Freie Universität Berlin

Freie Universität Berlin
Veterinary Medicine
ECTS Brochure 2024/2025

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Fachbereich Veterinärmedizin
der Freien Universität Berlin

1 Table of contents

2 The School of Veterinary Medicine introduces itself

Welcome to the School of Veterinary Medicine at Freie Universität Berlin. In this brochure you will find the prototypical course of study with the compulsory courses of the Veterinary Medicine degree programme as well as an ECTS classification of these courses.

2.1 Important addresses at the School of Veterinary Medicine

Coordinator for International Relations, Partnerships (Erasmus, Sokrates) and Visiting Students
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2.2 Clinics and Institutions

Further information about the department and an introduction to the scientific institutions as well as their contact persons can be found on our website at the following URL: http://www.vetmed.fu-berlin.de

2.2.1 Veterinary Hospital Freie Universität Berlin

Equine Clinic (WE17)

Oertzenweg 19b
14163 Berlin-Duppel

Phone: +49 (0)30 838-62300

pferdeklinik@vetmed.fu-berlin.de

Farm Animal Clinic - Division for Poultry (WE18)

Königsweg 63
14163 Berlin-Duppel

Phone: +49 (0)30 838-62310

gefluegelkrankheiten@vetmed.fu-berlin.de

Farm Animal Clinic - Divison for Ruminants and Camelids (WE18)
Farm Animal Clinic - Divison for Pigs (WE18)

Königsweg 65
14163 Berlin-Duppel

Phone: +49 (0)30 838-62261

klauentierklinik@vetmed.fu-berlin.de

Centre for Veterinary Clinical Services (WE19)

Oertzenweg 19b
14163 Berlin -Duppel

Phone: +49 (0)30 838-62618

kleintierklinik@vetmed.fu-berlin.de

Small Animal Clinic (WE20)

Oertzenweg 19b
14163 Berlin-Duppel

Phone: +49 (0)30 838-62356

kleintierklinik@vetmed.fu-berlin.de

2.2.2 Institutes

Institute of Veterinary Anatomy (WE01)

Koserstraße 20
14195 Berlin-Dahlem

Tel.: +49 (0)30 838 – 53555

anatomie@vetmed.fu-berlin.de

Institute of Veterinary Physiology (WE02)

Oertzenweg 19b
14163 Berlin-Duppel

Tel.: +49 (0)30 838-62600

physiologie@vetmed.fu-berlin.de

Institute of Veterinary Biochemistry (WE03)

Oertzenweg 19b
14163 Berlin-Duppel

Tel.: +49 (0)30 838-62225

biochemie@vetmed.fu-berlin.de

Institute of Animal Nutrition (WE04)

Königin-Luise-Str. 49
14195 Berlin-Dahlem

Phone: +49 (0)30 838-52256

tierernaehrung@vetmed.fu-berlin.de

Institute of Virology (WE05)

R.-v.-Ostertag-Str. 7-13
14163 Berlin-Duppel

Phone: +49 (0)30 838-51833

virologie@vetmed.fu-berlin.de

Institute of Immunology (WE06)

R.-v.-Ostertag-Str. 7-13
14163 Berlin-Duppel

Phone: +49 (0)30 838-51824

imb@vetmed.fu-berlin.de

Institute of Microbiology and Epizootics (WE07)

R.-v.-Ostertag-Str. 7-13
14163 Berlin-Düppel

Tel.: +49 (0)30 838-51840

imt@zedat.fu-berlin.de

Institute of Food Safety and Food Hygiene (WE08)

Königsweg 69
14163 Berlin-Duppel

Phone: +49 (0)30 838-62550

lebensmittelhygiene@vetmed.fu-berlin.de

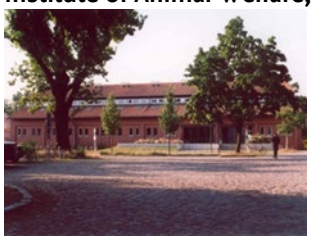
Institute for Animal Hygiene and Environmental Health (WE 10)

R.-v.-Ostertag-Str. 7-13
14163 Berlin-Düppel

Tel.: +49 (0)30 838-51845

tierhygiene@vetmed.fu-berlin.de

Institute of Animal Welfare, Animal Behavior and Laboratory Animal Science (WE11)



Königsweg 67, Building 21, 1st
OG14163 Berlin

Phone: +49 (0)30 838-56034

tierschutz@vetmed.fu-berlin.de

Institute of Animal Pathology (WE12)

R.-v.-Ostertag-Str. 15
14163 Berlin-Duppel

Phone: +49 (0)30 838-62450

pathologie@vetmed.fu-berlin.de

Institute of Parasitology and Tropical Veterinary Medicine (WE13)

R.-v.-Ostertag-Str. 7-13
14163 Berlin-Duppel

Phone: +49 (0)30 838 62310

parasitologie@vetmed.fu-berlin.de

Institute of Pharmacology and Toxicology (WE14)

Koserstraße 20
14195 Berlin-Dahlem

Phone: +49 (0)30 838-53214

pharmakologie@vetmed.fu-berlin.de

Institute of Veterinary Epidemiology and Biostatistics (WE15)

Königsweg 67, Building 21, 1st
OG14163 Berlin

Phone: +49 30 838 71714

marcus.doherr@fu-berlin.de

3 Information about the courses

3.1 Formal framework: Course of studies according to the Veterinary Licensing Ordinance

The degree programme in Veterinary Medicine in Germany is organized by the state. This means that the framework conditions are not regulated by the universities, but according to the requirements of the "Veterinary Licensing Ordinance" on a nationwide basis. This applies not only to the content, but also to the examinations, which are not organized by the university, but by a higher-level body. In Berlin, the "State Office for Health and Social Affairs" (LAGeSo) is responsible for this.

The TappV and other legal bases can be found at:
https://www.vetmed.fu-berlin.de/studium/veterinaermedizin/gesetze-ordnungen/index.html

The requirements of the TappV are implemented at the university for the course of study in a study regulation. These study regulations determine, among other things, which compulsory courses are offered in the individual semesters. At this planning level, the courses are described in this brochure.

The subsequent course planning is very concrete. In the course planning, it is planned for each semester exactly when each course will take place, in which room and by which lecturers. A list of the specific courses held in a semester with the corresponding times, locations and contact persons can be found in the course catalogue of the FU Berlin at: http://www.fu-berlin.de/vv

For each semester, timetables are published well in advance of the start of the courses, in which the weekly lectures, exercises and seminars as well as the venues are broken down. These are also available online at www.vetmed.fu-berlin.de. Further optional courses can be found in the online course catalogue of Freie Universität Berlin at: https://www.vetmed.fu-berlin.de/studium/veterinaermedizin/stundenplaene/index.html

3.2 Courses for planning your exchange

3.2.1 "Compulsory Events"

For a better overview for planning your exchange, you will find a compilation of the compulsory courses of the current year in Appendix 1, divided by semester. In addition to the descriptions of the contents of the courses and the type of performance assessment, you will find the ECTS credits with which these courses can be credited.

