S-D10/2_19 FVM-V-JMSS-06S-D12_19 FVM-V-JMSS-06S-E13_19	module (Basic/ Directional/ Social sciences) B D D D D D D D D D D D D D D D D D D	Elective m m m m m m m e	General academic / Practical GA GA GA GA GA GA GA GA GA GA	Veterinary pharmacology module 2 Pathomorphology module 2 Veterinary pharmacy General surgery and anesthesiology Diagnostic imaging Response to public health related disasters Parasitology and invasiology module 2 Clinical and laboratory diagnostics module 2 Bee diseases Advances in biomedical sciences - joint course	15 30 15 15 15 15 30 15	45 45 30 45 15 30 30 8	15	exercices	e-learning		ECTS_k	hours for ECTS 200 25 90 118 56 80 60 60 40 45	hours 60 75 15 60 30 45 60 30 45 60 30 15
No 59 60 61 62 63 64 65 66 67	Year 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	Sem. 6 6 6 6 6 6 6 6 6 6 6	Old catalogue number B15/2 D11/2 B16 D12 D9 D27 D13/2 D10/2 D21	FVM-V-JMSS-06S-B15/2_19 FVM-V-JMSS-06S-D11/2_19 FVM-V-JMSS-06S-B16_19 FVM-V-JMSS-06S-D09_19 FVM-V-JMSS-06S-D07_19 FVM-V-JMSS-06S-D13/2_19 FVM-V-JMSS-06S-D13/2_19 FVM-V-JMSS-06S-D01/2_19	module (Basic/ Directional/ Social sciences) B D D D D D D D D D D D D D D	Elective m m m m m m m m m m	General academic / Practical GA GA GA GA GA GA GA GA GA	Veterinary pharmacology module 2 Pathomorphology module 2 Veterinary pharmacy General surgery and anesthesiology Diagnostic imaging Response to public health related disasters Parasitology and invasiology module 2 Clinical and laboratory diagnostics module 2 Bee diseases Advances in biomedical sciences - joint course Experimental immunology	15 30 15 15 15 15 30 15 6	45 45 30 45 15 30 30 30 30 30 30 30 30 30 30 30 30 30	15	exercices		4 8 1 3 3 2 3 4 1	ECTS_k	hours for ECTS 200 25 90 118 56 80 60 40	hours 60 75 15 60 30 45 60 30 45 60 30 15
No 59 60 61 62 63 64 65 66 67 68	Year 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	Sem. 6 6 6 6 6 6 6 6 6 6 6 6	Old catalogue number B15/2 D11/2 B16 D12 D9 D27 D13/2 D10/2 D21 E13	FVM-V-JMSS-06S-B15/2_19 FVM-V-JMSS-06S-D11/2_19 FVM-V-JMSS-06S-D12_19 FVM-V-JMSS-06S-D12_19 FVM-V-JMSS-06S-D12_19 FVM-V-JMSS-06S-D13/2_19 FVM-V-JMSS-06S-D10/2_19 FVM-V-JMSS-06S-D10/2_19 FVM-V-JMSS-06S-D12_19 FVM-V-JMSS-06S-E13_19	module (Basic/ Directional/ Social sciences) B D D D D D D D D D D D D D D D D D D	Elective m m m m m m m e	General academic / Practical GA GA GA GA GA GA GA GA GA GA	Veterinary pharmacology module 2 Pathomorphology module 2 Veterinary pharmacy General surgery and anesthesiology Diagnostic imaging Response to public health related disasters Parasitology and invasiology module 2 Clinical and laboratory diagnostics module 2 Bee diseases Advances in biomedical sciences - joint course	15 30 15 15 15 15 30 15 6	45 45 30 45 15 30 30 30 30 30 30 30 30 30 30 30 30 30	15	exercices		4 8 1 3 3 2 3 4 1	ECTS_k 2 3 3 1 2 2 1 2 2 1 1 1 1 1	hours for ECTS 200 25 90 118 56 80 60 40 40 45 30	hours 60 75 15 45 60 30 45 60 30 15 15 15
No 59 60 61 62 63 64 65 66 67 68	Year 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	Sem. 6 6 6 6 6 6 6 6 6 6 6 6	Old catalogue number B15/2 D11/2 B16 D12 D9 D27 D13/2 D10/2 D21 E13	FVM-V-JMSS-06S-B15/2_19 FVM-V-JMSS-06S-D11/2_19 FVM-V-JMSS-06S-D12_19 FVM-V-JMSS-06S-D12_19 FVM-V-JMSS-06S-D12_19 FVM-V-JMSS-06S-D13/2_19 FVM-V-JMSS-06S-D10/2_19 FVM-V-JMSS-06S-D10/2_19 FVM-V-JMSS-06S-D12_19 FVM-V-JMSS-06S-E13_19	module (Basic/ Directional/ Social sciences) B D D D D D D D D D D D D D D D D D D	Elective m m m m m m m e	General academic / Practical GA GA GA GA GA GA GA GA GA GA	Veterinary pharmacology module 2 Pathomorphology module 2 Veterinary pharmacy General surgery and anesthesiology Diagnostic imaging Response to public health related disasters Parasitology and invasiology module 2 Clinical and laboratory diagnostics module 2 Bee diseases Advances in biomedical sciences - joint course Experimental immunology	15 30 15 15 15 15 15 30 0 15 	45 45 30 45 15 30 30 30 30 30 30 251	15	exercices		4 8 1 3 3 2 3 4 1	ECTS_k	hours for ECTS 200 25 90 118 56 80 60 60 40 45	hours 60 75 15 45 60 30 45 60 30 15 15 45 45 60 60 60 60 60 60 60 60 60 60 60 60 60

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No	Year	Sem.	Old catalogue number	New catalogue number	Type of the module (Basic/ Directional/ Social sciences)	Mandatory Elective	General academic / Practical	Module	Lectures	Practicals	Seminars	Field exercices	e-learning	ECTS	ECTS_k	Estimated hours for ECTS	Curricular hours
70	4	7	D16	FVM-V-JMSS-07W-D16 19	D	m	GA	Farm animal diseases	105	129		21		15	10	375	255
71	4	7	D22/1	FVM-V-JMSS-07W-D22/1 19	D	m	GA	Meat hygiene module 1	15	45				3	2	100	60
72	4	7	D11/3	FVM-V-JMSS-07W-D11/3 19	D	m	GA	Pathomorphology module 3	30	30				8	3	200	60
73	4	7		FVM-V-JMSS-07W-D26 19	D	m	GA	Feed hygiene	20			10		2	1	56	30
74	4	7	E46	FVM-V-JMSS-07W-E45 19	D	е	GA	Radiographic anatomy of dog and cat		15				1	1	30	15
75	4	7	E50	FVM-V-JMSS-07W-E50 19	D	е	GA	Clinical and functional neuroanatomy in dogs and cats		15				1	1	30	15
76	4	7	E78	FVM-V-JMSS-07W-E78_19	D	е	GA	Management of laboratory animal facility	15					1	1	30	15
•				• <u>–</u>	•	•		Sum of hours:	185	234	0	31	0			•	
								ECTS social sciences:	0	E	TS electives:	3	ECTS total:	31	19	Curricular hours:	450
						FCT	6 for student:	ECTS social sciences:	0	F	TS electives:	3	ECTS total:	31	19		450
	VFAR 4	SEMEST	FR 8			Lett	s for student.	Leto social sciences.	0		.15 electives.		Let's total.	51	15	nours.	450
	1 EAN 4,	SEIVIESI	LING		1	Ш	ш										
					Type of the												
No	Year	Sem.	Old catalogue number	New catalogue number	module (Basic/ Directional/ Social sciences)	Mandatory Elective	General academic / Practical	Module	Lectures	Practicals	Seminars	Field exercices	e-learning	ECTS	ECTS_k	Estimated hours for ECTS	Curricular hours
No 77	Year 4	Sem.	catalogue number	New catalogue number	(Basic/ Directional/ Social		academic / Practical	Module Equine diseases	Lectures				e-learning	ECTS	ECTS_k	hours for	
			catalogue number D15		(Basic/ Directional/ Social sciences)	Elective	academic / Practical GA			120			e-learning		ECTS_k	hours for ECTS	hours
77	4	8	catalogue number D15 D22/2	FVM-V-JMSS-08S-D15_19	(Basic/ Directional/ Social sciences) D	Elective	academic / Practical GA	Equine diseases	60	<u>120</u> 30			e-learning		ECTS_k	hours for ECTS 300	hours 180
77 78	4 4	8	catalogue number D15 D22/2 D25	FVM-V-JMSS-08S-D15_19 FVM-V-JMSS-08S-D22/2_19	(Basic/ Directional/ Social sciences) D D	Elective m m	academic / Practical GA GA	Equine diseases Meat Hygiene module 2	60 15	120 30			e-learning		ECTS_k	hours for ECTS 300 90	hours 180 45
77 78 79	4 4 4	8 8 8	catalogue number D15 D22/2 D25 B17	FVM-V-JMSS-085-D15_19 FVM-V-JMSS-085-D22/2_19 FVM-V-JMSS-085-D25_19	(Basic/ Directional/ Social sciences) D D D D	Elective m m m	academic / Practical GA GA GA	Equine diseases Meat Hygiene module 2 Zoonoses	60 15 15	120 30 30			e-learning		ECTS_k	hours for ECTS 300 90 25	hours 180 45 15
77 78 79 80	4 4 4	8 8 8 8	catalogue number D15 D22/2 D25 B17 D17	FVM-V-JMSS-085-D15_19 FVM-V-JMSS-085-D22/2_19 FVM-V-JMSS-085-D25_19 FVM-V-JMSS-085-B17_19	(Basic/ Directional/ Social sciences) D D D B	Elective m m m m	academic / Practical GA GA GA GA	Equine diseases Meat Hygiene module 2 Zoonoses General toxicology	60 15 15 30	120 30 30		exercices	e-learning		ECTS_k	hours for ECTS 300 90 25 75	hours 180 45 15 60
77 78 79 80 81	4 4 4 4 4	8 8 8 8 8	catalogue number D15 D22/2 D25 B17 D17 B20	FVM-V-JMSS-085-D15_19 FVM-V-JMSS-085-D22/2_19 FVM-V-JMSS-085-D25_19 FVM-V-JMSS-085-B17_19 FVM-V-JMSS-085-D17_19	(Basic/ Directional/ Social sciences) D D D B B D	Elective m m m m m	academic / Practical GA GA GA GA GA	Equine diseases Meat Hygiene module 2 Zoonoses General toxicology Andrology and artificial insemination	60 15 15 30 14	120 30 30 20	15	exercices	e-learning		ECTS_k	hours for ECTS 300 90 25 75 80	hours 180 45 15 60 40
77 78 79 80 81 82	4 4 4 4 4	8 8 8 8 8 8	Catalogue number D15 D22/2 D25 B17 D17 B20 D20	FVM-V-JMSS-085-D15_19 FVM-V-JMSS-085-D22/2_19 FVM-V-JMSS-085-D25_19 FVM-V-JMSS-085-B17_19 FVM-V-JMSS-085-D17_19 FVM-V-JMSS-085-B20_19	(Basic/ Directional/ Social sciences) D D D B B B B	Elective m m m m m m	academic / Practical GA GA GA GA GA GA	Equine diseases Meat Hygiene module 2 Zoonoses General toxicology Andrology and artificial insemination Veterinary jurisprudence	60 15 15 30 14 15	120 30 30 20	15	exercices	e-learning		ECTS_k	hours for ECTS 300 90 25 75 80 60	hours 180 45 15 60 40 30
77 78 79 80 81 82 83	4 4 4 4 4 4 4	8 8 8 8 8 8 8 8	Catalogue number D15 D22/2 D25 B17 D17 B20 D20 E19	FVM-V-JMSS-08S-D15_19 FVM-V-JMSS-08S-D22/2_19 FVM-V-JMSS-08S-D25_19 FVM-V-JMSS-08S-B17_19 FVM-V-JMSS-08S-B17_19 FVM-V-JMSS-08S-B20_19 FVM-V-JMSS-08S-D20_19	(Basic/ Directional/ Social sciences) D D D B D B B D B B D	Elective m m m m m m m	academic / Practical GA GA GA GA GA GA GA	Equine diseases Meat Hygiene module 2 Zoonoses General toxicology Andrology and artificial insemination Veterinary jurisprudence Fish diseases	60 15 15 30 14 15	120 30 30 20	15	exercices	e-learning		ECTS_k	hours for ECTS 300 90 25 75 80 60 25 30 30	hours 180 45 15 60 40 30 25
77 78 79 80 81 82 83 84	4 4 4 4 4 4 4 4	8 8 8 8 8 8 8 8 8 8	Catalogue number D15 D22/2 D25 B17 D17 B20 D20 E19 E85	FVM-V-JMSS-085-D15_19 FVM-V-JMSS-085-D22/2_19 FVM-V-JMSS-085-D25_19 FVM-V-JMSS-085-B17_19 FVM-V-JMSS-085-B17_19 FVM-V-JMSS-085-B20_19 FVM-V-JMSS-085-B20_19 FVM-V-JMSS-085-E19_19	(Basic/ Directional/ Social sciences) D D D B D B B D D B D D D D D	Elective m m m m m m e	academic / Practical GA GA GA GA GA GA GA	Equine diseases Meat Hygiene module 2 Zoonoses General toxicology Andrology and artificial insemination Veterinary jurisprudence Fish diseases Clinical immunology	60 15 15 30 14 15	120 30 30 20 10	15	exercices	e-learning		ECTS_k	hours for ECTS 300 90 25 75 80 60 60 25 30	hours 180 45 15 60 40 30 25 15
77 78 79 80 81 82 83 84 85	4 4 4 4 4 4 4 4	8 8 8 8 8 8 8 8 8 8 8 8 8	catalogue number D15 D22/2 D25 B17 D17 B20 D20 E19 E85 WP2	FVM-V-JMSS-08S-D15_19 FVM-V-JMSS-08S-D22/2_19 FVM-V-JMSS-08S-D25_19 FVM-V-JMSS-08S-B17_19 FVM-V-JMSS-08S-D17_19 FVM-V-JMSS-08S-D20_19 FVM-V-JMSS-08S-D20_19 FVM-V-JMSS-08S-E19_19 FVM-V-JMSS-08S-E85_19	(Basic/ Directional/ Social sciences) D D D B D B D D D D D D D D D	Elective m m m m m m e e e	academic / Practical GA GA GA GA GA GA GA GA GA	Equine diseases Meat Hygiene module 2 Zoonoses General toxicology Andrology and artificial insemination Veterinary jurisprudence Fish diseases Clinical immunology Clinical haematology	60 15 15 30 14 15	120 30 30 20 10	15	exercices 6	e-learning		ECTS_k	hours for ECTS 300 90 25 75 80 60 25 30 30	hours 180 45 15 60 40 30 25 15 15 15
777 78 79 80 81 82 83 84 85 86	4 4 4 4 4 4 4 4 4 4	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	catalogue number D15 D22/2 D25 B17 D17 B20 D20 E19 E85 WP2	FVM-V-JMSS-085-D15_19 FVM-V-JMSS-085-D22/2_19 FVM-V-JMSS-085-D25_19 FVM-V-JMSS-085-B17_19 FVM-V-JMSS-085-B17_19 FVM-V-JMSS-085-B20_19 FVM-V-JMSS-085-E19_19 FVM-V-JMSS-085-E19_19 FVM-V-JMSS-085-E19_19 FVM-V-JMSS-085-E19_19	(Basic/ Directional/ Social sciences) D D D B B D D D D D D D D D D D D	Elective m m m m m e e e sp	academic / Practical GA GA GA GA GA GA GA GA GA	Equine diseases Meat Hygiene module 2 Zoonoses General toxicology Andrology and artificial insemination Veterinary jurisprudence Fish diseases Clinical immunology Clinical haematology Clinical practice module 1 (summer practice)	60 15 15 30 14 15	120 30 30 20 10	15	exercices			ECTS_k	hours for ECTS 300 90 25 75 80 60 25 30 0 30 30 160	hours 180 45 15 60 40 30 25 15 15 160