Please note that the courses of the 1st, 3rd, 5th, 7th and 9th semesters take place in the winter semester and the courses of the 2nd, 4th, 6th, 8th and 10th semesters take place in the summer semester.

3.2.2 "Final clinical rotation"

The "Final clinical rotation" is the most important part of the practical-clinical training. This includes 9 consecutive weeks in one of the three clinics of the School. Students must opt for a focus rotation; farm animals, horses or small animals. The rotation groups are fixed in advance and cannot be freely chosen. The rotations are wholly or partially within the lecture period. For your planning, this means that you can complete either a clinical rotation OR other courses in one semester. It is generally not possible to successfully attend courses from the 1st to 8th semester and a rotation in one semester.
You will be offered a complete final rotation, but a clinic of your choice cannot be guaranteed in every case. If you wish to attend the final clinical rotation during your stay, it must be checked in advance in which focus rotation places are available. The ERASMUS representative at our School must be involved in the planning at an early stage.

3.2.3 "Elective Courses"

In addition to the compulsory courses, the School offers a variety of other courses that allow students to deepen their knowledge of a specific topic. The elective courses are advertised anew every semester, so that these courses are only fixed for the current (and possibly future) semester. These courses are published exclusively in the course catalogue. The courses are generally counted with one ECTS credit. Regular attendance is compulsory.

4 Examinations and performance assessments

4.1 Examinations

The examinations for students of the Veterinary Medicine degree programme are "state examinations". These exams are not organized by the university, but by an external authority. Incoming students within the framework of the ERASMUS exchange can therefore not take part in the official state examinations. However, examinations equivalent to the state examinations can be organized if incoming students fulfil the entrance requirements for those exams, i.e., have taken all modules that are content to these exams. To receive those examination offers, it is necessary to clearly define all exams you want to take at the beginning of the exchange. The procedure is as follows:

(i) Your Learning Agreement should specify which modules require an examination.

(ii) Review your LA with the ERASMUS coordinator regarding the feasibility of the examinations you have planned.

(iii) Details must be agreed with the responsible lecturers (types of examinations, grades and dates) at the beginning of the semester.

The awarding of grades for courses that are otherwise not graded at Freie Universität Berlin is provided only in exceptional cases at the discretion of the course organizer. **Please note that performance reviews cannot be carried out if they have not been coordinated in advance.**

4.2 Course-related performance assessments

In addition to the examinations, performance assessments are sometimes carried out at the course level. The event types "seminars" and "exercises" require regular and successful participation. In some cases, success of participation is assessed with attestations or report writing. These assessments are generally ungraded. **If deviating certificates of achievement are required, these must also be agreed in advance with the ERASMUS coordinator and the responsible lecturers. As for exams, the offering of assessments that are not laid out in the regular study regulations is completely at the discretion of the certifying lecturer.**

For the course type "lectures", neither regular attendance is checked nor is performance assessment required at the course level. The content review takes place via examinations at the module level. **Because Freie Universität Berlin does not perform attendance checks in lectures, it is generally not possible to receive documents certifying regular attendance in lectures.**

In summary, the types of attendance certificates and grades that may be provided to foreign students are legally fixed in the study and examination regulations. Other certificates and grades may be provided only in rare, well justified and exceptional circumstances and are completely at the discretion of the course coordinator. Requests for certificates or grades must be agreed upon in the Learning Agreement at the beginning of the semester. As the provision of grades that are not fixed in the study and examination regulations can mostly not be expected, students are strongly advised to obtain those grades at their home university. To facilitate the latter, the Coordinator for International Relations, Partnerships and Visiting Students will support you in sitting remote exams with your home university during your stay at Freie Universität Berlin.

4.3 Performance evaluation (grading scale)

The usual performance assessment at the Faculty of Veterinary Medicine is based on § 14 TAppV and consists of a scale of five grades with verbal definitions. The following exam grades are used for the evaluation of performance in oral and written examinations:

Grade Level	Definition	Description
1	"very good"	an excellent performance
2	"Good"	performance that is significantly higher than average requirements
3	"satisfactory"	a performance that meets average requirements in all respects
4	"adequate"	a performance that, despite its shortcomings, still meets the requirements
5	"Not sufficient"	a performance that no longer meets the requirements due to significant deficits.

For students in ECTS, this grading system is "translated" into the ECTS grading scale, which has 6 levels with the criteria described below.

Grade Level	Grade span	Definition	Definition	Description
A	1,0 – 1,5	excellent	excellent	an outstanding achievement
B	1,6 – 2,0	Very good	very good	a performance above average with some slight flaws
C	2,1 – 3,0	good	Good	a generally solid performance with some major flaws
D	3,1 – 3,5	satisfying	satisfactory	Mediocre performance with conspicuous bugs
E	3,6 – 4,0	sufficient	sufficient	Performance meets the minimum requirements
F	4,1 – 5,0	failed	Fail	Performance below minimum requirements

4.4 State examinations as part of the degree programme

The following state examinations are offered at Freie Universität, but Erasmus incoming students do not formally participate. If you would like to take some of these exams, please clarify this in advance with the ERASMUS coordinator.

5 List of examination subjects

Title of the exam	Type and time of the examination or study-related assessment	Form of examination (proportion of grade of the examination subject according to TAppV)	Content of the exam
A. Preliminary veterinary examination			
Natural Science Section of the Veterinary Preliminary Examination (Pre-Physicum) § 19 TAppV			
Physics incl. Fundamentals of Physical Radiation Protection § 19 No. 1 TAppV	Examination during the lecture-free period at the end of the 2nd semesters	Oral exam (100%) or alternatively written or electronic exam (100%)	§ 21 TAppV
Chemistry § 19 No. 2 TAppV	Examination during the lecture-free period at the end of the 2nd semesters	Exam (written or electronic) (100%)	§ 21 TAppV
Zoology § 19 No. 3 TAppV	Examination during the lecture-free period at the end of the 2nd semesters	Oral exam (100%) or alternatively written or electronic exam (100%)	§ 21 TAppV
Botany of Forage, Poisonous and Medicinal Plants § 19 No. 4 TAppV	Examination during the lecture-free period at the end of the 2nd semesters	Exam (written or electronic) (100%)	§ 21 TAppV
Anatomical-physiological section of the preliminary veterinary examination (Physicum) § 22 TAppV			
Biochemistry § 22 No. 4 TAppV	Examination during the lecture-free period at the end of the 3rd semesters	Oral exam (100%)	§ 27 TAppV
Animal Breeding and Genetics Including Animal Assessment § 22 No. 5 TAppV	Examination during the lecture-free period at the end of the 3rd semesters	Exam (written or electronic) (100%)	§ 28 TAppV
Anatomy § 22 No. 1 TAppV	Examination during the lecture-free period at the end of the 4th semesters	Oral exam with practical parts (100%)	§ 24 TAppV
Histology and Embryology § 22 No. 2 TAppV	Examination during the lecture-free period at the end of the 4th semesters	Exam (written or electronic) (100%)	§ 25 TAppV
Physiology § 22 No. 3 TAppV	Examination during the lecture-free period at the end of the 4th semesters	Oral exam with practical parts (100%)	§ 26 TAppV

Title of the exam	Type and time of the examination or study-related assessment	Form of examination (proportion of grade of the examination subject according to TAppV)	Content of the exam
B. Veterinary examination			
Animal Husbandry and Animal Hygiene § 29 No. 1 TAppV	Examination during the lecture-free period at the end of the 5th smesters	Exam and first repeat exam: written or electronic exam (100%)	§ 32 TAppV
Animal Welfare and Ethology § 29 No. 2 TAppV	Examination during the lecture-free period at the end of the 5th semesters	Exam (written or electronic) (100%)	§ 33 TAppV
Animal Nutrition § 29 No. 3 TAppV	Examination during the lecture-free period at the end of the 5th semesters	Oral exam with practical exercises (100%)	§ 34 TAppV
Clinical Propaedeutics § 29 No. 4 TAppV	Examination during the lecture-free period at the end of the 5th semesters	Oral exam with practical exercises (100%)	§ 35 TAppV
Virology § 29 No. 5 TAppV	Examination during the lecture-free period at the end of the 6th semesters	Oral exam (100%)	§ 36 TAppV
Bacteriology and Mycology § 29 No. 6 TAppV	2 parts as follows:		§ 37 TAppV
1 Microbiology Course	Course-related assessment during the 6th semester	Practical exercise with written protocol (20%)	
2 Bacteriology and Mycology	Examination during the lecture-free period at the end of the 6th semesters	Exam (written or electronic) (80%)	
Parasitology § 29 No. 7 TAppV	Examination during the lecture-free period at the end of the 6th semesters	Oral exam with practical exercises (100%)	§ 38 TAppV
Pharmacology and Toxicology § 29 No. 9 TAppV	Examination during the lecture-free period at the end of the 6th semesters	Oral exam (100%)	§ 40 TAppV

Title of the exam			Type and time of the examination or study-related assessment	Form of examination (proportion of grade of the examination subject according to TAppV)	Content of the exam
B. Veterinary examination					
Drug and Narcotics Legislation § 29 No. 10 TAppV			2 parts as follows:		§ 41 TAppV
	1	Galenics and Prescription	Course-related performance assessments during the 7th semester	Practical exercise with written or electronic content (40%)	
	2	Drug and Narcotics Legislation	Examination during the lecture-free period at the end of the 7th semesters	Oral exam (60%)	
Radiology § 29 No. 12 TAppV			Examination during the lecture-free period at the end of the 7th semesters	Oral exam with practical exercises/OSCE (100%)	§ 43 TAppV
Animal Epizootic Control and Infection Epidemiology § 29 No. 8 TAppV			Examination during the lecture-free period at the end of the 8th semesters	Oral exam (100%)	§ 39 TAppV
General Pathology and Special Pathological Anatomy and Histology § 29 No. 13 TAppV			3 parts as follows:		§ 44 TAppV
	1	General pathology	Study-related performance assessment during the lecture-free period at the end of the 8th semester	Exam (written or electronic) (25%)	
	2	Special Pathology	Study-related performance assessment during the lecture-free period at the end of the 8th semester	Exam (written or electronic) (35%)	
	3	General Pathology and Special Pathological Anatomy and Histology	Examination in the 9th/10th semester, during the final clinical rotation	Oral and practical exam (40%)	
Poultry diseases § 29 No. 11 TAppV			Final exam during the 11th semester	Oral exam (100%)	§ 42 TAppV
Food Science Including Food Hygiene § 29 No. 14 TAppV			Final exam during the 11th semester	Oral exam with practical exercises (100%)	§ 45 TAppV
Meat Hygiene § 29 No. 15 TAppV			2 parts as follows:		§ 46 TAppV
	1	General and special meat hygiene	Study-related performance assessment at the end of the course 8th semesters	Exam (written or electronic) (40%)	
	2	Fleischhygiene	Final exam during the 11th semester	Oral exam with practical exercises (60%)	

Title of the exam			Type and time of the examination or study-related assessment	Form of examination (proportion of grade of the examination subject according to TAppV)	Content of the exam
B. Veterinary examination					
Dairy Science § 29 No. 16 TAppV			2 parts as follows:		§ 47 TAppV
	1	Milk Test Report	Course-related performance assessment during the 7th semester	Practical exercise with written protocol (30%)	
	2	Dairy Science	Final exam during the 11th semester	Exam (written or electronic) (70%)	
Reproductive Medicine § 29 No. 17 TAppV			Final exam during the 11th semester	Oral exam with practical exercises (100%)	§ 48 TAppV
Internal Medicine § 29 No. 18 TAppV			2 parts as follows:		§ 49 TAppV
	1	Internal Medicine, Dermatology and Laboratory Diagnostics (cross-species exam)	Study-related performance assessment during the lecture-free period at the end of the 8th semester	Exam (written or electronic) (40%)	
	2	Internal Medicine	Final exam during the 11th semester	Oral exam with practical exercises (60%)	
Surgery and Anaesthesiology § 29 No. 19 TAppV			2 parts as follows:		§ 50 TAppV
	1	General and Special Surgery, Anaesthesiology and Ophthalmology (cross-species exam)	Study-related performance assessment during the lecture-free period at the end of the 8th semester	Exam (written or electronic) (40%)	
	2	Surgery and Anesthesiology	Final exam during the 11th semester	Oral exam with practical exercises (60%)	
Judicial Veterinary Medicine, Professional Law and Professional Code § 29 No. 20 TAppV			Final exam during the 11th semester	Exam (written or electronic) (100%)	§ 51 TAppV

6 Courses in WS 2023/24 and SoSe 2024

6.1 Pre-clinical studies

6.1.1 Courses of the 1st Year

Chemistry					
Course No.	21791b		Semester	1	
Format	Lectures		ECTS-Credits	4,0	SWS 4,0
Course contents	Chemical reactions, stoichiometry, quantity of substances: moles, structure of atoms, interaction of light/matter, periodic table, properties of matter, noble gases, states of matter, equation of state of the ideal gas, isotopes, atomic bond H2 molecule, oxidation and reduction, halogens, electronegativities, hydrogen halogens, polar atomic bond, hydrogen bond, chem. equilibrium, law of mass, reaction rate, half-life, 1st order reaction, energetics chem. reactions, Gibbs-Helmholtz equation, energy profile, activation energy, closed, closed and open systems, alkali metals, metallic bonding, ionic bonding, ion lattices, alkali halides, chalcogens, O2 molecule, ozone, orbital hybridization, geometry of polyatomic molecules, *- and *-bonds, mesomerism, properties and structure of water, self-dissociation, pH, acids and bases (Brønstedt), neutralization, indicators, weak acids and bases, pkA, pkB, degree of dissociation *, buffer, buffer capacity; Potentials, Nernst's equation, pH-dependent potentials, pH measurement with the glass electrode, diffusion and membrane potentials, sulfur and Compounds, coupled equilibria, solubility product, heterogeneous phase equilibria, essential trace elements, toxicity & concentration, alkaline earth metals, formation & decay constants of complexes, chelated complexes, toughness, coordination number (boron & aluminum), nitrogen group, ammonia, hydrazine, hydroxylamine, nitrogen oxides, nitric and nitric acid, phosphoric acid, apatites, multi-stage dissociation, condensation of phosphoric acid, phosphate buffer; carbon group, carbon dioxide, hydrogen carbonate & carbonate, urea, phosgene, hydrogen cyanide & salts; Overview of Si compounds, important subgroup elements (Fe, Cu, Co, Mo, etc.).				
Institutions	WE03				