 ECTS for student:
 ECTS social sciences:
 0
 ECTS electives:
 2
 ECTS total:
 35
 16
 hours:

 ECTS for student:
 ECTS social sciences:
 0
 ECTS electives:
 2
 ECTS total:
 35
 18
 Hours:

665

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No	Year	Sem.	Old catalogue number	New catalogue number	Type of the module (Basic/ Directional/ Social sciences)	Mandatory Elective	General academic / Practical	Module	Lectures	Practicals	Seminars	Field exercices	e-learning	ECTS	ECTS_k	Estimated hours for ECTS	Curricular hours
88	5	9	D14	FVM-V-JMSS-09W-D14_19	D	m	GA	Dog and cat diseases	75	150				14	9	450	225
89	5	9	D5	FVM-V-JMSS-09W-D05_19	D	m	GA	Dietetics	15		15			1	1	40	30
90	5	9	D18	FVM-V-JMSS-09W-D18_19	D	m	GA	Avian diseases	45	45				6	3	180	90
91	5	9	D28	FVM-V-JMSS-09W-D28_19	D	m	GA	Administration and legal aspects in veterinary	15		30			2	1	60	45
92	5	9	D19	FVM-V-JMSS-09W-D19_19	D	m	GA	Fur animals diseases	10	9		6		1	1	35	25
93	5	9	D23/1	FVM-V-JMSS-09W-D23/1_19	D	m	GA	Hygiene of food of animal origin module 1	30	45				4	3	195	75
94	5	9	E20	FVM-V-JMSS-09W-E20_19	D	е	GA	Clinical toxicology of large animals	15					1	1	25	15
95	5	9	E21	FVM-V-JMSS-09W-E21_19	D	е	GA	Clinical toxicology of small animals	15					1	1	25	15
96	5	9	E80	FVM-V-JMSS-09W-E80_19	D	е	GA	Veterinary at the border control	6	6		3		1	1	30	15
97	5	9	E84	FVM-V-JMSS-09W-E84_19	D	е	GA	Reptile and amphibian dietetics	15					1	1	30	15
								Sum of hours:	241	255	45	9	0				

YEAR 5, SEMES	IESTER .	10			ECIS	o for student:	ECTS social sciences:	0	EC	TS electives:	2	ECTS total:	30	20	hours: Hours:	520
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No Year Sem.		Old atalogue number	New catalogue number	Type of the module (Basic/ Directional/ Social sciences)	Mandatory Elective	General academic / Practical	Module	Lectures	Practicals	Seminars	Field exercices	e-learning	ECTS	ECTS_k	Estimated hours for ECTS	Curricular hours
98 5 10	-		FVM-V-JMSS-10S-D07_19	D	m	GA	Veterinary prevention	45	-		5		5	3	137	75
99 5 10	0	D23/2	FVM-V-JMSS-10S-D23/2_19	D	m	GA	Hygiene of food of animal origin module 2	15	30				4	2	105	45
100 5 10	0	D24	FVM-V-JMSS-10S-D24_19	D	m	GA	Milk hygiene	15	15				2	1	56	30
101 5 10	0	R2	FVM-V-JMSS-10S-R02_19	D	m	GA	Rotation - Farm animal diseases				90		4	3	142	90
102 5 10	0	R3	FVM-V-JMSS-10S-R03_19	D	m	GA	Rotation - Dog and cat diseases		85				6	3	170	85
103 5 10	0	R4	FVM-V-JMSS-10S-R04_19	D	m	GA	Rotation - Equine diseases		50		40		4	3	142	90
104 5 10	0		FVM-V-JMSS-10S-R01_19	D	m	-	Rotation - Avian diseases		30				2	1	60	30
105 5 10	0	R6	FVM-V-JMSS-10S-R06_19	D	m	GA	Rotation - Laboratory class of parasitology		7.5	7.5			2	1	25	15
							Block I: Small Animal Electives [4 ECTS]									
106 5 10	0	E23	FVM-V-JMSS-10S-E23_19	D	е	GA	Behavioural medicine of cats and dogs	15		15			2	1	45	30
107 5 10	0	E15	FVM-V-JMSS-10S-E15_19	D	е	GA	Clinical and laboratory diagnostics in emergency veterinary medicine		5	10			1	1	30	15
108 5 10	0	E52	FVM-V-JMSS-10S-E52 19	D	е	GA	Differential diagnostics based on laboratory results	15					1	1	30	15
							Block II: Large Animal Electives [4 ECTS]									
109 5 10	0	E81	FVM-V-JMSS-10S-E81 19	D	е	GA	Behavioural medicine of horses		15				1	1	30	15
110 5 10	0	E12	FVM-V-JMSS-10S-E12_19	D	е	GA	Veterinary of pig herd	2			13		1	1	30	15
111 5 10	0	E38	FVM-V-JMSS-10S-E38_19	D	е	GA	Veterinary of the racing horse	15			15		2	1	45	30
							Block III: Food Hygiene Electives [4 ECTS]									
112 5 10	0	E51	FVM-V-JMSS-10S-E51 19	D	е	GA	Management of seafood safety	15					1	1	30	15
113 5 10	0	E42	FVM-V-JMSS-10S-E42_19	D	е	GA	Management of food and feed safety	15					1	1	30	15
114 5 10	0	E83	FVM-V-JMSS-10S-E83_19	D	е	GA	Nutraceuticals in farm animals	15					1	1	30	15
115 5 10			FVM-V-JMSS-10S-E17 19	D		GA	Applied pharmacology of farm animals									

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No	Year	Sem.	Old catalogue number	New catalogue number	Type of the module (Basic/ Directional/ Social sciences)	Mandatory Elective	General academic / Practical		Lectures	Practicals	Seminars	Field exercices	e-learning	ECTS	ECTS_k	Estimated hours for ECTS	Curricular hours
								Other Electives [4 ECTS]									
116	5	10	E43	FVM-V-JMSS-10S-E43_19	D	е	GA	Ophthalmology in small animals	3	12				1	1	31	15
117	5	10	E86	FVM-V-JMSS-10S-E86_19	D	е	GA	Breed-related disorders	15					1	1	30	15
118	5	10	E14	FVM-V-JMSS-10S-E14_19	D	е	GA	From symptoms to diagnosis - skin			15			1	1	30	15
119	5	10	E89	FVM-V-JMSS-10S-E89_19	D	е	GA	Veterinary otology	6	9				1	1	30	15
120	5	10	WP4	FVM-V-JMSS-10S-WP4_19	D	sp	GA	Clinical practice module 2 (summer practice)				160		5	0	160	160
121	5	10	WP5	FVM-V-JMSS-10S-WP5_19	D	sp	GA	Veterinary inspection, meat hygiene (summer practice)				80		2	0	85	80
								Sum of hours:	206	283.5	47.5	403	0				
								ECTS social sciences:	0	EC	TS electives:	16	ECTS total:	52	31	Curricular hours:	940
						ECTS	for student:	ECTS social sciences:	0	EC	TS electives:	8	ECTS total:	44		Hours:	820

YEAR 6, SEMESTER 11

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No	Year	Sem.	Old catalogue number	New catalogue number	Type of the module (Basic/ Directional/ Social sciences)	Mandatory Elective	General academic / Practical	Module	Lectures	Practicals	Seminars	Field exercices	e-learning	ECTS	ECTS_k	Estimated hours for ECTS	Curricular hours
122	6	11	R5	FVM-V-JMSS-11W-R05 19	D	m	GA	Rotation - Veterinary laboratory diagnostics		15				2	1	30	15
123	6	11	D30	FVM-V-JMSS-11W-D30 19	D	m	GA	Herd health management	30	33		12		2	1	75	75
					•			Block I: Small Animal Electives [9 ECTS]		•							
124	6	11	E22	FVM-V-JMSS-11W-E22_19	D	е	GA	Cardiology diagnostics in small animals	15					1	1	28	15
125	6	11	E24	FVM-V-JMSS-11W-E24_19	D	е	GA	Small animal bone and joint surgery		30				2	1	50	30
126	6	11	E53	FVM-V-JMSS-11W-E53_19	D	е	GA	Daily clinical practice		15				1	1	30	15
127	6	11	E37	FVM-V-JMSS-11W-E37_19	D	е	GA	Clinical course of small animal surgery		15				1	1	30	15
128	6	11	E54	FVM-V-JMSS-11W-E54_19	D	е	GA	Small animal dermatology	6	9				1	1	30	15
129	6	11	E29	FVM-V-JMSS-11W-E29_19	D	е	GA	Small animal dentistry	6	9				1	1	30	15
130	6	11	E36	FVM-V-JMSS-11W-E36_19	D	е	GA	Surgery of genital organs of dogs and cats (solo castration)	15	15				2	1	45	30
					•			Block II: Large Animal Electives [9 ECTS]		•							
131	6	11	E55	FVM-V-JMSS-11W-E55_19	D	е	GA	Equine diseases - clinical cases		8		7		1	1	30	15
132	6	11	E56	FVM-V-JMSS-11W-E56_19	D	е	GA	Common surgical procedures in horses		16				1	1	30	16
133	6	11	E31	FVM-V-JMSS-11W-E31_19	D	е	GA	Ultrasound diagnostics of the reproductive tract in farm animals	4	26				2	1	45	30
134	6	11	E57	FVM-V-JMSS-11W-E57_19	D	е	GA	Horse dentistry	9	6				1	1	30	15
135	6	11	E58	FVM-V-JMSS-11W-E58_19	D	е	GA	Horse arthroscopy	8	7				1	1	30	15
136	6	11	E76	FVM-V-JMSS-11W-E76_19	D	е	GA	Hoof management in cattle		3		12		1	1	30	15
137	6	11	E59	FVM-V-JMSS-11W-E59_19	D	е	GA	Mastitis prevention and treatment in dairy herds	5	25				2	1	45	30
								Block III: Advanced Imaging Electives [3 ECTS]									
138	6	11	E44	FVM-V-JMSS-11W-E44_19	D	е	GA	Veterinary oncology			15			1	1	30	15
139	6	11	E39	FVM-V-JMSS-11W-E39_19	D	е	GA	Ultrasound diagnostics in companion animals		15				1	1	30	15
140	6	11	E60	FVM-V-JMSS-11W-E60_19	D	е	GA	Imaging diagnostics in companion animals		15				1	1	30	15
								Block IV: Advanced Internal Medicine Electives [3 ECTS]									
141	6	11	E61	FVM-V-JMSS-11W-E61_19	D	е	GA	Management of life-threatening situations in small animal anaesthesia			15			1	1	30	15
142	6	11	E30	FVM-V-JMSS-11W-E30_19	D	е	GA	Intensive care of dogs and cats		15				1	1	30	15
143	6	11	E62	FVM-V-JMSS-11W-E62_19	D	е	GA	From symptoms to diagnosis - advanced course			15			1	1	30	15

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No	Year	Sem.	Old catalogue number	New catalogue number	Type of the module (Basic/ Directional/ Social sciences)	Mandatory Elective	General academic / Practical	Module	Lectures	Practicals	Seminars	Field exercices	e-learning	ECTS	ECTS_k	Estimated hours for ECTS	Curricular hours
				-				Other Electives [10 ECTS]			•						
144	6	11	E4	FVM-V-JMSS-11W-E04_19	D	е	GA	Communication and negotiations skills in veterinary practice	5	10				1	1	25	15
145	6	11	E41	FVM-V-JMSS-11W-E41_19	D	е	GA	Exotic animals medicine	24	6				2	1	45	30
146	6	11	E63	FVM-V-JMSS-11W-E63_19	D	е	GA	Clinical course of exotic animal diseases (ZOO)	9			21		2	1	60	30
147	6	11	E32	FVM-V-JMSS-11W-E32_19	D	е		Management of veterinary practice	7	8				1	1	30	15
148	6	11	E64	FVM-V-JMSS-11W-E64_19	D	е	GA	Introduction to cynology and dog show essentials	12	1	2			1	1	30	
149	6	11	E34	FVM-V-JMSS-11W-E34_19	D	е	GA	Herd health management in small ruminants	5	10		15		2	1	45	
150	6	11		FVM-V-JMSS-11W-E74_19	D	е	GA	Clinical anaesthesiology		15				1	1	30	-
151	6	11	E83	FVM-V-JMSS-10S-E83_19	D	е	GA	Nutraceuticals in farm animals	15					1	1	30	15
								Sum of hours:	175	327	47	67	0				
								ECTS social sciences:	0	E	CTS electives:	55	ECTS total:	59	35	Curricular hours:	1066
						ECTS	5 for student:	ECTS social sciences:	0	E	CTS electives:	42	ECTS total:	46		Hours:	871
								Total curricular hours excludi	ing resear	ch project:	6511	,	includi	ing resear	ch project:	6961	
								Total offe	ered ECTS:	428	Socia	l sciences:	15		Electives:	128	
								Max ECTS pe	r student:	385	Socia	l sciences:	15		Electives:	105	
								Min ECTS pe				l sciences:	12		Electives:	80	
										200	00010					50	

YEAR 6, SEMESTER 11

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No	Year	Sem.	Old catalogue number	New catalogue number	Type of the module (Basic/ Directional/ Social sciences)	Mandatory	General academic / Practical	Module	Lectures	Practicals	Seminars	Field exercices	e-learning	ECTS	ECTS_k	Estimated hours for ECTS	Curricular hours
152	6	11	E66	FVM-V-JMSS-11W-E66_19	В	е	GA	Individual research project, completed with dissertation		450				20	5	450	450
								Sum of hours: ECTS social sciences:		450 EC	0 CTS electives:	0 20	0 ECTS total:	20	5	Curricular hours	450

LEARNING OUTCOMES MATRIX

Unit: Faculty of Veterinary Medicine Field of studies: Veterinary Medicine Level of study: Long-cycle Master's degree programme Profile of study: General Academic (GA)