Medical terminology					
Course No.	08069		Semester	1	
Format	Lectures		ECTS-Credits	1,0	SWS 1,0
Course contents	Latin and Greek phonetics and words, application in scientific and medical language, structure of the noun anatomica, including related nomenclatures				
Institutions	WE01				

Physics (V)					
Course No.	20007301		Semester	1	
Format	Lectures		ECTS-Credits	2,0	SWS 2,0
Course contents	The lecture focuses on elements of atomic and nuclear physics related to radiology (fundamental ideas of quantum mechanics, Bohr's atomic model, nuclear model, radioactive decay, steel protection). The basics of mechanics, electricity, wave theory and optics necessary for the understanding of atomic and nuclear physics are discussed in the first half of the lecture.				
Institutions	WE02				

Physical Exercises

Course No.	20007330		Semester	1	
Format	Exercise		ECTS-Credits	4,0	SWS 2,0
Course contents	In the practical exercises, the methods of experimental work are introduced. For this purpose, experimental tasks from the fields of mechanics, electricity, optics, atomic and nuclear physics are processed, recorded, evaluated and compared with theoretical assumptions.				
Institutions	WE02				

Zoology

Course No.	23760a		Semester	1	
Format	Lectures		ECTS-Credits	4,0	SWS 4,0
Course contents	- construction of the animal cell; - Functional relationships (excretion, contractile and motile elements; - cytoskeleton, extracellular matrix); reproduction, generational renewal and development; basic phenomena of genetics (molecular genetics, developmental genetics); - Introduction to phylogenetic systematics; - Presentation of the most important taxa of the animal kingdom; - Comparative Animal Physiology incl. Neurobiology and Behavioral Biology.				
Institutions	WE13				

General Botany

Course No.	23760b		Semester	1	
Format	Lectures		ECTS-Credits	4,0	SWS 2,0
Course contents	The lecture presents the main lines of the plant kingdom with their respective characteristics and discusses the basic principles of plant life forms in the context of their evolution. (1) The three kingdoms of living things, evolutionary lines of prokaryotes with aerobic photosynthesis. Evolutionary lines of photosynthetic eukaryotes, endosymbiont theory (2) Sexual reproduction in plants, alternation of generations, overview of the polyphyletic group of algae (Part 1: Heterokontophyta, Dinophyta, Cryptophyta, Euglenophyta) (3) Overview of the polyphyletic group of algae (Part 2: Glaucobionta, Rhodobionta, Chlorobionta), overview of the Mycobionta as plastid-less, heterotrophic organisms (especially slime, ascomyceous and stander fungi), overview of lichens as a symbiosis between fungi and algae (4) Landfall of plants, overview of the polyphyletic group of algae (Part 3: algae-shaped representatives of the Streptophyta), overview of the evolutionary line of mosses (hornworts, liverworts, broadleaf mosses), overview of the lycophytes and monilophytes (Part 1: club moss, moss ferns, horsetails) (5) Overview of the lycophytes and monilophytes (Part 2: Ferns), characteristics of seed plants, overview of the gymnosperms (Part 1: Cycadopsida, Ginkgopsida, Coniferopsida) (6) Overview of the gymnosperms (Part 2: Gnetopsida), reproductive morphology of flowering plants, overview of the angiosperms (basal angiosperms, monocotyledons, eudicots), diversity of selected groups of monocots and eudicots.				
Institutions	WE04				

General and Special Histology I

Course No.	08060		Semester	1	
Format	Lectures		ECTS-Credits	1,0	SWS 1,0
Course contents	Ultrastructure of the animal cell, structure of tissues as well as microscopic anatomy of the skin and immune system of domestic mammals and birds with functional reference. Establishing references to clinical situations or cases and integrating the various fields of knowledge.				
Institutions	WE01				

General and Special Histology Course I					
Course No.	08062		Semester	1	
Format	Exercise		ECTS-Credits	4,0	SWS 2,0
Course contents	Handling of the microscope and independent microscopic diagnosis of all types of tissues (bone tissue, including development), as well as blood vessels, blood cells and organs of the lymphatic system of domestic mammals and poultry. Deepening of knowledge especially for the histological-microscopic diagnostics of the respective course preparations. Basic knowledge of the preparation of preparations for light and electron microscopy, basic knowledge of light microscopy, routine histological staining, immunohistochemistry and electron microscopy. Basic knowledge in the differentiation of physiological and pathologically altered tissue. Maximization of professional competence through peer instructing (= teaching by students accompanied and supported by the lecturers).				
Institutions	WE01				

Agriculture					
Course No.	08210		Semester	1	
Format	Lectures		ECTS-Credits	2,0	SWS 2,0
Course contents	Influencing factors and purpose in livestock farming; animal husbandry, animal performance, animal health; animal-environment interaction; farm structures with livestock farming; intensive and extensive livestock farming; requirements for animal husbandry systems; animal husbandry and animal welfare; animal husbandry and environmental protection; livestock in the agroecosystem; evaluation of animal husbandry systems; evaluation criteria for animal-friendly and environmentally sound animal husbandry; principles of barn construction; housing arrangements for dairy cows; combinations of husbandry, feeding, milking, manure removal; variants of housing for growing cattle; grazing practices; housing arrangements for pigs at all levels of husbandry; Influences of husbandry and feeding practices on the health and growth of pigs, as well as the quality of the meat; opportunities and conditions for sheep farming; poultry farming; Animal husbandry in organic farming.				
Institutions	WE04				

Course No.	0800xx		Semester	1	
Format	Exercise		ECTS-Credits	2,9	SWS 5,0
Course contents					
Institutions					

Comparative Anatomy I					
Course No.	08050		Semester	1	
Format	Lectures		ECTS-Credits	1,5	SWS 1,5
Course contents	- Construction of basic anatomical knowledge in the form of general osteology, myology, arthrology, angiology, lymphology, neurology as well as the general structure of skin, mucous membranes and serous membranes. - Knowledge of the basic concept of structures and organ systems (e.g. musculoskeletal, respiratory, digestive, urinary and reproductive systems) in carnivores (dogs, cats) in close connection with the circulatory and nervous systems as well as the lymphatic and endocrine systems. - Ability to link topographic and systematic anatomy; interdisciplinary links (histology, zoology).				

	- Practical relevance through constant linking of applied anatomical aspects with clinically relevant topics with regard to the clinical part of the course (surgery, imaging diagnostics: X-ray, ultrasound, MRI, CT). - Understanding of comparative anatomy using the example of variations of the basic blueprint of the animal's body between dog and cat. - Preparation for the subsequent, thematically coupled practical lessons.
Institutions	WE01

Comparative Anatomy I (Dissection course)

Course No.	08052		Semester	1	
Format	Exercise		ECTS-Credits	6,0	SWS 3,0
Course contents	- Systematically guided topographical preparation of the structures and organ systems on fixed and unfixed animal bodies (dog and cat comparative). - Deepening of specialist knowledge, development of rhetorical skills and intensification of professional communication between students through the new didactic method "peer instructing". "Peer instructing" (peer = to instruct = to instruct) is based on the teaching by students accompanied and supported by the lecturers. - Learning the topographic preparation method as preparation for later clinical-surgical work. Linking topographic and systematic anatomy; interdisciplinary links (histology, zoology). - Independent preparation of the body cavities on unfixed animal carcasses (dog and cat) and comparison of the different anatomical structures of carnivores on unfixed carcasses, as well as on organ and skeletal preparations or plastinates and polyethylene glycol (PEG) preparations. - Mesoscopic demonstrations (dissecting magnifying glass). - Learning anatomical terminology. - Clinical relevance by learning how to interpret imaging techniques: Comparison of the anatomical specimens created or provided by the patient with X-ray images presented on specific topics as well as CT and ultrasound images. - Guidance for the assessment of clinically applied questions.				
Institutions	WE01				

History of Veterinary Medicine

Course No.	08912		Semester	1	
Format	Lectures		ECTS-Credits	1,0	SWS 1,0
Course contents	At the beginning of the veterinary studies, students should be given an insight into the development of veterinary medicine and the history of the profession. Among other things, the relationship between humans and animals from prehistory to the present day is depicted.				
Institutions	WE17				

Introduction to the Veterinary Profession

Course No.	08850		Semester	1	
Format	Lectures		ECTS-Credits	2,0	SWS 1,0
Course contents	As part of the event, students will gain first insights into the diversity of veterinary practice and the associated career opportunities. Students will have the opportunity to ask questions about the study of veterinary medicine. The possibilities for choosing training within the framework of the compulsory internships are presented. Practitioners, official veterinarians, scientists, veterinarians working in the pharmaceutical industry and professional representatives describe their everyday work with the associated highlights, but also the obstacles. Questions and contributions to the discussion are expressly encouraged.				
Institutions	WE18				

Cross-sectional teaching: Module Learning Strategies and Time Management

Course No.	08770		Semester	1	
Format	Seminars		ECTS-Credits	1,0	SWS 1,0
Course contents	In this course, learning strategies are learned and applied, as well as methods for time management.				
Institutions	WE01				

Chemistry Exercises

Course No.	21791a		Semester	2	
Format	Exercise		ECTS-Credits	5,0	SWS 3,5
Course contents	Practical exercises on selected topics of the lecture				
Institutions	WE03				

Botany of Forage, Poisonous and Medicinal Plants

Course No.	08205		Semester	2	
Format	Lectures		ECTS-Credits	2,0	SWS 2,0
Course contents	The aim of the event is for you to: 1. know basic methods for cultivating fodder plants, 2. be able to name the most important fodder plants, 3. know the essential properties, 4. learn how to harvest, preserve, store and process forage crops, 5. master the basic definitions of medicinal herbalism, 6. be able to recognize/name/designate important medicinal and poisonous plants and 7. know and be able to assess their ingredients or pharmacological/toxicological effects. Teaching units: 1. Introduction, basics of the cultivation of fodder plants 2. Permanent grassland, green cuttings 3. Management and influence on feed value 4. Forage cultivation 5. Specificities of crops used as animal feed 6. Introduction to medicinal herbology 7. Botany of medicinal plants 8. Botany of medicinal plants (excursion) 9. Introduction to poisonous plants 10. Botany of poisonous plants				
Institutions	WE04				

Biochemistry I

Course No.	08150		Semester	2	
Format	Lectures		ECTS-Credits	4,0	SWS 4,0
Course contents	The Basic Concept of the Lecture Biochemistry I -Introduction - Amino acids, proteins and N-metabolism - Coenzymes/vitamins and enzymes - Carbohydrates and their metabolism - Lipids, membrane formation and lipid metabolism - Biological oxidation (citrate cycle, respiratory chain) A detailed compilation of the lecture contents, including a catalogue of topics, can be found on Blackboard.				
Institutions	WE03				

Seminar for the Biochemistry Practical Course

Course No.	08152		Semester	2	
Format	Seminars		ECTS-Credits	2,0	SWS 0,5
Course contents	A total of 4 attestations are to be completed within the framework of this seminar on the following topics in order to deepen specialist knowledge:				

	Amino acids Proteins Enzymes Carbohydrates carbohydrate metabolism, Vitamins Lipids Lipid metabolism.
Institutions	WE03

Animal Breeding and Genetics Incl. Animal Assessment

Course No.	08215		Semester	2	
Format	Lectures		ECTS-Credits	2,0	SWS 2,0
Course contents	Course contents: - Structure and function of the genetic make-up - Importance of mutations - Laws of heredity - Molecular genetic methods in animal breeding - Population genetic basis - Breeding methodology (elements of breeding programs)				
Institutions	WE11				

Special Animal Breeding and Genetics Incl. Animal Assessment

Course No.	08216		Semester	2	
Format	Lectures		ECTS-Credits	2,0	SWS 2,0
Course contents	- Development of animal populations, services, consumption of animal products - Breeding programs (breeding goal, performance tests, selection, breeding progress) for important livestock breeds of cattle, pigs, horses, sheep and chickens - Current aspects of animal breeding				
Institutions	WE11				

Exercises in Animal Breeding and Genetics Incl. Animal Assessment

Course No.	08217		Semester	2	
Format	Exercise		ECTS-Credits	2,0	SWS 1,0
Course contents	Cattle: breeds; direction of performance and employment prospects, assessment of breeding animals, assessment of carcasses and quality production, practical breeding work. Horses: Organization of the performance test Pigs: breeding value estimation, breeding methods, assessment of pigs breeds and breeding animals, assessment of carcass quality. Sheep and goats: breeds of sheep, breeds of goats, breeding programmes for unfavourable population structures.				
Institutions	WE11				

Physiology I

Course No.	08100		Semester	2	
Format	Lectures		ECTS-Credits	2,0	SWS 2,0
Course contents	In this first part of the physiology lectures, basic contents of cell physiology, neuronal and neuromuscular excitability as well as sensory and vegetative functions are taught.				
Institutions	WE02				

Comparative Anatomy II

Course No.	08054		Semester	2	
Format	Lectures		ECTS-Credits	1,0	SWS 1,0

Course contents	
Institutions	WE01

Comparative Anatomy II (Dissection course)

Course No.	08051		Semester	2	
Format	Exercise		ECTS-Credits	6,0	SWS 3,0
Course contents					
Institutions	WE01				