Effect symbol	
Directional effects	
Histology and embroylogy Module 1	
Cell biology	
Biology Information tochnology	
Biophysics	
Chemistry	
Latin	
Copyrights in academia	
Physical education Module 1	
Molecular cell physiology	
Intercultural communication Calculus	
anguage for university student	Мо
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Histology and embryology Module 2 Biochemistry Module 1	
General and veterinary genetics	
Environmental protection	
Biostatistics and methods of documentation	
History of veterinary and deontology	
Agronomy	
Polish language Module 1	
Physical education Module 2	
Aquaculture and exotic animals care Breeds and variaties of dogs and cats	
	7

KNOWLEDGE

Graduate knows and understands:

			Ва	sic	sci	end	ces																			
WW_NP1	knows and describes regular morphology of the animal organism: cells, tissues, organs and systems	3	1	1	3											3				1		1		Τ	Τ	
WW_NP2	knows structure, describes and explains functions of the systems of the animal organism (respiratory, gastrointestinal, cardiovascular, urinary, nervous, locomotion, reproductive, endocrine, immune and skin)	3	1				3									3	1									
WW_NP3	describes and interprets development of organs and the whole organism in relation to the adult organism	-	1														1						T		T	_
WW_NP4	describes and explains metabolic processes on the molecular, cellular, organ and organism levels	1						3			3					3		3								
WW_NP5	describes and explains homeostasis, neurohormonal regulation reproduction, ageing and death describes, explains and interprets rules and mechanisms	1									1					3										
WW_NP6	governoes, explains and interprets rules and internations governing animal health, disease and therapy, from the cellular level, through the organs, organisms, herds to the whole population of animals																									
WW_NP7	knows and interprets patophysiological changes in the organs and systems, biological mechanisms (including immunological) and pharmacological mechanisms facilitating recovery																									
WW_NP8	identifies and describes biology of infectious agents inducing diseases transmitted between animals, animals and humans, including mechanisms of the disease transmission and organism defence systems																									
WW_NP9	defines and describes genetic mechanisms, identifies genetic disorders and knows bases of the genetic engineering																		3						;	3
WW_NP10	defines and describes mechanisms of drug action, their fate in the organism and drug-to-drug interactions																			1						
WW NP11	utilises chemoterapeutics																						\top		T	
 WW_NP12	prescribes drugs																						-	T	T	_
WW_NP13	knows and uses English and Latin medical nomenclature	3							3							3									T	
WW_NP14	knows and uses Polish language to the effect of communication with the specialists in the veterinary and related sciences, uses Polish source materials	3											2		3								3			
			Clir	nica	l sc	cier	ice	5		 		 		 								 				
W_NK1	describes, explains and interprets disorders on the cellular, tissue, organ, system and organism levels occurring in the course of the disease	3														3										
W_NK2	describes, explains and interprets mechanisms of the organ and organism pathologies describes and interprets causes and symptoms of the	3														3					_		\downarrow		_	
W_NK3	describes and interprets causes and symptoms of the disease, describes and interprets patomorphological changes, uses procedures for therapy and prevention in the particular diseases	3																								
W_NK4	implements diagnostic (including differential diagnostics) and therapeutic procedures																			\Box	\Box					
W_NK5	carries out clinical evaluation and monitors heard health in the intensive production																				\Box					
W_NK6	implements official epizootic procedures in case of the law- regulated diseases																									

W_NK7	collects, analyses and correctly interprets clinical data, results of the laboratory tests and other diagnostics																Π	Τ	
W_NK8	techniques indicates and interprets appropriate law regulations, knows rules governing issuing of the verdicts and creates official opinions for the law courts, state, local and veterinary administration																	2	2
W_NK9	knows bases of the functioning of state veterinary service, also in the aspect of public health prevention																		
	·	A	nin	nal	pro	duc	tio	n											
W_PZ1	describes breeds within animal species, describes rules of animal husbandry and breeding	3																3	3 3
W_PZ2	describes rules for animal selection for breeding, methods of breeding and selection																		3
W_PZ3	describes rules of animal feeding (according to the species specifics), elaborates and analyses diet compositions																	1	
W_PZ4	describes and evaluates conditions for animal welfare																	1	1
W_PZ5	describes and interprets rules of produce economics																		
W_PZ6	describes conditions for appropriate utilisation and disposal of animal by-products and management of waste from animal production																		
			Fc	od	hy	gien	ie												
W_HŻ1	describes and interprets methods of consumers health protection by the appropriate organ responsible for the production of foods of animal origin																		
W_HŻ2	describes, interprets and evaluates conditions of hygiene and technology of production, food safety, also uses appropriate law regulations of the veterinary supervision																		
W_HŻ3	conducts ante-mortem and post-mortem examination of animals	3																	
W_HŻ4	describes and implies HACCP (Hazard Analysis and Critical Control Points) procedures								T				Τ	T	T			Τ	

SKILLS

Graduate knows how to:

basic	professional	skills

		Jas	le p	101	C33				5																			
	effectively communicates with clients, veterinary surgeons																											
U_OUZ1	and employees of the state sanitary control, state and																							1				
	local administration																											
U OUZ2	knows how to listen and explain in the language that is	3					2					3	2					3	,			1			1			1
0_0022	understandable and appropriate for the situation	3					2					3	2					2	,			1			Т			1
	formulates clear case studies and knows how to create																											
	documentation according to the current laws and																											
U_OUZ3	regulations, in the form understandable for the owner of																						3					
	the animal and clear for other veterinary surgeons																											
U_OUZ4	knows how to operate in the interdisciplinary team																											
	appropriately interprets responsibility of the veterinary																											
U_OUZ5	surgeon towards animal, its owner, society and																					2		2				2
	environment																											
U OUZ6	evaluates economical and sociological implications of the																						3					
0_0020	veterinary practice																						5					
	understands the need of the best possible utilisation of																											
U_OUZ7	professional skills in order to enhance the quality of	3																Э	3					2	1			1
	veterinary care, animal welfare and public health																											
	Graduate knows how to orga	nis	e a	nd	im	ple	me	nt	vet	eri	nar	уp	rac	tice	e, ir	nclu	din	g:										
	knows self and employer responsibilities and obligations in																										Τ	
U_OUZ8	light of the law and occupational health and safety																											
	regulations																											
	can calculate fees, knows how to issue an official invoice																											
U_OUZ9	and respects rules of proper financial and medical																											
	documentation																											
	uses computer systems for effective communication,																											
U_OUZ10	accumulation, processing, analysis and propagation of					3																	3					
	information																											
U OUZ11	acts within the current standards and ethical obligations																							2				
0_00211	5																	_						-				
U OUZ12	understands the need of continuous education for	1																3	3			1		1	1			
	professional development	-																_	·			_		-	_		_	
U OUZ13	can adapt professional offer to the dynamically changing																											
	situation on the work market														_	_		_	_						_		_	_
	knows his limitations and knows how to use the																											
U_OUZ14	professional advice and help of the specialists or	3																					3					
	specialised units in difficult cases															_		_	_						_		_	_
U_0UZ15	uses English and Latin medical nomenclature	3							3									(1)	3									
U OUZ16	can communicate in Polish and knows how to use Polish	3																3	2									
0_00210	professional source materials																	, i	,									
		act	ical	pr	ofe	ssic	ona	l sk	tills																			
	performs veterinary investigation in order to acquire	1										T	Т	T	T	Т	Γ			1	$[\neg]$		Т	Т	Т	Τ	Γ	
U_PUZ1	precise information on single animal and group of animals					1									l					1								
	(heard), and their environment																			1								
U PUZ2	handles animals in safe and humane way, and instructs				1	1			11		I	ſ	Ι	ſ	ſ	ſ	1		1	1	[]	11	Ι		ſ		1	
0_1.022	others to do alike					1														1								
U_PUZ3	carries out full clinical evaluation					1														1								

	performs first aid procedures for all animal species for				Τ		Τ		T				Т					
U_PUZ4	haemorrhage, wounds, respiratory disorders, eye and ear injuries, internal injuries, heart block, loss of																	
U PUZ5	consciousness, cahexia, burns and tissue injuries evaluates nutritional state of the animal and ordains										1						2	
_	information on proper animal nutrition collects and safeguards the biological material, knows the	\vdash	_	+	+	-	-	\vdash	-			_	-			_	_	┝┼╴
U_PUZ6	rules of sample transport and basic laboratory analyses, properly evaluates and interprets results of laboratory analyses				2								3					
U_PUZ7	uses diagnostic apparatuses including x-ray, ultrasound and others, according to its manuals and health and safety regulations concerning animals and humans			1	2										3			
U_PUZ8	implements proper official epizootic procedures in case of the law-regulated diseases			3														
U_PUZ9	acquires and uses information on registered drugs																	
U_PUZ10	prescribes and uses drugs and medical materials according to current regulations, including rules of their safe storage and utilisation																	
U_PUZ11	uses methods of safe sedation, general and local anaesthesia, and methods for pain evaluation and relief																	
U_PUZ12	choses the treatment adequate for the diagnosed disease																	
U_PUZ13	implements rules of aseptic and antiseptic surgery procedures, and uses proper methods of tools sterilisation																	
U_PUZ14	evaluates the need for euthanasia, properly informs the owner of the animal and carries out the euthanasia procedure according to rules and obligations of professional ethics and proper utilisation of the body																	
U_PUZ15	carries out patomorphological examination, prepares proper protocol, collects and labels samples and safeguards them for transport																	
U_PUZ16	performs ante-mortem and post-mortem examination and examination of the products of animal origin																	
U_PUZ17	documents and uses documentation of the health, welfare and, in certain cases, the productivity of the heard									Ī						Ī		
U_PUZ18	prepares the preventive scheme according to the species specifics																	
U_PUZ19	evaluates the risk and prepares the procedures minimising the risk of contamination, cross-species infection and accumulation of the disease agents in veterinary facilities and the environment																	

RSONAL COMPETENCES Graduate:

					~~~	•																		 	_	
K KP1	takes responsibility for his decisions concerning humans																									
-	and animals									_			_		_	_								 _	_	_
K_KP2	observes the ethical rules and obligations										2											3				
K KP3	shows tolerance to beliefs and behaviour influenced by										3											2				
K_KF3	different sociological and cultural background										3											2				
K KP4	shows the competence in solving of the conflicts and	1															3									
к_кр4	pliability in the reactions for sociological changes	Т															э									
K KP5	can critically evaluate personal actions and actions of	1							1		1						3							1		
K_KFJ	others to improve proposed actions	Т							т		т						3							т		
K KP6	developed a habit of constantly updating his knowledge	3												3			3									
K_K 0	and skills	5												5			5									
K_KP7	knows his limitations	3															3									
K_KP8	considers wellbeing of his patient as a topmost priority																									
	can cooperate with specialists of other professions for the																				2					_
К_КР9	protection of public health																				3					
K_KP10	can operate under stress and duress																									
K_KP11	can organise the work of a team								1		1													1		
K KP12	understands the need to engage in the operations of																					3				
K_KP12	professional and territorial organisations																					3				
K KP13	understands the consequences of his decisions, especially																			2			1			
K_KP15	those influencing natural environment																			2			т			
K KP14	knows basic laws and regulations governing intellectual	3						3									3								Т	
K_KP14	property	5						3									3									
Inne 1	has knowledge sufficient for further study in the course of	3		ΙT	ΙT	1	Ι	Ι	Ι	ſ	1		ſ	Ī	ſ		1	Ī			Ι	Ι	Ι	ſ	1	
inite 1	continuity of the subjects	5				1					-						-								-	
Inne2	has other knowledge and skills	3							1	1	1	3		3	3		1		1					1	2	1

#### LEARNING OUTCOMES MATRIX

Unit: Faculty of Veterinary Medicine Field of studies: Veterinary Medicine Level of study: Long-cycle Master's degree programme Profile of study: General Academic (GA)

											1od Yea										
Effect symbol	Directional effects	Biochemistry Module 2	Animal physiology Module 1	Animal husbandry and breeding	Technologies in animal production	Ethology	Veterinary economics	Veterinary epidemiology	Comparative anatomy	Polish language Module 2	Veterinary microbiology Module 1	Medical botany	Animal physiology Module 2	Veterinary microbiology Module 2	Animal nutrition and feeding	Polish language Module 3	Immunology	Topographic anatomy	Physiology of exercise	Principles of animal handling	Husbandry practice (summer practice)
	KNOV	VLE	DGE																		

#### Graduate knows and understands:

Basic sciences knows and describes regular morphology of the animal WW NP1 3 2 3 organism: cells, tissues, organs and systems knows structure, describes and explains functions of the systems of the animal organism (respiratory, 3 WW_NP2 3 3 3 2 3 gastrointestinal, cardiovascular, urinary, nervous, locomotion, reproductive, endocrine, immune and skin) describes and interprets development of organs and the WW NP3 whole organism in relation to the adult organism describes and explains metabolic processes on the 2 3 3 2 WW NP4 3 molecular, cellular, organ and organism levels describes and explains homeostasis, neurohormonal 3 3 WW NP5 2 3 3 2 regulation reproduction, ageing and death describes, explains and interprets rules and mechanisms governing animal health, disease and therapy, from the 3 WW NP6 2 3 3 2 2 3 cellular level, through the organs, organisms, herds to the whole population of animals knows and interprets patophysiological changes in the organs and systems, biological mechanisms (including 3 3 2 2 WW NP7 immunological) and pharmacological mechanisms facilitating recovery identifies and describes biology of infectious agents inducing diseases transmitted between animals, animals WW_NP8 3 3 and humans, including mechanisms of the disease transmission and organism defence systems defines and describes genetic mechanisms, identifies WW_NP9 genetic disorders and knows bases of the genetic engineering defines and describes mechanisms of drug action, their WW_NP10 2 fate in the organism and drug-to-drug interactions WW NP11 utilises chemoterapeutics WW_NP12 prescribes drugs 3 2 3 2 WW_NP13 knows and uses English and Latin medical nomenclature knows and uses Polish language to the effect of 2 3 3 2 3 WW NP14 communication with the specialists in the veterinary and 1 related sciences, uses Polish source materials Clinical sciences describes, explains and interprets disorders on the cellular W_NK1 3 tissue, organ, system and organism levels occurring in the 3 course of the disease describes, explains and interprets mechanisms of the 3 2 3 W NK2 organ and organism pathologies describes and interprets causes and symptoms of the disease, describes and interprets patomorphological 3 W NK3 changes, uses procedures for therapy and prevention in the particular diseases implements diagnostic (including differential diagnostics) 3 2 W NK4 and therapeutic procedures carries out clinical evaluation and monitors heard health in 2 W NK5 the intensive production implements official epizootic procedures in case of the law 3 3 W NK6 regulated diseases