Introduction to Behavioral Biology

Course No.	08550		Semester	2	
Format	Lectures		ECTS-Credits	2,0	SWS 2,0
Course contents	- Fundamentals and Objectives of Behavioral Science - Emergence of behavior and behavioral patterns - Methods of behavioral observation - Specific behaviors such as dogs, cats, pets, laboratory rodents, fish, frogs and reptiles, cattle, pigs, horses, poultry, sheep and goats, zoo and wild animals				
Institutions	WE11				

Introduction to Animal Welfare Ethics and Law

Course No.	08551		Semester	2	
Format	Lectures		ECTS-Credits	2,0	SWS 2,0
Course contents	- Fundamentals of Animal Welfare Law (Animal Protection Act, Animal Protection Ordinance, Animal Protection Ordinance, Animal Protection Ordinance, Regulation 1/2005 (EC), Animal Protection Ordinance, Directive 63/2010 EU, Animal Protection Ordinance) - Mammal appraisal - Circus Guidelines - Veterinary Ethics - Aspects of animal welfare in the keeping of cattle, pigs, pets and pets - Aspects of animal welfare at slaughter - Aspects of animal welfare in zoo animal husbandry and the display of animals - Ethical considerations and aspects of animal welfare in animal research				
Institutions	WE11				

Biomedical Statistics

Course No.	08780		Semester	2	
Format	Lectures		ECTS-Credits	2,0	SWS 2,0
Course contents	In this introductory lecture on biometrics, the basic concepts and methods of population medicine (epidemiology), data collection and data evaluation (statistics) are presented using illustrative examples. In particular, the following topics will be addressed: (1) definitions and areas of application of epidemiology and statistics; (2) data formats and descriptions; (3) measures of disease incidence and association; (4) Characteristics and areas of application of diagnostic test procedures, (5) probability distributions (binomial, normal) and calculating with probabilities, (6) descriptive statistics; (7) formulating and testing statistical hypotheses, and (8) Simple statistical test procedures.				
Institutions	WE16				

Cross-sectional Focus on Communication

Course No.	08083		Semester	2	
Format	Lectures		ECTS-Credits	1,0	SWS 1,0

Course contents	This course teaches the basics of communication.
Institutions	WE01

6.1.2 Courses of the 2nd Year

Biochemistry II					
Course No.	08154		Semester	3	
Format	Lectures		ECTS-Credits	3,0	SWS 3,0
Course contents	A total of 5 lectures are to be completed within the framework of this seminar on the following topics to deepen the specialist knowledge: amino acids, proteins, enzymes, carbohydrates, carbohydrate metabolism, vitamins, lipids, lipid metabolism.				
Institutions	WE03				

Biochemical Practical Course					
Course No.	08151		Semester	3	
Format	Exercise		ECTS-Credits	4,0	SWS 1,5
Course contents	Practical implementation of seven experiments: 1. Proteins (determination of free amino acids with ninhydrin, determination of arginase activity in the liver) 2. Enzymes (electrophoretic separation of LDH isoenzymes in agarose gel, determination of the enrichment of the enzyme lactate dehydrogenase) 3. Carbohydrates (isolation of glycogen from hepatic acid hydrolysate and detection of glucose, determination of glucose-6-phospatase activity in liver extract) 4. Lipids (enzymatic determination of D-3-hydroxybutyrate in the blood, enzymatic cleavage of triacylglycerols by pancreatic lipase, determination of peroxide number) 5. Biological oxidation (extraction of mitochondria from heart muscle, measurement of succinate dehydrogenase reaction, acquisition of cytochrome C absorption spectra, study of cytochrome C oxidase) 6. Nucleic acids (purification of DNA from whole horse blood, enzymatic cleavage of DNA and viscosity measurement, gel electrophoresis of DNA, photometric determination of DNA concentration and purity) 7. Vitamins/hormones (characterization and separation of vitamins, detection of hormonal regulation of blood glucose levels)				
Institutions	WE03				

Proseminar for Exercises in Physiology					
Course No.	08102		Semester	3	
Format	Seminars		ECTS-Credits	2,0	SWS 0,5
Course contents	The preparatory seminars for the physiological exercises serve to deepen selected sub-areas of the knowledge imparted in the lectures. The aim is to discuss basic cell and organ functions in small groups in preparation for or in addition to the physiological exercises in such a way that practical knowledge is built up for the physiological exercises and the examinations in the subject of physiology. The aim is to enable students to independently discuss complex physiological issues.				
Institutions	WE02				

Physiology II					
Course No.	08101		Semester	3	
Format	Lectures		ECTS-Credits	4,0	SWS 4,0
Course contents	Building on the knowledge gained from Physiology I, this second part of the physiology lecture program discusses the central nervous system control of complex functional processes, the specific functions of the individual organs and integrative performances of different organ systems.				

	In addition to an explanation of the structure-function relationships, the special functional processes and their regulation, special attention is paid to the weaknesses relevant to pathophysiological derailments and pharmacological intervention points in the discussion of the individual organ systems.
Institutions	WE02

Comparative Anatomy III					
Course No.	08053		Semester	3	
Format	Lectures		ECTS-Credits	1,5	SWS 1,5
Course contents	- Systematically guided topographic preparation of the structures and organ systems on fixed and unfixed animal carcasses (horse, cattle, sheep, goats, pigs). - Deepening of specialist knowledge, development of rhetorical skills and intensification of professional communication between students through the new didactic method 'peer instructing' (peer = eng. The equal, the peer, to instruct = English to educate, instruct) based on the teaching by students accompanied and supported by the lecturers. - Learning the topographic preparation method as preparation for later clinical-surgical work, with a focus on stratigraphy, orientation on the basis of palpable bone points and muscle furrows, positional relationships and organ projection on the animal's body as well as conduction structures to be gentle. - Ability to independently carry out the preparation demonstrated on the demonstration species on the other species and to work out differences. - Linking topographic and systematic anatomy; interdisciplinary links (microscopic anatomy, propaedeutics, physiology). - Independent preparation of the body cavities on fixed animal carcasses (horses, cattle, small ruminants) and comparison of the different anatomical structures on unfixed carcasses (cattle, small ruminants, pigs), as well as on organ and skeletal preparations or plastinates and polyethylene glycol (PEG) preparations. Mesoscopic demonstrations (dissecting magnifying glass). - Practical application and transfer of medical terminology and anatomical terminology. - Clinically applied anatomy by orienting palpation on live animals. - Guidance for the assessment of clinically applied questions.				
Institutions	WE01				

Comparative Anatomy III (Dissection course)					
Course No.	08055		Semester	3	
Format	Exercise		ECTS-Credits	6,0	SWS 3,0
Course contents	Deepening and broadening practical skills; Deepening and expanding the anatomical knowledge of the body cavities of large domestic mammals (cattle, horses, pigs, small ruminants) as well as introduction to the anatomy of pets (rodents, rabbits, ornamental birds, exotics) on the basis of unfixed animal carcasses. Introduction to the anatomy of commercial poultry. Presentation of clinically significant structures of the body cavities and internal organs using the example of clinical questions. Knowledge of the projection of the organs onto the body wall. Deepening of comparative-anatomical knowledge. Identification of the functional adaptation of certain organ systems to certain living conditions of the different species. Comparison of the mammal and bird baseline. Learning the knowledge of anatomically relevant basics for soft tissue surgery and simulation of standard procedures. Deepening of specialist knowledge, development of rhetorical skills and intensification of professional communication between students or between students and academic staff through so-called "competence teams".				
Institutions	WE01				

Histology II (Microscopic Anatomy II)					
Course No.	08061		Semester	4	
Format	Lectures		ECTS-Credits	1,0	SWS 1,0
Course contents	Microscopic anatomy of the digestive, respiratory, genitourinary, nervous system and sensory organs, each with functional reference. Establishing references to clinical situations or cases and integrating the various fields of knowledge.				
Institutions	WE01				

Histology II (Microscopic Anatomy II) and Embryology Course					
Course No.	08063		Semester	4	
Format	Exercise		ECTS-Credits	4,0	SWS 2,0
Course contents	Independent microscopic diagnostics of all organ systems of domestic mammals and poultry as well as the most important structures during embryonic development and the placenta. Deepening of knowledge especially for the histological-microscopic diagnostics of the respective course preparations. Basic knowledge in the differentiation of physiological and pathologically altered tissue. Maximization of professional competence through peer instructing (= teaching by students accompanied and supported by the lecturers). Intensification of professional communication between students or between students and lecturers.				
Institutions	WE01				

Embryology					
Course No.	08065		Semester	4	
Format	Lectures		ECTS-Credits	1,0	SWS 1,0
Course contents	Development of essential principles of developmental biology and embryology including medical and experimental embryology such as differentiation and determination, epithelial and mesenchymal interactions, role of growth factors, signaling molecules and cell adhesion molecules, proliferation and apoptosis, embryonic induction and cell migration.				
Institutions	WE01				

Clinical Biochemistry and Physiology					
Course No.	08153		Semester	4	
Format	Lectures		ECTS-Credits	1,0	SWS 1,0
Course contents	Selected, clinically particularly relevant topics in biochemistry and physiology are taught in close coordination with colleagues from the two disciplines. From the explanation of pathobiochemical and pathophysiological relationships, references to laboratory diagnostics are derived. This course serves as mandatory preparation for the course "Clinical Laboratory Diagnostics" in the 6th semester. The chronological sequence of the coordinated teaching will be announced on a notice board or on the blackboard.				
Institutions	WE03				

Physiological Exercises (4th semester)					
Course No.	08103		Semester	4	
Format	Exercise		ECTS-Credits	5,0	SWS 2,5
Course contents	- Deepening of the teaching content taught in the lectures and preparatory seminars - Acquisition of application-ready knowledge of important experimental methods in physiology as well as selected methods of laboratory and clinical diagnostics - Ready-to-use knowledge of the orders of magnitude of clinically relevant physiological variables				

	- Training of dexterity in the handling of laboratory animals, laboratory equipment and computer-aided evaluation procedures
Institutions	WE02

Physiology III (4th semester)

Course No.	08104		Semester	4		
Format	Lectures		ECTS-Credits	1,0	SWS	1,0
Course contents	In this third part of the physiology lecture program, selected topics of physiology that are clinically particularly relevant are taught. In close coordination, colleagues from biochemistry and clinics will present pathobiochemical and laboratory diagnostic content.					
Institutions	WE02					

Comparative Anatomy IV

Course No.	08056		Semester	4		
Format	Lectures		ECTS-Credits	3,0	SWS	3,0
Course contents						
Institutions	WE01					

Feed Science

Course No.	08200		Semester	4		
Format	Exercise		ECTS-Credits	4,0	SWS	2,0
Course contents	The optimal use of feed in the context of a performance-oriented, environmentally friendly and healthy diet of the animals requires detailed knowledge of their ingredients and quality characteristics, the comprehensive presentation of which is a focus of the course, taking into account the essential influencing factors in production, preservation, storage, treatment and processing. The ingredients determined using conventional methods are primarily used to characterise the feed, taking into account pollutants that limit its use. Another aim is to present physical, chemical, biological and biotechnological processes and treatments for improving the quality of feed and feed mixtures. Objectives 1. You will be familiar with the key factors influencing the production, preservation, storage, treatment and processing of animal feed. 2. You will be able to assess feed on the basis of the ingredients identified, taking into account factors limiting its use. 3. They are familiar with the essential physical, chemical, biological and biotechnological processes and treatments for improving the quality of feed and feed mixtures. 4. You are familiar with the main legal framework for feed and feed additives.					
Institutions	WE04					

Animal Welfare Seminar

Course No.	08552		Semester	4		
Format	Seminars		ECTS-Credits	4,0	SWS	2,0
Course contents	Practice-relevant animal welfare topics from official practice are presented and discussed in anonymized form. Possible topics are animal husbandry in circuses, cruel breeding in the small animal sector, slaughter of pregnant cattle, euthanasia of pets, hunting, etc. Of great importance is the correct documentation and legal classification of cases relevant to animal welfare.					
Institutions	WE11					

6.2 Clinical Section

6.2.1 Courses of the 3rd Year

Animal Nutrition						
Course No.	08201		Semester	5		
Format	Lectures		ECTS-Credits	3,0	SWS	3,0
Course contents	The objectives of the lecture are: - The students know the nutritional basics as the basis of feeding - You will have an overview of the scientific findings on animal nutrition of the most important pet species and can assess the energy and nutrient supply - You can assess and assess errors and problems in feeding - You will have an overview of the most important dietary applications for pets, horses and food-producing animals - You know the influence of animal nutrition on the safety and quality of food (meat, milk, eggs)					
Institutions	WE04					

Animal Nutrition						
Course No.	08202		Semester	5		
Format	Exercise		ECTS-Credits	2,0	SWS	2,0
Course contents	The following learning objectives should be achieved: 1. Students acquire knowledge on practical feeding and ration design 2. You have applicable knowledge of errors and limitations in feeding 3. You have basic knowledge of the main diet-related diseases and dietary indications that are important for animal nutrition					
Institutions	WE04					

Clinical Propaedeutics - Small Animals						
Course No.	08952		Semester	5		
Format	Exercise		ECTS-Credits	2,0	SWS	2,0
Course contents	Application of previously discussed theoretical knowledge under guidance in small groups. Topics: handling of the animal, general examination, coercive measures, lymph node palpation, cardiovascular examination, blood draw/injection techniques, examination of eyes, skin, ears, oral cavity, respiratory tract, urinary tract, gastrointestinal tract; neurological examination, lameness diagnosis, dressing theory; Examination of small pets. Students should be familiar with the theoretical foundations of the propaedeutic content. They should be able to carry out a complete clinical general examination, including special examinations of small animals and pets, and to be able to interpret the findings.					
Institutions	WE20					