		-	-						 							 _
	collects, analyses and correctly interprets clinical data,															
W_NK7	results of the laboratory tests and other diagnostics							3		3				2		
	techniques															
	indicates and interprets appropriate law regulations,															
W NK8	knows rules governing issuing of the verdicts and creates															
W_INKO	official opinions for the law courts, state, local and															
	veterinary administration															
	knows bases of the functioning of state veterinary service,															
W_NK9	also in the aspect of public health prevention						2			2						
	Animal p	rod	luct	ion												
W PZ1	describes breeds within animal species, describes rules of															3
VV_PZ1	animal husbandry and breeding															э
W PZ2	describes rules for animal selection for breeding, methods															3
VV_PZZ	of breeding and selection															э
	describes rules of animal feeding (according to the species															
W_PZ3	specifics), elaborates and analyses diet compositions												3			3
	specifics), elaborates and analyses diet compositions															
W_PZ4	describes and evaluates conditions for animal welfare				3											3
W PZ5	describes and interprets rules of produce economics					3										3
	describes conditions for appropriate utilisation and					-										-
W PZ6	disposal of animal by-products and management of waste				2											
	from animal production				-											
	Food hygiene										ľ					
	, ,															
	describes and interprets methods of consumers health															
W_HŻ1	protection by the appropriate organ responsible for the									2		3				
	production of foods of animal origin															
	describes, interprets and evaluates conditions of hygiene															_
							1									
W_HŻ2	and technology of production, food safety, also uses															
	appropriate law regulations of the veterinary supervision															
W HŻ3	conducts ante-mortem and post-mortem examination of															
vv_HZ3	animals															
<u>م</u> ل المر	describes and implies HACCP (Hazard Analysis and Critical										I					
W_HŻ4	Control Points) procedures					1										

SKILLS

## Graduate knows how to: basic professional skills

1	effectively communicates with clients, veterinary surgeons			1													r T		-
	and employees of the state sanitary control, state and						1				3			3					
_							т				э			э					
	local administration knows how to listen and explain in the language that is																<u> </u>		
U 0U72							1												1
	understandable and appropriate for the situation																_		
	formulates clear case studies and knows how to create																		
U OUZ3	documentation according to the current laws and																		
0_0023	regulations, in the form understandable for the owner of																		
	the animal and clear for other veterinary surgeons																		
U OUZ4	knows how to operate in the interdisciplinary team						3												
_	appropriately interprets responsibility of the veterinary						Ĵ												
	surgeon towards animal, its owner, society and						3									3			
-	environment						5									5			
	evaluates economical and sociological implications of the															_			
	veterinary practice																		
	understands the need of the best possible utilisation of															_			
	professional skills in order to enhance the quality of											3					2		
_	veterinary care, animal welfare and public health											5					-		
L	Graduate knows how to organise and i	mnl	lem	ent	ve	teri	inar	vn	ract	ice	ind	cluic	ling	<b>.</b>			+		
	knows self and employer responsibilities and obligations in							7 8						,. 					
	light of the law and occupational health and safety																	3	
-	regulations																	5	
	can calculate fees, knows how to issue an official invoice																		
	and respects rules of proper financial and medical																		
_	documentation																		
	uses computer systems for effective communication,															_			
	accumulation, processing, analysis and propagation of						2	3											
_	information						_	-											
																_			
0_00211	acts within the current standards and ethical obligations																		
U OUZ12	understands the need of continuous education for								3		3			3			2		
_	professional development								2		З			Э			2		
U OUZ13	can adapt professional offer to the dynamically changing																		
_	situation on the work market																		
	knows his limitations and knows how to use the																		
U_OUZ14	professional advice and help of the specialists or															3			
	specialised units in difficult cases																		
U_OUZ15	uses English and Latin medical nomenclature										3			3					
U OUZ16	can communicate in Polish and knows how to use Polish								3										
0_00216	professional source materials								3										
	practical pro	fess	sion	ial s	kills	5	_												
	performs veterinary investigation in order to acquire						1												
U PUZ1			1	1 2	1	2	1	3											
<u> </u>	precise information on single animal and group of animals			3		2		5									1		
-	(heard), and their environment			3		2		3											
- 11 PU72	(heard), and their environment handles animals in safe and humane way, and instructs			_		2		_							 	 		3	
– U_PUZ2	(heard), and their environment			3		2		3										3	

	performs first aid procedures for all animal species for						1	-	T	-	Т	T						1	T
	haemorrhage, wounds, respiratory disorders, eye and ear																		
U_PUZ4	injuries, internal injuries, heart block, loss of																		
	consciousness, cahexia, burns and tissue injuries																		
	evaluates nutritional state of the animal and ordains																_		_
U_PUZ5	information on proper animal nutrition													3					
	collects and safeguards the biological material, knows the						-	_	-	-	-	-	-		-	-			_
	rules of sample transport and basic laboratory analyses,																		
U_PUZ6	properly evaluates and interprets results of laboratory	3								3			3						
	analyses																		
	uses diagnostic apparatuses including x-ray, ultrasound																		
U_PUZ7	and others, according to its manuals and health and safety																		
	regulations concerning animals and humans																		
	implements proper official epizootic procedures in case of																		
U_PUZ8	the law-regulated diseases						3												
U PUZ9	acquires and uses information on registered drugs						3												
-	prescribes and uses drugs and medical materials according																		
U PUZ10	to current regulations, including rules of their safe storage		1								1								
_	and utilisation																		
	uses methods of safe sedation, general and local																		
U_PUZ11	anaesthesia, and methods for pain evaluation and relief																		
U_PUZ12	choses the treatment adequate for the diagnosed disease						3						3						
										_			_						
U PUZ13	implements rules of aseptic and antiseptic surgery																		
-	procedures, and uses proper methods of tools sterilisation																		
	evaluates the need for euthanasia, properly informs the																		
	owner of the animal and carries out the euthanasia																		
U_PUZ14	procedure according to rules and obligations of																		
	professional ethics and proper utilisation of the body																		
	carries out patomorphological examination, prepares																		
U_PUZ15	proper protocol, collects and labels samples and																		
	safeguards them for transport performs ante-mortem and post-mortem examination and						 		_		-	_							
U_PUZ16	examination of the products of animal origin																		
			-	-	-	-			-		+	+							
U PUZ17	documents and uses documentation of the health, welfare																		
,	and, in certain cases, the productivity of the heard																		
U PUZ18	prepares the preventive scheme according to the species						3												
0_PUZ18	specifics						3												
	evaluates the risk and prepares the procedures minimising							Τ			Т	Т							
U PUZ19	the risk of contamination, cross-species infection and																		
5_1 0219	accumulation of the disease agents in veterinary facilities																		
	and the environment																		
	<b>c</b> 1	ON	IPE	TEN	CES	5													

## Graduate:

K KP1	takes responsibility for his decisions concerning humans				2	2						3	1	2	
K_KF1	and animals				2	2						5	Т	2	
K_KP2	observes the ethical rules and obligations				1								1		3
K_KP3	shows tolerance to beliefs and behaviour influenced by												1		1
K_KF3	different sociological and cultural background														т
K KP4	shows the competence in solving of the conflicts and					2						3	1		
K_KI 4	pliability in the reactions for sociological changes					2						5			
K KP5	can critically evaluate personal actions and actions of					2						3	1		
	others to improve proposed actions					-						5			
К КРб	developed a habit of constantly updating his knowledge					2						3	1		
-	and skills									_		_	_		
K_KP7	knows his limitations					2						3	1		
K_KP8	considers wellbeing of his patient as a topmost priority												r I		
K KP9	can cooperate with specialists of other professions for the												1		
к_крэ	protection of public health														
K_KP10	can operate under stress and duress					1							1		
K_KP11	can organise the work of a team					3									
K KP12	understands the need to engage in the operations of														
	professional and territorial organisations									_					
K KP13	understands the consequences of his decisions, especially					2						3	1		
	those influencing natural environment									_		•			
K KP14	knows basic laws and regulations governing intellectual												1		
_	property					_				_			_		
Inne 1	has knowledge sufficient for further study in the course of	2				1			3			3	1		
-	continuity of the subjects		_	_		+	-	_	-	_		-			
Inne2	has other knowledge and skills											3			

## LEARNING OUTCOMES MATRIX

Unit: Faculty of Veterinary Medicine Field of studies: Veterinary Medicine Level of study: Long-cycle Master's degree programme Profile of study: General Academic (GA)

												lule r III									$\neg$
Effect symbol	Directional effects	Animal pathophysiology	Pathomorphology Module 1	Veterinary Pharmacology Module 1	Parasitology and invasiology Module 1	Polish language Module 4	Clinical and laboratory diagnostics Module 1	Veterinary virology	Bacteriological and mycological laboratory diagnostics of skin inf	One Health in veterinary practice	Veterinary Pharmacology Module 2	Pathomorphology Module 2	Veterinary pharmacy	General surgery and anesthesiology	Diagnostic imaging	Response to public health related disasters	Parasitology and invasiology Module 2	Clinical and laboratory diagnostics Module 2	Bee diseases	Advances in biomedical sciences - joint course	Experimental immunology

Modules Graduate knows and understands:

WW_NP1       knows and describes regular morphology of the animal organism: cells, issues, organs and systems       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1		Basic s	cie	nce	s																
<pre>     drgansm:cells, tissue, organs and systems     ww_NP2     knows structure, describes and explains functions of the     systems of the animal organism (respiratory,     locomotion, reproductive, endocrine, immune and skin)     describes and interprets development of organs and the     ww_NP3     describes and explains metabolic processes on the     mounological, cellular, organ and organism levels     ww_NP4     describes and explains networks and therapy, from the     system of therapy and therapy. System     ad explains networks and therapy. from the     systems and interprets rules and mechanisms     ww_NP4     describes and explains networks and therapy. from the     systems and interprets patophysiological changes in the     cellular level, through the organs, organism, herds to the     sublock and describes biology of infectious agents     inducing disease the interprets mechanisms (including     immunological) and pharmacological mechanisms     ad humans, including mechanisms of the disease     ww_NP8     genetic disorders and knows bases of the genetic     engineering,     ww_NP1 utilises chemotrapeutics     ww_NP12     genetic disorders and knows bases of the genetic     engineering     ww_NP12     rescribes mechanisms of drug discus, animals     and humans, including mechanisms of the disease     ww_NP12     rescribes and describes mechanisms of the disease     ww_NP12     rescribes and humans, including mechanisms of the disease     ww_NP12     rescribes and knows bases of the genetic     ww_NP12     rescribes and knows bases of the genetic     ww_NP12     rescribes and humans, including mechanisms of the     describes, explains and interprets genetic mechanisms     rescribes and metry test suborders on the elivite     ww_NP12     rescri</pre>		knows and describes regular morphology of the animal				1											1				1
www_N2       systems of the animal organism (respiratory, gastrointestinal, cardiovascular, urinary, nervous, laccomotion, reproductive, endocrine, immune and skin)       Image: State S	VV VV_INPI	organism: cells, tissues, organs and systems				Т											т				
WW_NP2       gastrointestinal, cardiovascular, urinary, nervous, locomotion, reproductive, endocrine, immune and skin)       Image: Constraint of the constraint		knows structure, describes and explains functions of the																			
-       gastrointestinal, cardiovascular, urmary, nervous, locomotion, reproductive, endocrine, immune and skin)       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -		systems of the animal organism (respiratory,																	2		
WW_NP3       describes and interprets development of organs and the whole organism in relation to the adult organism       Image: Control of Control	WW_NP2	gastrointestinal, cardiovascular, urinary, nervous,																	3		
WW_NP3       whole organism in relation to the adult organism       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I		locomotion, reproductive, endocrine, immune and skin)																			
WW_NP3       whole organism in relation to the adult organism       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I		describes and interprets development of organs and the														 					-
WW_NPA       describes and explains metabolic processes on the molecular, cellular, organ and organism levels       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1	WW_NP3																		3		
molecular, celular, organ and organism levels       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>																					
WW_NP5       regulation reproduction, ageing and death       3       3       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1 <t< td=""><td>WW_NP4</td><td>molecular, cellular, organ and organism levels</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	WW_NP4	molecular, cellular, organ and organism levels																			
<ul> <li>regulation reproduction, ageing and death explosion and interprets rules and mechanisms governing animal health, disease and therapy, from the whole population of animals knows and interprets patophysiological changes in the knows and interprets patophysiological mechanisms immunological) and pharmacological mechanisms immunological) and pharmacological mechanisms immunological) and pharmacological mechanisms inducing diseases transmited between animals, animals and humans, including mechanisms of the disease transmission and organism defence systems defines and describes biology of infectious agents inducing diseases transmited between animals, animals and humans, including mechanisms of the disease transmission and organism defence systems defines and describes genetic mechanisms, identifies www_NP10 defines and describes mechanisms of drug action, their fate in the organism and drug-to-drug interactions www_NP11 utilises chemoterapeutics www_NP12 prescribes drugs www_NP12 prescribes drugs www_NP14 defines and duces beginetic mechanisms, identifies www_NP14 defines and describes penetic mechanisms of the disease transmission and drug-to-drug interactions www_NP11 utilises chemoterapeutics www_NP12 prescribes drugs www_NP14 describes, explains and latim medical nomenclature w_NK14 itsue, organ, system and organism levels occurring in the describes, explains and interprets disorders on the celluar; tissue, organ, system and organism levels occurring in the describes and interprets disorders o</li></ul>		describes and explains homeostasis, neurohormonal	2																		1
WWNP6       governing animal health, disease and therapy, from the cellular level, through the organs, organisms, herd's to the whole population of animals knows and interprets patophysiological changes in the grans and systems, biological mechanisms (including immunological) and pharmacological mechanisms (including immunological) and pharmacological mechanisms (including immunological) and pharmacological mechanisms (including mechanisms of the disease       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3	VVVV_INF3	regulation reproduction, ageing and death	5																		
WW_NP6       cellular level, through the organs, organisms, herds to the       3       1       2       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       <																					
-       cellular revel, through the organs, organisms, herds to the         -       whole population of animals         knows and interprets patophysiological changes in the       a         wW_NP7       grasn and systems, biological mechanisms (including immunological) and pharmacological mechanisms (including immunological) and pharmacological mechanisms of the disease       a         wW_NP8       inducing diseases transmitted between animals, animals and humans, including mechanisms of the disease       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a	WW NP6		3			1					2						1				
WW_NPT       knows and interprets patophysiological mechanisms (including organs and systems, biological mechanisms (including disease) facilitating recovery       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       <			-														_				
WW_NP7       organs and systems, biological mechanisms (including immunological) and pharmacological mechanisms       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3																 					-
WW_NP1       immunological) and pharmacological mechanisms       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3																					I
facilitative recovery       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i	WW_NP7		3		3	3									3		3				I
WW_NP8       identifies and describes biology of infectious agents and humans, including mechanisms of the disease transmission and organism defence systems defines and describes genetic mechanisms, identifies       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3																					
WW_NP8       inducing diseases transmitted between animals, animals and humans, including mechanisms of the disease       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3 <td></td> <td>identifies and describes biology of infectious agents</td> <td></td> <td> _</td> <td>_</td> <td>_</td> <td>_</td> <td></td> <td>-</td>		identifies and describes biology of infectious agents														 _	_	_	_		-
WW_NP3       and humans, including mechanisms of the disease       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i       i		с, с																			L
transmission and organism defence systems       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I       I </td <td>WW_NP8</td> <td>-</td> <td></td> <td></td> <td></td> <td>3</td> <td></td> <td></td> <td>3</td> <td>3</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>3</td> <td></td> <td>3</td> <td></td> <td></td>	WW_NP8	-				3			3	3							3		3		
defines and describes genetic mechanisms, identifies       a       a       b       a       b       a       b       a       b       a       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b       b		, 0																			
engineering       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a       a <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>1</td></td<>																					1
WW_NP10       defines and describes mechanisms of drug action, their fate in the organism and drug-to-drug interactions       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3	WW_NP9	genetic disorders and knows bases of the genetic																			
WW_NP10       fate in the organism and drug-to-drug interactions       3       3       1       1       3       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1 <td>_</td> <td>engineering</td> <td></td>	_	engineering																			
WW_NP10       fate in the organism and drug-to-drug interactions       3       3       1       1       3       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1 <td></td> <td>defines and describes mechanisms of drug action, their</td> <td></td> <td>1</td>		defines and describes mechanisms of drug action, their																			1
WW_NP11       utilises chemoterapeutics       3       2       3       3       1       3       1       1       3       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1	WW_NP10	0			3							3									
WW_NP12       prescribes drugs       Image: Construction of the series of the series of the disease       Image: Construction of the disease       Image: Construction of the disease         WW_NK1       describes, explains and interprets mechanisms of the disease, describes and interprets causes and symptoms of the disease.       Image:					-	-				-		-					-				-
Wumper       Normalization       Normalination       Normalization					3	2				3		3		_		 	3				_
www_NP14       knows and uses Polish language to the effect of communication with the specialists in the veterinary and interprets assences       1       3       1       3       1       1       2         www_NP14       describes, explains and interprets disorders on the cellular, tissue, organ, system and organism levels occurring in the course of the disease       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3	WW_NP12	prescribes drugs												3		 					
WWNP14       communication with the specialists in the veterinary and related sciences, uses Polish source materials       1       3       1       3       1       1       2         Clinical sciences         Clinical sciences         WNK1       describes, explains and interprets disorders on the cellular, tissue, organ, system and organism levels occurring in the course of the disease       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3 <t< td=""><td>WW_NP13</td><td>knows and uses English and Latin medical nomenclature</td><td>3</td><td></td><td></td><td>1</td><td></td><td>2</td><td></td><td></td><td></td><td></td><td></td><td>3</td><td></td><td></td><td>1</td><td>2</td><td></td><td></td><td></td></t<>	WW_NP13	knows and uses English and Latin medical nomenclature	3			1		2						3			1	2			
related sciences, uses Polish source materials         Clinical sciences         Clinical sciences         W_NK1       describes, explains and interprets disorders on the cellular, tissue, organ, system and organism levels occurring in the source of the disease       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3		knows and uses Polish language to the effect of																			
Clinical sciences         W_NK1       describes, explains and interprets disorders on the cellular, tissue, organ, system and organism levels occurring in the course of the disease       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3 <td>WW_NP14</td> <td>communication with the specialists in the veterinary and</td> <td></td> <td></td> <td></td> <td>1</td> <td>3</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>1</td> <td></td> <td></td> <td>2</td> <td></td>	WW_NP14	communication with the specialists in the veterinary and				1	3										1			2	
W_NK1       describes, explains and interprets disorders on the cellular, tissue, organ, system and organism levels occurring in the 3 3 3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3 <td< td=""><td></td><td>related sciences, uses Polish source materials</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>		related sciences, uses Polish source materials																			
W_NK1       tissue, organ, system and organism levels occurring in the       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3 <td< td=""><td></td><td></td><td>scie</td><td>ence</td><td>es</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td> </td><td></td><td></td><td></td><td></td><td>_</td></td<>			scie	ence	es											 					_
w_NK2       course of the disease       3       3       2       3       3       3         W_NK2       describes, explains and interprets mechanisms of the organ and organism pathologies       3       3       2       3       3       3         W_NK3       describes and interprets causes and symptoms of the disease, describes and interprets patomorphological changes, uses procedures for therapy and prevention in the particular diseases       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>1</td></td<>																					1
W_NK2       describes, explains and interprets mechanisms of the organ and organism pathologies       3       3       2       3       3       3         W_NK3       describes and interprets causes and symptoms of the disease, describes and interprets patomorphological changes, uses procedures for therapy and prevention in the particular diseases       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3	W_NK1		3	3				3					3		3			3			I
W_NK2       organ and organism pathologies       3       3       2       3       3       3         describes and interprets causes and symptoms of the       describes and interprets patomorphological       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3<																					_
W_NK3       describes and interprets causes and symptoms of the disease, describes and interprets patomorphological changes, uses procedures for therapy and prevention in the particular diseases       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3	W_NK2		3	3				2					3					3			
W_NK3       disease, describes and interprets patomorphological changes, uses procedures for therapy and prevention in the particular diseases       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3       3		organ and organism pathologies describes and interprets causes and symptoms of the			-																+
W_NK3       changes, uses procedures for therapy and prevention in the particular diseases       3       1       3       1       3       1       3       1       3       1       3       1       3       1       3       1       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3																					1
the particular diseases       1       3       1       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3 <td>W_NK3</td> <td></td> <td></td> <td>3</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>3</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>3</td> <td></td> <td></td>	W_NK3			3									3						3		
W_NK4       implements diagnostic (including differential diagnostics) and therapeutic procedures       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1																					1
W_NK4       and therapeutic procedures       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       3       3       1       <																		_			1
W_NK5     carries out clinical evaluation and monitors heard health in the intensive production     3     3       W_NK6     implements official epizootic procedures in case of the law     3	W_NK4					1		3							3		1	3	3		
-     the intensive production       W NK6     implements official epizootic procedures in case of the law-								~										2			1
	W_NK5							3										3			
ve_ivico regulated diseases	W NKC	implements official epizootic procedures in case of the law-							2												1
	VV_INKO	regulated diseases							3												

				_							-	-	1					
	collects, analyses and correctly interprets clinical data,																	
W_NK7	results of the laboratory tests and other diagnostics	3		1		2				Э					1	3		
	techniques																	
	indicates and interprets appropriate law regulations,																	
	knows rules governing issuing of the verdicts and creates		2														2	
W_NK8	official opinions for the law courts, state, local and		3														3	
	veterinary administration																	
W NK9	knows bases of the functioning of state veterinary service,			1											1			
	also in the aspect of public health prevention			-											-			
	Animal p	roduct	ion															
	describes breeds within animal species, describes rules of		[				I					T	1					
W_PZ1	animal husbandry and breeding																	
	describes rules for animal selection for breeding, methods		$\vdash$							-	+	+	$\vdash$					
W_PZ2	of breeding and selection																	
	or breeding and selection	-						-	-	_	-	-	-			-	-	_
W PZ3	describes rules of animal feeding (according to the species																	
VV_P25	specifics), elaborates and analyses diet compositions																	
		_									+	-	-				$\vdash$	
W_PZ4	describes and evaluates conditions for animal welfare																	
W_PZ5	describes and interprets rules of produce economics								_	-	-							
W_125	describes and interprets rates of produce economies describes conditions for appropriate utilisation and									_	-	-	-				-	
W PZ6	disposal of animal by-products and management of waste																	
VV_P20																		
L	from animal production		ļ								_	_					<u> </u>	
	Food h	ygien	e 			1 1				-	-	-	1					
	describes and interprets methods of consumers health																	
W HŻ1	protection by the appropriate organ responsible for the													3				
-	production of foods of animal origin													_				
											_	_						
	describes, interprets and evaluates conditions of hygiene		1										1					
W HŻ2	and technology of production, food safety, also uses								3					3				
	appropriate law regulations of the veterinary supervision								-					-				
					L						_	$\bot$	<u> </u>				⊢⊢	
W HŻ3	conducts ante-mortem and post-mortem examination of																	
	animals																$\square$	
W HŻ4	describes and implies HACCP (Hazard Analysis and Critical		1															
	Control Points) procedures																	

SKILLS

#### Graduate knows how to:

basic professional skills

										-				 				<u> </u>	<u> </u>	
	effectively communicates with clients, veterinary surgeons																			
U_OUZ1	and employees of the state sanitary control, state and	2					3		3								3		2	
	local administration																			
U OUZ2	knows how to listen and explain in the language that is	3													2				2	2
0_0022	understandable and appropriate for the situation	5													2				2	2
	formulates clear case studies and knows how to create																			
	documentation according to the current laws and																			
U_OUZ3	regulations, in the form understandable for the owner of		3									3					3			
	the animal and clear for other veterinary surgeons																			
	, .										_			 				⊢	_	
U_OUZ4	knows how to operate in the interdisciplinary team														2				2	2
	appropriately interprets responsibility of the veterinary																			
U_OUZ5	surgeon towards animal, its owner, society and			3			3		2	3			3		2		3			
	environment																			
U OUZ6	evaluates economical and sociological implications of the											3								
0_0020	veterinary practice											5								
	understands the need of the best possible utilisation of																			
U_OUZ7	professional skills in order to enhance the quality of																			
	veterinary care, animal welfare and public health																			
	Graduate knows how to organise and i		lem	ent	ve	teri	nar	y pr	act	ice,	inc	lud	ing							
	knows self and employer responsibilities and obligations in																			
U_OUZ8	light of the law and occupational health and safety						2													
	regulations																			
	can calculate fees, knows how to issue an official invoice																			
U_OUZ9	and respects rules of proper financial and medical																			
	documentation																			
	uses computer systems for effective communication,																			
U_OUZ10	accumulation, processing, analysis and propagation of																			
	information																			
11 01711	acts within the current standards and ethical obligations						3										3			
0_00211							5										5			
U OUZ12	understands the need of continuous education for	2													2					1
0_00011	professional development	-													-					-
U OUZ13	can adapt professional offer to the dynamically changing																			
0_00215	situation on the work market																			
	knows his limitations and knows how to use the																			
U_OUZ14	professional advice and help of the specialists or																	3		
	specialised units in difficult cases																	$ \rightarrow $		
U_0UZ15	uses English and Latin medical nomenclature	1											3				2			
U OUZ16	can communicate in Polish and knows how to use Polish																			
0.00210	professional source materials																			
	practical pro	fess	sion	al s	kills	;														
	performs veterinary investigation in order to acquire											T								
U_PUZ1	precise information on single animal and group of animals															3		3		
	(heard), and their environment																	Щ		
U PUZ2	handles animals in safe and humane way, and instructs						2	ΙŢ	Ι		ſ	Ι	Ι	Γ	Ι	T		ιĪ	Ι	]
0_F022	others to do alike						2													
U_PUZ3	carries out full clinical evaluation						2	[	Ι	ſ	ſ	ſ	Ι	ſ		Ι		3		

	performs first aid procedures for all animal species for	1															Т
U PUZ4	haemorrhage, wounds, respiratory disorders, eye and ear										3			1			
0_P024	injuries, internal injuries, heart block, loss of										5			1			
	consciousness, cahexia, burns and tissue injuries																
U PUZ5	evaluates nutritional state of the animal and ordains								3								
0_1025	information on proper animal nutrition								J								
	collects and safeguards the biological material, knows the																
U PUZ6	rules of sample transport and basic laboratory analyses,						3						3	3	3	3	
	properly evaluates and interprets results of laboratory						Ŭ						Ũ	Ũ		Ŭ	
	analyses																
	uses diagnostic apparatuses including x-ray, ultrasound																
U PUZ7	and others, according to its manuals and health and safety											3		1			
-	regulations concerning animals and humans																
	* *	 							-								-
U_PUZ8	implements proper official epizootic procedures in case of															3	
-	the law-regulated diseases	 -	-	-		_	-	_		2	2					2	 -
U_PUZ9	acquires and uses information on registered drugs prescribes and uses drugs and medical materials according	 3				_	_	_	-	3	3			1		3	-
		_	2							~						2	
U_PUZ10	to current regulations, including rules of their safe storage	3	2							3				1		3	
	and utilisation					_	_	-	-								-
U PUZ11	uses methods of safe sedation, general and local										3						
0_P0211	anaesthesia, and methods for pain evaluation and relief										З						
			-	-		-	-	-									 -
U_PUZ12	choses the treatment adequate for the diagnosed disease									3							
	implements rules of aseptic and antiseptic surgery																
U_PUZ13	procedures, and uses proper methods of tools sterilisation						3				3					3	
	······································					_	_	_	-								-
	evaluates the need for euthanasia, properly informs the																
U PUZ14	owner of the animal and carries out the euthanasia						2										
0_P0214	procedure according to rules and obligations of						3										
	professional ethics and proper utilisation of the body																
	carries out patomorphological examination, prepares	 					-	-									-
U PUZ15	proper protocol, collects and labels samples and																
0_10215	safeguards them for transport																
	performs ante-mortem and post-mortem examination and						+										
U_PUZ16	examination of the products of animal origin												1				
	documents and uses documentation of the health, welfare																
U_PUZ17	,														3		
	and, in certain cases, the productivity of the heard																
U PUZ18	prepares the preventive scheme according to the species																 1
0_F0210	specifics																
	evaluates the risk and prepares the procedures minimising	1	1	1	T				1								
U PUZ19	the risk of contamination, cross-species infection and	1	1	1					1	1		1				3	
5_1 5219	accumulation of the disease agents in veterinary facilities	1	1	1					1	1		1				5	
	and the environment	1	1	1	1				1	1		1					

## Graduate:

K KP1	takes responsibility for his decisions concerning humans	2					3				2			i T		
I	and animals	-					5				~					
K_KP2	observes the ethical rules and obligations				2								3			1
К КРЗ	shows tolerance to beliefs and behaviour influenced by														1	
K_KI 3	different sociological and cultural background														Т	
K KP4	shows the competence in solving of the conflicts and														1	
K_K 4	pliability in the reactions for sociological changes														-	
K KP5	can critically evaluate personal actions and actions of											1	3			
	others to improve proposed actions											-	•	⊢		
K KP6	developed a habit of constantly updating his knowledge	3		1	2							1	3		1	
_	and skills	_		_	_			 		 		_	-		_	
K_KP7	knows his limitations	1		1								1				
K_KP8	considers wellbeing of his patient as a topmost priority			1	2							1	3			
К КР9	can cooperate with specialists of other professions for the			1	2						2	1	2			
	protection of public health				_			 			-		-			
K_KP10	can operate under stress and duress				2					 	3	1	2	⊢		
K_KP11	can organise the work of a team				2								2			
K KP12	understands the need to engage in the operations of															
N_N 12	professional and territorial organisations															
K KP13	understands the consequences of his decisions, especially															
	those influencing natural environment									 				⊢		
K KP14	knows basic laws and regulations governing intellectual															
_	property							 						⊢		
Inne 1	has knowledge sufficient for further study in the course of								1						1	
	continuity of the subjects								-					⊢	-	
Inne2	has other knowledge and skills														1	

## LEARNING OUTCOMES MATRIX

Unit: Faculty of Veterinary Medicine Field of studies: Veterinary Medicine Level of study: Long-cycle Master's degree programme Profile of study: General Academic (GA)

										lod /ea							1		
Effect symbol	Directional effects	Farm animal diseases	Feed hygiene	Pathomorphology Module 3	Meat hygiene Module 1	Radiographic anatomy of dog and cat	Clinical and functional neuroanatomy in dogs and cats	Management of laboratory animal facility	Equine diseases	Meat Hygiene Module 2	Zoonoses	General toxicology	Andrology and artificial insemination	Veterinary jurisprudence	Fish diseases	Clinical immunology	Clinical haematology	Clinical practice Module 1 (summer practice)	Vet. inspection practice, slaughter house (summer practice)

#### Modules Graduate knows and understands:

	Basic science	S													
WW NP1	knows and describes regular morphology of the animal			2	1										
VV VV_INPI	organism: cells, tissues, organs and systems			2	т										
	knows structure, describes and explains functions of the														
	systems of the animal organism (respiratory,														
WW_NP2	gastrointestinal, cardiovascular, urinary, nervous,			2							3				
	locomotion, reproductive, endocrine, immune and skin)														
WW NP3	describes and interprets development of organs and the										3				
	whole organism in relation to the adult organism										 Ŭ			_	
WW NP4	describes and explains metabolic processes on the														
_	molecular, cellular, organ and organism levels													_	_
WW NP5	describes and explains homeostasis, neurohormonal														
_	regulation reproduction, ageing and death														
	describes, explains and interprets rules and mechanisms														
WW NP6	governing animal health, disease and therapy, from the			2					2			3			
	cellular level, through the organs, organisms, herds to the			_					_			-			
	whole population of animals														
	knows and interprets patophysiological changes in the														
WW NP7	organs and systems, biological mechanisms (including								2			3			
-	immunological) and pharmacological mechanisms								_			-			
	facilitating recovery														
	identifies and describes biology of infectious agents														
WW NP8	inducing diseases transmitted between animals, animals							3							
_	and humans, including mechanisms of the disease							-							
	transmission and organism defence systems													_	_
	defines and describes genetic mechanisms, identifies														
WW_NP9	genetic disorders and knows bases of the genetic														
	engineering														
	defines and describes mechanisms of drug action, their fate	-					_		-			-			
WW_NP10	in the organism and drug-to-drug interactions	2					2		2			3			
				 							•			_	_
-	utilises chemoterapeutics	_					_				2			3	
WW_NP12	prescribes drugs	2					2							3	
WW_NP13	knows and uses English and Latin medical nomenclature											3			
	knows and uses Polish language to the effect of														
WW NP14	communication with the specialists in the veterinary and			2											
_	related sciences, uses Polish source materials														
	Clinical scienc	es													
	describes, explains and interprets disorders on the cellular,												Ι		
W NK1	tissue, organ, system and organism levels occurring in the	2		3						2		3			
	course of the disease	~								-		J			
	describes, explains and interprets mechanisms of the organ													-	
W_NK2	and organism pathologies			2	1				2		3	3			
	describes and interprets causes and symptoms of the						-							+	
	disease, describes and interprets patomorphological														
W_NK3	changes, uses procedures for therapy and prevention in	3	3	2			3	2	2	2		3			
	the particular diseases														
	implements diagnostic (including differential diagnostics)	_					-								
W_NK4	and therapeutic procedures	3			2		3		2		3	3	3	3	
	carries out clinical evaluation and monitors heard health in	-				-	-				_			+	
W_NK5	the intensive production	3				2	3				3				
	implements official epizootic procedures in case of the law-	~												7	
W_NK6	regulated diseases	3												3	
														_	

	collects, analyses and correctly interprets clinical data,																
W_NK7	results of the laboratory tests and other diagnostics	3		3				3			2	3		3	3	3	
	techniques																
	indicates and interprets appropriate law regulations,																
W NK8	knows rules governing issuing of the verdicts and creates										2		3				
VV_INKO	official opinions for the law courts, state, local and										2		5				
	veterinary administration																
	knows bases of the functioning of state veterinary service,																
W_NK9	also in the aspect of public health prevention		3														
	also in the aspect of public health prevention																
	Animal produc	tior	1														
W PZ1	describes breeds within animal species, describes rules of																
VV_PZI	animal husbandry and breeding																
W/ D72	describes rules for animal selection for breeding, methods											3					
W_PZ2	of breeding and selection											3					
	describes rules of animal feeding (according to the species																
W_PZ3	specifics), elaborates and analyses diet compositions																
	specifics), elaborates and analyses diet compositions																
W PZ4	describes and evaluates conditions for animal welfare				3												2
VV_FZ4					5												2
W_PZ5	describes and interprets rules of produce economics																
	describes conditions for appropriate utilisation and																
W_PZ6	disposal of animal by-products and management of waste		3		3		1										2
	from animal production																
	Food hygien	e															
	describes and interprets methods of consumers health																
W HŻ1	protection by the appropriate organ responsible for the		3		3				3								3
VV_HZI			З		5				э								Э
	production of foods of animal origin																
	describes, interprets and evaluates conditions of hygiene																
W HŻ2	and technology of production, food safety, also uses		3	1	3				3	2							3
vv_1122	appropriate law regulations of the veterinary supervision		5		5				5	2							J
W HŻ3	conducts ante-mortem and post-mortem examination of				3				3								3
vv_1123	animals				5				5								5
W HŻ4	describes and implies HACCP (Hazard Analysis and Critical				3				3								3
vv_1124	Control Points) procedures	1		1	<b>1</b>	1			5								5

#### SKILLS Graduate knows how to:

basic professional skills

	al sk	ills															
effectively communicates with clients, veterinary surgeons																	
U_OUZ1 and employees of the state sanitary control, state and loca	1				2								3				3
administration	_																
U OUZ2 knows how to listen and explain in the language that is					2										3	2	3
understandable and appropriate for the situation	_				-										,	-	J
formulates clear case studies and knows how to create																	
documentation according to the current laws and			-					_							-	_	-
U_OUZ3 regulations, in the form understandable for the owner of			3					2							3	3	3
the animal and clear for other veterinary surgeons																	
, ,	_				2										3	2	
U_OUZ4 knows how to operate in the interdisciplinary team appropriately interprets responsibility of the veterinary	_				2										5	2	
							2				2		3	2	2		
U_OUZ5 surgeon towards animal, its owner, society and							2				2		3	2	3		
environment evaluates economical and sociological implications of the	_				-											+	_
U 0026															3		
veterinary practice understands the need of the best possible utilisation of																	_
U OUZ7 professional skills in order to enhance the quality of											2				3	2	
											2				3	2	
veterinary care, animal welfare and public health Graduate knows how to organise and imple		L	+	ina			c+i.		inc	اسط	ling					1	
knows self and employer responsibilities and obligations in		LVE	ler	1116	ar y	рга	cu	Le,	inc	iuu	iiiig I	<u>.</u>		- 1		Т	-
							3			2			3			2	
U_OUZ8 light of the law and occupational health and safety							3			2			3			2	
regulations can calculate fees, knows how to issue an official invoice																	_
U OUZ9 and respects rules of proper financial and medical																	
documentation																	
uses computer systems for effective communication,	-				-											ł	
U OUZ10 accumulation, processing, analysis and propagation of																	3
information																	5
	-																
U_OUZ11 acts within the current standards and ethical obligations																	3
U OUZ12 understands the need of continuous education for															3		3
professional development															5		5
U OUZ13 can adapt professional offer to the dynamically changing																	
situation on the work market	_																
knows his limitations and knows how to use the																	
U_OUZ14 professional advice and help of the specialists or																	
specialised units in difficult cases	_															-	
U OUZ15 uses English and Latin medical nomenclature						1											
					2	1											
L OUZ16 can communicate in Polish and knows how to use Polish																	
U_OUZ16 can communicate in Polish and knows how to use Polish professional source materials					2	1											
U_OUZ16 can communicate in Polish and knows how to use Polish professional source materials practical professio	nal	skil	ls		2	1											
U_OUZ16 can communicate in Polish and knows how to use Polish professional source materials practical profession performs veterinary investigation in order to acquire		skil	ls		2	1		_									
U_OUZ16 can communicate in Polish and knows how to use Polish professional source materials practical profession performs veterinary investigation in order to acquire precise information on single animal and group of animals	onal s	skil	ls		2			2						2			3
U_OUZ16 can communicate in Polish and knows how to use Polish professional source materials practical profession performs veterinary investigation in order to acquire precise information on single animal and group of animals (heard). and their environment		skil	ls		2			2						2			3
U_OUZ16         can communicate in Polish and knows how to use Polish professional source materials           practical professional source materials         practical professional source materials           U_PUZ1         performs veterinary investigation in order to acquire precise information on single animal and group of animals (heard), and their environment           U_PUZ2         handles animals in safe and humane way, and instructs		skil	ls		2			2						2			3
U_OUZ16 can communicate in Polish and knows how to use Polish professional source materials practical profession performs veterinary investigation in order to acquire precise information on single animal and group of animals (heard). and their environment		skil	ls			1		2						2			3

	performs first aid procedures for all animal species for														- 1		
	haemorrhage, wounds, respiratory disorders, eye and ear																
U_PUZ4									2								
	injuries, internal injuries, heart block, loss of																
	consciousness, cahexia, burns and tissue injuries evaluates nutritional state of the animal and ordains											 					
U_PUZ5																	
	information on proper animal nutrition collects and safeguards the biological material, knows the																
U_PUZ6	rules of sample transport and basic laboratory analyses,		3	3					3		2			3			
	properly evaluates and interprets results of laboratory																
	analyses																
	uses diagnostic apparatuses including x-ray, ultrasound and																
U_PUZ7	others, according to its manuals and health and safety					3					2			3			
	regulations concerning animals and humans																
	implements proper official epizootic procedures in case of											 					
U_PUZ8		2								3			2				
	the law-regulated diseases				 							 				-	
U_PUZ9	acquires and uses information on registered drugs																
	prescribes and uses drugs and medical materials according	~												~	~	~	
U_PUZ10	to current regulations, including rules of their safe storage	2												3	2	3	
	and utilisation																
	uses methods of safe sedation, general and local														~		
U_PUZ11	anaesthesia, and methods for pain evaluation and relief														2		
U_PUZ12	choses the treatment adequate for the diagnosed disease												2		2		
								_							-	_	
U PUZ13	implements rules of aseptic and antiseptic surgery													3			
0_10215	procedures, and uses proper methods of tools sterilisation													5			
		_									_						
	evaluates the need for euthanasia, properly informs the																
U PUZ14	owner of the animal and carries out the euthanasia																
	procedure according to rules and obligations of																
	professional ethics and proper utilisation of the body																
	carries out patomorphological examination, prepares																-
U PUZ15	proper protocol, collects and labels samples and												3	3			
_	safeguards them for transport																
	performs ante-mortem and post-mortem examination and			3													
U_PUZ16	examination of the products of animal origin			3													
	documents and uses documentation of the health, welfare																_
U_PUZ17	and, in certain cases, the productivity of the heard	2						2								3	
	and, in certain cases, the productivity of the heard																
U PUZ18	prepares the preventive scheme according to the species				]		]						ΙT		I	3	
0_10710	specifics															3	
	evaluates the risk and prepares the procedures minimising				]		]						ΙT		I	Γ	
U PUZ19	the risk of contamination, cross-species infection and																
0_10713	accumulation of the disease agents in veterinary facilities															1	
	and the environment																

#### PERSONAL COMPETENCES Graduate:

						 						 		_	
K KP1	takes responsibility for his decisions concerning humans							2			2	3	3		
K_K 1	and animals							2			2	5	5		
K_KP2	observes the ethical rules and obligations				2										
К КРЗ	shows tolerance to beliefs and behaviour influenced by	2													
к_крэ	different sociological and cultural background	2													
K KP4	shows the competence in solving of the conflicts and														
К_КР4	pliability in the reactions for sociological changes														
K KP5	can critically evaluate personal actions and actions of					1									
K_KF3	others to improve proposed actions					1									
K_KP6	developed a habit of constantly updating his knowledge				2							3	2		
K_KFU	and skills				2							5	2		
K_KP7	knows his limitations											3			
K_KP8	considers wellbeing of his patient as a topmost priority											3			
	can cooperate with specialists of other professions for the			3			2	2		2					2
К_КР9	protection of public health			3			2	2		2					Z
K_KP10	can operate under stress and duress														
K_KP11	can organise the work of a team														
K KD12	understands the need to engage in the operations of														
K_KP12	professional and territorial organisations														
K_KP13	understands the consequences of his decisions, especially									2					
K_KP15	those influencing natural environment									2					
K KP14	knows basic laws and regulations governing intellectual														
K_KF 14	property														
Inne 1	has knowledge sufficient for further study in the course of		3												
inic 1	continuity of the subjects		5												
Inne2	has other knowledge and skills								3						

## LEARNING OUTCOMES MATRIX

Unit: Faculty of Veterinary Medicine Field of studies: Veterinary Medicine Level of study: Long-cycle Master's degree programme Profile of study: General Academic (GA)

		Modules
		Year V
Effect symbol	Directional effects	Dog and cat diseases           Dietetics           Avian diseases           Administration and legal aspects in veterinary           Eur animals diseases           Eur animals disease           Eur animals diseases           Eur animal diseases           Reptile and amphibian dietetics           Veterinary prevention           Hygiene of food of animal origin Module 2           Mike hygiene           Rotation-Farm animal diseases           Rotation-Laboratory diagostics in emergency veterinary medicine           Differential diseases           Rotation-Laboratory diagostics in emergency veterinary medicine           Differential diagnostics based on laboratory results           Behavioural medicine of horses           Clinic and laboratory diagnostics in emergency veterinary medicine           Differential diagnostics based on laboratory results           Behavioural medicine of horses           Clinic and laboratory diagnostics in emergency veterinary medicine           Differential diagnostics based on laboratory results           Behavioural medicine of casts and dogs           Clinic and labor

Graduate knows and understands:

					В	asic s	cie	nce	s																					
	knows and describes regular morphology of the animal		I		Ī								Т		T		Т	T		Γ				Т	Т			Т	Γ	Т
WW_NP1	organism: cells, tissues, organs and systems																													
	knows structure, describes and explains functions of the																													
	systems of the animal organism (respiratory,		3	2												2														
WW_NP2	gastrointestinal, cardiovascular, urinary, nervous,		э	2												3														
	locomotion, reproductive, endocrine, immune and skin)																													
	describes and interprets development of organs and the			_			ŀ							1	Ť						1									-
WW_NP3	whole organism in relation to the adult organism			2												3	3													
WW NP4	describes and explains metabolic processes on the																													Т
VV VV_INF4	molecular, cellular, organ and organism levels																											$\square$		_
WW_NP5	describes and explains homeostasis, neurohormonal		2																											
-	regulation reproduction, ageing and death describes, explains and interprets rules and mechanisms			_	-						_		_	_	-			_	_	-	_		_	_	_					_
	governing animal health, disease and therapy, from the																													
WW_NP6	cellular level, through the organs, organisms, herds to the		2			3	2	2		2							3	3												
	whole population of animals																													
	knows and interprets patophysiological changes in the			1	1		$\square$				+			+	1					t	1							+		+
WW NP7	organs and systems, biological mechanisms (including						2	2							1		3	3		1										
vvvv_inP7	immunological) and pharmacological mechanisms						2	2							1		2	5		1	1									
	facilitating recovery																		_	L								$ \perp$		$\perp$
	identifies and describes biology of infectious agents														1					1	1									
WW_NP8	inducing diseases transmitted between animals, animals			1			1				3				1		3				3									
	and humans, including mechanisms of the disease																													
	transmission and organism defence systems defines and describes genetic mechanisms, identifies				+	-						+	+	+			-	-	+	┢	-			+	-			+	-	+
WW NP9	genetic disorders and knows bases of the genetic		2																											
	engineering		-																											
	defines and describes mechanisms of drug action, their fate																													
WW_NP10	in the organism and drug-to-drug interactions						2	2												2				3						
																		_	_									$ \rightarrow$		
WW_NP11	utilises chemoterapeutics			2																2									_	3
WW_NP12	prescribes drugs																													3
WW_NP13	knows and uses English and Latin medical nomenclature																													3
	knows and uses Polish language to the effect of			-	-	_					-	+	-	+			-	-	-	+	-		_	-	-			$\rightarrow$	-	+
WW NP14	communication with the specialists in the veterinary and																													3
	related sciences, uses Polish source materials																													J
	Fredered Sciences) ases i onsin source materials				Cli	nical	scie	enc	es																					
	describes, explains and interprets disorders on the cellular,													T											1			Т		Т
W_NK1	tissue, organ, system and organism levels occurring in the	2												3						1		3				3			3	
	course of the disease																													
W_NK2	describes, explains and interprets mechanisms of the organ	3		2			2	2						3	1			3	3	1		3				3	3	3	3	
-	and organism pathologies describes and interprets causes and symptoms of the		_	$\rightarrow$	-		ŀ	$\vdash$		$\vdash$	+	+	+	F	+		+	+	+	+	+		+	+	+	Ľ		+	+	+
	disease, describes and interprets causes and symptoms of the														1					1	1									
W_NK3	changes, uses procedures for therapy and prevention in			2		3	2	2			3			3	3			3		2	3	3				3	3	3	3	
	the particular diseases														1					1	1									
	implements diagnostic (including differential diagnostics)			2	t		1	_			~			1	-					1	1									_
W_NK4	and therapeutic procedures	2		2			2	2			3			3	3	3		3 3	5	2		3					3	3		3
W NK5	carries out clinical evaluation and monitors heard health in			2		3					3		3		3	3				1	3				2					3
	the intensive production	Ļļ		-		<u> </u>					5			1_	1	l ,			_	1				_	-			$\rightarrow$	+	1
W_NK6	implements official epizootic procedures in case of the law-				2										1	3				1	1									3
	regulated diseases collects, analyses and correctly interprets clinical data,	$\vdash$	-	+	+	+	$\vdash$	$\vdash$	$\vdash$	$\vdash$	+	+	+	+	+	$\vdash$	+	-	+	┢	+	$\vdash$		+	+	$\vdash$		+	+	+
W NK7	results of the laboratory tests and other diagnostics	2		2		3	2	2			3			3	3	3		3	3	2	3	3					3	3		3
··_/////	techniques	1		-		۲	Ĺ	1			<u> </u>			[]				~	ľ	12	<b>1</b>									۲
	indicates and interprets appropriate law regulations,		l	1	1		$\square$				1			+	1					t	1							$\uparrow$	$\uparrow$	+
W NK8	knows rules governing issuing of the verdicts and creates				3				3						1					1	1									
VV_INKO	official opinions for the law courts, state, local and	1			э		1		э						1															

W_NK9	knows bases of the functioning of state veterinary service, also in the aspect of public health prevention		2				3														
ļ	•		Ani	ma	l pro	odu	ctior	1													
W_PZ1	describes breeds within animal species, describes rules of animal husbandry and breeding							3													
W_PZ2	describes rules for animal selection for breeding, methods of breeding and selection																				
W_PZ3	describes rules of animal feeding (according to the species specifics), elaborates and analyses diet compositions							3													
W_PZ4	describes and evaluates conditions for animal welfare							2	3						3						
W_PZ5	describes and interprets rules of produce economics																				
W_PZ6	describes conditions for appropriate utilisation and disposal of animal by-products and management of waste from animal production																				6
		• •	F	00	d hy	/gie	ne														_
W_HŻ1	describes and interprets methods of consumers health protection by the appropriate organ responsible for the production of foods of animal origin		3		3					3	3							2	2		3
W_HŻ2	describes, interprets and evaluates conditions of hygiene and technology of production, food safety, also uses appropriate law regulations of the veterinary supervision		3		3					3	3					2	2				3
W_HŻ3	conducts ante-mortem and post-mortem examination of animals																				
W_HŻ4	describes and implies HACCP (Hazard Analysis and Critical Control Points) procedures				3					3	3					2	2				3

## SKILLS

#### Graduate knows how to: basic professional skills

				bas	ic p	prot	fessi	iona	al sk	ills																						
	effectively communicates with clients, veterinary surgeons																															
U_OUZ1	and employees of the state sanitary control, state and local																3		3					2	2						3	
	administration																														1	
	knows how to listen and explain in the language that is		2							2	2						2	2	2			2	3	2	2							
U_OUZ2	understandable and appropriate for the situation		2							2	3						3	3	3			3	3	Z	2						1	
	formulates clear case studies and knows how to create																															
																															1	
U OUZ3	documentation according to the current laws and														3 3	3	3		3				3								1	
	regulations, in the form understandable for the owner of																-		-				-								1	
	the animal and clear for other veterinary surgeons																														1	
U OUZ4	knows how to operate in the interdisciplinary team			-	-	-		-		_			-	-				1	3				3				-					-
0_0024	appropriately interprets responsibility of the veterinary		_	_	_	_	_	-	-			_	_	-	_	_	-	-	5				5				-		_	-	-	
																			_		~		~			~	~				1	
U_OUZ5	surgeon towards animal, its owner, society and																		3		2		3			3	3				1	
	environment			_	_	_	_	_	-				_	_	_	_	_	_	_								$\rightarrow$		_	-	$\square$	
U_OUZ6	evaluates economical and sociological implications of the																						3								1	
	veterinary practice				_	_		_					_			_							Ŭ				_				ш	
	understands the need of the best possible utilisation of																														1	
U_OUZ7	professional skills in order to enhance the quality of																3						3	1	1						1	
	veterinary care, animal welfare and public health																															
	Graduate knows how	to d	orga	anis	se a	nd	imp	olen	nen	t v	etei	rina	ry j	ora	ctic	e, iı	nclu	ıdir	ng:													
	knows self and employer responsibilities and obligations in		Ī		T	T	T					Ţ	Т														T					٦
U OUZ8	light of the law and occupational health and safety			1															1													
	regulations																														1	
-	can calculate fees, knows how to issue an official invoice		1	+	+	+	+	+	1	-		$\neg$	+	+	+		+		t				-				+	+		1	$\vdash$	-
U OUZ9	and respects rules of proper financial and medical																		1												11	
0_0025	documentation																														1	
	uses computer systems for effective communication,		-	-	-	-		+	-			-	-	+	+		+	+					_				$\rightarrow$	+	_	-	-	
																															1	
U_0UZ10	accumulation, processing, analysis and propagation of																														1	
	information			_	_	_	_	_	-				_	_	_	_	_	_	_								$\rightarrow$		_	-	$\square$	
U OUZ11	acts within the current standards and ethical obligations														3																1	
	-			_	_	_	_	_				_	_		_		_	_									_	_	_			
U OUZ12	understands the need of continuous education for		2																				3								1	
	professional development		-																				Ŭ									
U_OUZ13	can adapt professional offer to the dynamically changing																														1	
0_00210	situation on the work market																															
	knows his limitations and knows how to use the																														1	
U_0UZ14	professional advice and help of the specialists or																														1	
	specialised units in difficult cases																														1	
U 0UZ15	uses English and Latin medical nomenclature																															
	can communicate in Polish and knows how to use Polish																															
U_OUZ16	professional source materials																														1	
	professional source materials		nr	act	ica	Inr	ofes	cio	nal	rkil	lc I					_															<u> </u>	
	performs votorings, investigation in order to acquire	- 1	рі	act	ICa	i pi	UIE:	5310		511	13	T	-	1	1	-	1	1	1	1			- 1		- 1	-	<b>—</b> т	1	-	1	П	_
	performs veterinary investigation in order to acquire		2	2						2	2			2			_	2				2	2								2	
U_PUZ1	precise information on single animal and group of animals		2	2						2	3			3	-	3	3	3				3	3								3	
	(heard), and their environment		_	_	_	_		_	-			_	_	_	_	_	_	_	_		_							_	_	-	4	
U PUZ2	handles animals in safe and humane way, and instructs															3															1	
_	others to do alike				-+		_	_	_	_			-+			_	+	+	1								$\rightarrow$	_	_	_	Щ	_
U_PUZ3	carries out full clinical evaluation	3												3	3	3	3														3	
	performs first aid procedures for all animal species for	ΙĪ	ſ	ſ	ſ	ſ		1	1		]	ſ	ſ	Γ	Γ	1	1	1	1	]		II	I		ΙĪ		ſ	Γ		1	i I	
U PUZ4	haemorrhage, wounds, respiratory disorders, eye and ear	3							2		1	1			3				1								ļ					
0_2024	injuries, internal injuries, heart block, loss of consciousness,	3							<b> </b> ²		1	1			5				1								ļ					
	cahexia, burns and tissue injuries										1	1							1								ļ					
	evaluates nutritional state of the animal and ordains			T					1	~		T		T	1	1.		1	1							_	T	1		1	Π	
U_PUZ5	information on proper animal nutrition			1						2						3	5		1							3						
	collects and safeguards the biological material, knows the			t	+	+			1			-†	+	T			1	1	1								+	1		1	Ħ	
	rules of sample transport and basic laboratory analyses,																		1												11	
U_PUZ6	properly evaluates and interprets results of laboratory																3		1	3						3					11	
																			1												11	
	analyses	$\vdash$	-	+	+	+		+	+	-		-+	+	+	+	+	+	+	1	$\square$			_		$\vdash$		+	+	_	+	$\vdash$	_
	uses diagnostic apparatuses including x-ray, ultrasound and			1															1													
U_PUZ7	others, according to its manuals and health and safety			1															1		3											
	regulations concerning animals and humans																		1												11	
	implements proper official epizootic procedures in case of		_	+	+	+	_	+	+	_		-	+	+		_	+	+	-				_				+	+		+	$\vdash$	_
U_PUZ8					2						1	1				З	3		1								ļ					
_	the law-regulated diseases								1								1	1	1											1	L	

U_PUZ9	acquires and uses information on registered drugs											3					3			ГT	
U_PUZ10	prescribes and uses drugs and medical materials according to current regulations, including rules of their safe storage and utilisation									3	3							3			3
U_PUZ11	uses methods of safe sedation, general and local anaesthesia, and methods for pain evaluation and relief																				
U_PUZ12	choses the treatment adequate for the diagnosed disease								3		3	3	3		3						
U_PUZ13	implements rules of aseptic and antiseptic surgery procedures, and uses proper methods of tools sterilisation																				
U_PUZ14	evaluates the need for euthanasia, properly informs the owner of the animal and carries out the euthanasia procedure according to rules and obligations of professional ethics and proper utilisation of the body													2							
U_PUZ15	carries out patomorphological examination, prepares proper protocol, collects and labels samples and safeguards them for transport	2									3	3									
U_PUZ16	performs ante-mortem and post-mortem examination and examination of the products of animal origin					1.1	3 3	;													3
U_PUZ17	documents and uses documentation of the health, welfare and, in certain cases, the productivity of the heard									3											3
U_PUZ18	prepares the preventive scheme according to the species specifics	2										3					3				3
U_PUZ19	evaluates the risk and prepares the procedures minimising the risk of contamination, cross-species infection and accumulation of the disease agents in veterinary facilities and the environment											3					3				

#### PERSONAL COMPETENCES Graduate:

#### takes responsibility for his decisions concerning humans K_KP1 1 3 2 3 3 3 and animals observes the ethical rules and obligations K KP2 3 shows tolerance to beliefs and behaviour influenced by К_КРЗ different sociological and cultural background shows the competence in solving of the conflicts and K_KP4 pliability in the reactions for sociological changes can critically evaluate personal actions and actions of 2 3 3 K_KP5 1 1 others to improve proposed actions developed a habit of constantly updating his knowledge 3 3 K_KP6 2 and skills K_KP7 knows his limitations 2 3 3 3 K_KP8 considers wellbeing of his patient as a topmost priority 3 3 can cooperate with specialists of other professions for the 3 2 3 3 3 2 1 1 K_KP9 protection of public health K_KP10 can operate under stress and duress can organise the work of a team K KP11 1 1 understands the need to engage in the operations of K_KP12 professional and territorial organisations understands the consequences of his decisions, especially 3 K KP13 those influencing natural environment knows basic laws and regulations governing intellectual K_KP14 1 property has knowledge sufficient for further study in the course of Inne 1 3 continuity of the subjects has other knowledge and skills Inne2 2 2

## LEARNING OUTCOMES MATRIX

Unit: Faculty of Veterinary Medicine Field of studies: Veterinary Medicine Level of study: Long-cycle Master's degree programme Profile of study: General Academic (GA)

Effect symbol	
Directional effects	
Rotation - Veterinary laboratory diagnostics Herch health management	r
Cardiology diagnostics in small animals	
Small animal bone and joint surgery	
Daily clinical practice	
clinical course of small animal surgery Small animal dermatology	
Small animal dentistry	
Equine diseases - clinical cases Common surgical procedures in horses	
Ultrasound diagnostics of the reproductive tract in farm animals	
Horse dentistry	
	M
atement in dairy herds	odul
Imaging diagnostics in companion animals	
Manangemement of life -threatening situations in small animal anaes	
Intensive care of dogs and cats	
Communication and negotations skills in veterinary practice	
Exotic animals medicine	
Clinical course of exotic animal diseases (200)	
Management of vetermary practice Introduction to cynology and dog show essentials	
Herd health management in small ruminants	
Clinical anaesthesiology	
Nutraceuticals in farm animals Individual research project, completed with dissertation	
	Т

#### Modules Graduate knows and understands:

				Ва	sic	scie	enc	es																				
14044 1151	knows and describes regular morphology of the animal								2			1						1			T		T		1	П	Τ	Т
WW_NP1	organism: cells, tissues, organs and systems				L				3			L						L										
	knows structure, describes and explains functions of the																											
	systems of the animal organism (respiratory,																											
WW_NP2	gastrointestinal, cardiovascular, urinary, nervous,								3													-	3					
	locomotion, reproductive, endocrine, immune and skin)																											
								+	_	_	_											_	+	_	_			
WW_NP3	describes and interprets development of organs and the																											
	whole organism in relation to the adult organism describes and explains metabolic processes on the							+	_	_	-				_	_	_				_	_	+	_	_	+	_	
WW_NP4	molecular, cellular, organ and organism levels								3																			
	describes and explains homeostasis, neurohormonal				-		_		-					-	-	+				-	-				-		+	+
WW_NP5	regulation reproduction, ageing and death																					1	3					
	describes, explains and interprets rules and mechanisms																									+	+	+
	governing animal health, disease and therapy, from the																											
WW_NP6	cellular level, through the organs, organisms, herds to the																											
	whole population of animals											1						1										
	knows and interprets patophysiological changes in the										1	1						1					T			$\square$	T	
WW NP7	organs and systems, biological mechanisms (including											3						3									2	
VV VV_INP7	immunological) and pharmacological mechanisms											э						З									2	
	facilitating recovery																									Ш	$\square$	$\bot$
	identifies and describes biology of infectious agents											1						1										1
WW NP8	inducing diseases transmitted between animals, animals		3												3							3	3					
	and humans, including mechanisms of the disease		Ŭ												Ŭ							ľ	-					
	transmission and organism defence systems							-															_		_	$\vdash$		
	defines and describes genetic mechanisms, identifies																											
WW_NP9	genetic disorders and knows bases of the genetic																											
	engineering							+	_	_	-				_	-	_				_	_	+	_	_	+	_	
WW NP10	defines and describes mechanisms of drug action, their								3	,		3					3									3		3
WWV_NF10	fate in the organism and drug-to-drug interactions									<b>,</b>		5					5									5		5
WW NP11	utilises chemoterapeutics							3				3	3	3			3						3			3		+
-								Ū	3	3		Ŭ	Ŭ	Ū		-	-					_	3				+	+
								ł		-				_								-	<u> </u>			+		
WW_NP13	knows and uses English and Latin medical nomenclature								3																			
	knows and uses Polish language to the effect of																											
WW_NP14	communication with the specialists in the veterinary and																											
_	related sciences, uses Polish source materials																											
			(	Clin	nica	l sc	ien	ces												_			-					
	describes, explains and interprets disorders on the cellular,																										Т	
W_NK1	tissue, organ, system and organism levels occurring in the				3		3		3	3		1	3	3		1	3	3	3							3		
	course of the disease																											
W_NK2	describes, explains and interprets mechanisms of the				3		3	3	3	3		3	3	3			3	1	3	3	3	:	3					
	organ and organism pathologies				, J		5	5	~	1		Ľ	1	~		`	-	1	, j	5	~	`	-		_	Щ	$\downarrow$	$\perp$
	describes and interprets causes and symptoms of the											1						1										1
W NK3	disease, describes and interprets patomorphological		3					3	3 3	3 3	3	3	3	3		3	3	1	3	3	3		3	3		3		1
	changes, uses procedures for therapy and prevention in							_		ľ	Ē	1						1		-	-							1
	the particular diseases			_		$\square$		_	_	_	+	_	H			+	_	_		_	-+	_	+		_	$\vdash$	+	+
W_NK4	implements diagnostic (including differential diagnostics)	3				3		3	3 3	3 3		1	3	3		3 3	3	3	3	3	3	3	3					1
	and therapeutic procedures carries out clinical evaluation and monitors heard health in		$\vdash$	_	_	$\vdash$		$\rightarrow$	+	+	+	$\vdash$	$\vdash$		-+	+	_	$\vdash$	$\vdash$	_		-+	+	+	_	++	+	+
W_NK5	the intensive production		3						3	3	2	1	3	3	3			1										1
	implements official epizootic procedures in case of the law-			_	-			+	+	+	+	$\vdash$	┝┤		+	╉	+	$\vdash$		_	+	+	+	+	+	++	+	+
W_NK6	regulated diseases											1			3			1										
	regulated discuses					II			1		-	1			- 1	-		1				-			-	<u> </u>	<u> </u>	

W_NK7	collects, analyses and correctly interprets clinical data, results of the laboratory tests and other diagnostics techniques	3	3			3	3	3	3	3	3	3	3		:	3	3	3				3		
W_NK8	Indicates and interprets appropriate law regulations, knows rules governing issuing of the verdicts and creates official opinions for the law courts, state, local and veterinary administration	3											3						3		:	3		
W_NK9	knows bases of the functioning of state veterinary service, also in the aspect of public health prevention	3																						
			A	nim	al p	rod	ucti	on																
W_PZ1	describes breeds within animal species, describes rules of animal husbandry and breeding																				1	3		
W_PZ2	describes rules for animal selection for breeding, methods of breeding and selection																							
W_PZ3	describes rules of animal feeding (according to the species specifics), elaborates and analyses diet compositions																					3 3	3	
W_PZ4	describes and evaluates conditions for animal welfare		3																	3		3 3		
W_PZ5	describes and interprets rules of produce economics																							
W_PZ6	describes conditions for appropriate utilisation and disposal of animal by-products and management of waste from animal production																							
				Foo	od h	nygi	ene																	
W_HŻ1	describes and interprets methods of consumers health protection by the appropriate organ responsible for the production of foods of animal origin																							
W_HŻ2	describes, interprets and evaluates conditions of hygiene and technology of production, food safety, also uses appropriate law regulations of the veterinary supervision																							
W_HŻ3	conducts ante-mortem and post-mortem examination of animals																							_
W_HŻ4	describes and implies HACCP (Hazard Analysis and Critical Control Points) procedures	3																						

SKILLS

Graduate knows how to:

basic	professional	skills	

		L.	Jasi	с рі		2221	UII	ais	KIII:	5																				
U_OUZ1	effectively communicates with clients, veterinary surgeons and employees of the state sanitary control, state and local administration																				3	3	3							
U_OUZ2	knows how to listen and explain in the language that is understandable and appropriate for the situation		3																		3	3	3							2
U_OUZ3	formulates clear case studies and knows how to create documentation according to the current laws and regulations, in the form understandable for the owner of the animal and clear for other veterinary surgeons					3	3			3				3	3															
U OUZ4	knows how to operate in the interdisciplinary team				4	3	3															1						1		2
U_OUZ5	appropriately interprets responsibility of the veterinary surgeon towards animal, its owner, society and environment				-	-	-						3					3		3										
U_OUZ6	evaluates economical and sociological implications of the veterinary practice																									3				
U_OUZ7	understands the need of the best possible utilisation of professional skills in order to enhance the quality of veterinary care, animal welfare and public health					3													3											
	Graduate knows how to o	rga	nis	e ai	nd i	imp	bler	ne	nt	/ete	erir	nary	y pi	ract	tice	, in	clu	din	g:											
	knows self and employer responsibilities and obligations in					Ì																						Τ		
U_OUZ8	light of the law and occupational health and safety regulations	3				3																								
U_OUZ9	can calculate fees, knows how to issue an official invoice and respects rules of proper financial and medical documentation	3																					3							
U_OUZ10	uses computer systems for effective communication, accumulation, processing, analysis and propagation of information																		3											
U_OUZ11	acts within the current standards and ethical obligations	3			3	3	3																							
U_0UZ12	understands the need of continuous education for professional development															3														3
U_OUZ13	can adapt professional offer to the dynamically changing situation on the work market																									3			3	
U_OUZ14	knows his limitations and knows how to use the professional advice and help of the specialists or specialised units in difficult cases																		3											
U_0UZ15	uses English and Latin medical nomenclature																													
U_0UZ16	can communicate in Polish and knows how to use Polish professional source materials																													
r		pra	acti	cal	pro	ofes	ssio	nal	l sk	ills														1					1	
U_PUZ1	performs veterinary investigation in order to acquire precise information on single animal and group of animals		3	3	3			3	3	3	3	2		3		3	3		3		3	3	3	3	3					
U_PUZ2	(heard), and their environment handles animals in safe and humane way, and instructs others to do alike			3								2					3		3				$\left  \right $	3	3			+		$\vdash$
U PUZ3	carries out full clinical evaluation			3	3		3	3	3	3	3			3	3	3	3		3		+	+	+	3	$\vdash$	$\vdash$	1	3	3	H
	performs first aid procedures for all animal species for				-			J	J	-	J			-			-		-		+	+	1	Ť		$\vdash$		-	Ť	$\square$
U_PUZ4	haemorrhage, wounds, respiratory disorders, eye and ear injuries, internal injuries, heart block, loss of consciousness, cahexia, burns and tissue injuries			3	3		3									3					3	3								
	iconsciousness, canexia, purns and tissue iniuries			L																1	1		1	1	I				1	1

U_PUZ5	evaluates nutritional state of the animal and ordains information on proper animal nutrition																		:	3 3	3			3
U_PUZ6	collects and safeguards the biological material, knows the rules of sample transport and basic laboratory analyses, properly evaluates and interprets results of laboratory analyses	3		3		3	3		3					3					:	3		3		3
U_PUZ7	uses diagnostic apparatuses including x-ray, ultrasound and others, according to its manuals and health and safety regulations concerning animals and humans	3								3 3	3	3		3	3	3								
U_PUZ8	implements proper official epizootic procedures in case of the law-regulated diseases											3						1	3					
U_PUZ9	acquires and uses information on registered drugs																			3				
U_PUZ10	prescribes and uses drugs and medical materials according to current regulations, including rules of their safe storage and utilisation					3	3	3				3										3		
U_PUZ11	uses methods of safe sedation, general and local anaesthesia, and methods for pain evaluation and relief			3																			3	
U_PUZ12	choses the treatment adequate for the diagnosed disease		3	3	3	3	3					3					3			3 3	3			
U_PUZ13	implements rules of aseptic and antiseptic surgery procedures, and uses proper methods of tools sterilisation	3								1	3		3		3									3
U_PUZ14	evaluates the need for euthanasia, properly informs the owner of the animal and carries out the euthanasia procedure according to rules and obligations of professional ethics and proper utilisation of the body	3								3					3				3					
U_PUZ15	carries out patomorphological examination, prepares proper protocol, collects and labels samples and safeguards them for transport																		:	3				
U_PUZ16	performs ante-mortem and post-mortem examination and examination of the products of animal origin																							
U_PUZ17	documents and uses documentation of the health, welfare and, in certain cases, the productivity of the heard							3					3					ſ						
U_PUZ18	prepares the preventive scheme according to the species specifics																		:	3				3
U_PUZ19	evaluates the risk and prepares the procedures minimising the risk of contamination, cross-species infection and accumulation of the disease agents in veterinary facilities and the environment	3										3												

## Graduate:

			 			-					 												
K KP1	takes responsibility for his decisions concerning humans	ιŢ			1 ]					ΙT	3			3	ſ		3	ΙT	Γ		3		
K_K 1	and animals										_			5			5				5		
K_KP2	observes the ethical rules and obligations	1									117	3											1
К КРЗ	shows tolerance to beliefs and behaviour influenced by										3						3						
к_крэ	different sociological and cultural background										5						5						
K KP4	shows the competence in solving of the conflicts and																3						
K_KI 4	pliability in the reactions for sociological changes																5						
K KP5	can critically evaluate personal actions and actions of						3				-	2	3				3			3			
K_K 3	others to improve proposed actions						5				`	<u> </u>	5				J			J			
K KP6	developed a habit of constantly updating his knowledge				3												3						
	and skills	Ш										_					_						$\perp$
K_KP7	knows his limitations				3												3				3		
K_KP8	considers wellbeing of his patient as a topmost priority			3				3									3						
K KP9	can cooperate with specialists of other professions for the																						T
к_кр9	protection of public health																						
K_KP10	can operate under stress and duress																3					3	
K_KP11	can organise the work of a team															3							
K KP12	understands the need to engage in the operations of																						
K_KP1Z	professional and territorial organisations																						
K KP13	understands the consequences of his decisions, especially																						
K_KP15	those influencing natural environment																						
K KP14	knows basic laws and regulations governing intellectual																						3
K_KI 14	property																						5
Inne 1	has knowledge sufficient for further study in the course of																			2			
inite I	continuity of the subjects								1														$\perp$
Inne2	has other knowledge and skills												1				3			2			

## Opinia Samorządu Studentów Wydziału Medycyny Weterynaryjnej o nowym programie studiów jednolitych studiów magisterskich stacjonarnych i niestacjonarnych na kierunku Weterynaria od roku 2019/20

Przedstawiony przez Komisję ds. Dydaktyki nowy program jednolitych studiów magisterskich na kierunku Weterynaria (od roku 2019/20) został – w ocenie Samorządu Wydziałowego – uznany za pozytywną zmianę w stosunku do obecnie realizowanego programu studiów.

Nowy program pozwala na podniesienie i podkreślenie znaczenia wiedzy weterynaryjnej oraz jej praktycznego zastosowania w pracy zawodowej. Naszym zdaniem proponowany program jednolitych studiów magisterskich tworzy szeroką i bardziej zróżnicowaną ofertę programową, pozwalając tym samym na lepsze przygotowanie studentów do wykonywania zawodu lekarza.

W zaproponowanym programie studiów za szczególnie cenne uważamy:

 wprowadzenie nowych przedmiotów (modele komunikacyjne w relacji lekarz-właściciel, etyka zawodowa lekarza weterynarii), które poszerzają naszą wiedzę w zakresie kompetencji społecznych

 wprowadzenie przedmiotów, które zostały zaproponowane przez studentów tj. Neonatologia małych zwierząt, Nowoczesne techniki obrazowania, czy Geriatria psów i kotów. Dzięki takim zabiegom, Wydział postępuje wspólnie z rozwojem w dziedzinie weterynarii

 poszerzenie wiedzy i umiejętności z zakresu technik obrazowania dla różnych gatunków zwierząt, co przygotuje nas w dużym stopniu do lepszego analizowania jednego z podstawowych w weterynarii badań diagnostycznych

Podsumowując: w naszej opinii przygotowany program studiów w interesujący sposób łączy wiedzę z praktyką oraz wymagania uniwersyteckie z koniecznością przygotowania zawodowego studentów. Uważamy, że program ten będzie bardziej atrakcyjny dla kandydatów na studia na kierunku Weterynaria niż aktualnie obowiązujący.

W imieniu RWSS WMW SGGW

Przewodnicząca Rady Wydziałowej Samorządu Studentów SGGW Wydziału Medycyny Weterynaryjnej PCUCCU USHO I Katarzyna Opałczyńska /