Clinical Propaedeutics - Ruminants, Camelids and Pigs						
Course No.	08854		Semester	5		
Format	Exercise		ECTS-Credits	2,0	SWS	2,0
Course contents	The paramount importance of a thorough clinical examination, even in the age of modern technical diagnostic possibilities, is impressively demonstrated in scientific studies. Within the framework of this course, the handling of the livestock, the clinical examination procedure and basic diagnostic and therapeutic skills in ruminants, camelids and pigs are taught (introduction by means of time-independent online events or scripts; practical training in face-to-face courses);					

	The students train basic, non-invasive examination methods under guidance in small groups on live animals. Instruction is provided on occupational safety and biosafety when handling farm animals.
Institutions	WE18

Clinical Propaedeutics -Equine

Course No.	08802		Semester	5	
Format	Exercise		ECTS-Credits	2,0	SWS 2,0
Course contents	In this course, the diagnostic procedure for the examination of the most important organ systems in horses will be presented theoretically and practically. In each case, a theoretical introduction is offered in the lecture hall of the Equine Clinic and in the following week, a practical exercise is performed on the treated organ system of interest in small groups on a living horse.				
Institutions	WE17				

Clinical Propaedeutics - Communication

Course No.	08082		Semester	5	
Format	Exercise		ECTS-Credits	1,0	SWS 1,0
Course contents	This course is a practical course and requires your active participation. There will be 3 different real-life scenarios that you can voluntarily play through with actors (so-called simulation persons) and 1 role play that can be played among each other. There will also be a short e-learning course to prepare you for the course and the different scenarios.				
Institutions	WE17-20				

Animal Hygiene and Environmental Health

Course No.	08460		Semester	5	
Format	Lectures		ECTS-Credits	2,0	SWS 2,0
Course contents	- Basics of animal hygiene, -Definitions -Ecosystem - livestock-environment interactions, - Legal basis				
Institutions	WE10				

Animal Husbandry

Course No.	08461		Semester	5	
Format	Lectures		ECTS-Credits	2,0	SWS 2,0
Course contents	- Fundamentals of Animal Husbandry, Physiological Basics, Ethological Basics, Legal Principles - pig farming, cattle farming (incl. calves), poultry farming (laying hens, fattening poultry, waterfowl), - keeping small ruminants, - Horse husbandry, small and pet farming, organic animal husbandry, - Evaluate animal husbandry, - identify animal welfare problems, - Knowing alternative husbandry systems				
Institutions	WE10				

General and Special Pharmacology and Toxicology

Course No.	08700		Semester	5	
Format	Lectures		ECTS-Credits	4,0	SWS 4,0
Course contents	Introduction to pharmacokinetics and pharmacodynamics, autonomic nervous system				

	CNS active substances, Narcosis analgesics, cardiovascular drugs, Gastrointestinal pharmaceuticals, Pharmacotherapy of the respiratory tract
Institutions	WE14

General and Clinical Radiology I

Course No.	08974		Semester	5	
Format	Lectures		ECTS-Credits	1,0	SWS 1,0
Course contents	The lecture includes X-ray diagnostics of the proximal limb as well as head and trunk images of the horse. In addition, the basics of ultrasound diagnostics and the advanced imaging procedures CT, MRI and scintigraphy are presented.				
Institutions	WE17				

General and Special Virology I (V)

Course No.	08250		Semester	5	
Format	Lectures		ECTS-Credits	2,0	SWS 2,0
Course contents	The following topics and content are on the lesson plan: General Virology: Morphology and systematics of viruses, replication cycle of RNA and DNA viruses, General Infection Theory: acute and latent infections, Entry points of viruses: local and systemic infections. Humoral and cell-mediated immune response, vaccines, virus detection, diagnostics. Special Virology: Veterinary pathogens of the individual virus families, in particular reportable and notifiable animal disease pathogens. Systematics, replication cycle, entry point, etiology, course and diagnosis of the disease, prevention and control by means of vaccination or hygiene measures, significance for human health in zoonoses				
Institutions	WE05				

General Infectious Medicine/General Bacteriology and Mycology

Course No.	08350		Semester	5	
Format	Lectures		ECTS-Credits	2,0	SWS 2,0
Course contents	- Basis of infection and epidemic theory, definitions, ecosystem, cause-effect, evolution of pathogen-host relationships - Positive Guest-Host Relationships, Model Diseases - Pathogenesis - Clinically inapparent infections - Infectious diseases - Structure of bacteria - Genetics - Metabolism, Cultivation, Microscopy, Isolation, Detection, Determination, Classification, Taxonomy - Virulence mechanisms incl. pathogenicity islands - Chemotherapy and resistance - General mycology (structure, taxonomy, propagation, virulence mechanisms, isolation, determination) - Etiology, Pathogenesis, Clinic, Therapy of Veterinary Relevant Fungal Infectious Diseases				
Institutions	WE07				

General and Specific Immunology

Course No.	08300b		Semester	5	
Format	Lectures		ECTS-Credits	1,0	SWS 2,0

Course contents	The following topics will be discussed: Receptors and cells of the non-specific immune system, the complement system, the humoral immune response, structure and function of the histocompatibility complex, T-cell-mediated immune response, cytokines, messengers of the immune system, mucosal immune responses, allergy and hypersensitivity, autoimmune responses, transplantation and immunosuppressants, tumor immunology, vaccination strategies, immune defense against protozoa and helminths.
Institutions	WE06

Parasitology Lectures					
Course No.	08650		Semester	5	
Format	Lectures		ECTS-Credits	3,0	SWS 3,0
Course contents	Objectives: Acquisition of in-depth knowledge of general and special veterinary parasitology. Course contents: The most important pathogens in veterinary medicine from the respective subfields of parasitology, i.e. protozoology, helminthology and akarology/entomology, are presented with regard to their morphology, biology, epidemiology, pathogenesis, veterinary and zoonotic significance as well as the clinic caused by them. In addition, the principles of parasitological diagnostics and the basics of therapy and control are discussed.				
Institutions	WE13				

Surgery Block Course					
Course No.	088820		Semester	5	
Format	Exercise		ECTS-Credits	1,5	SWS 1,5
Course contents	In the surgery block course, the theoretical knowledge is applied and deepened at 7 practical stations. The work is done in small groups.				
Institutions	WE20				

Surgery - Basic Principles					
Course No.	08812		Semester	5	
Format	Lectures		ECTS-Credits	1,0	SWS 2,0
Course contents	This event is held in cooperation with Small Animal Surgery, Equine Clinic and Clinic for Hoofed Animals. General surgical topics will be discussed.				
Institutions	WE20				

Herd Health Management					
Course No.	08904		Semester	5	
Format	Exercise		ECTS-Credits	1,0	SWS 1,0
Course contents					
Institutions	WE15				

Herd Health Management					
Course No.	NEU		Semester	5	
Format	Exercise		ECTS-Credits	0,5	SWS 0,5
Course contents					
Institutions	WE18				

Herd Health Management					
Course No.	NEU		Semester	5	
Format	Exercise		ECTS-Credits	0,5	SWS 0,5
Course contents					
Institutions	WE18				

General Pathology with Exercises (lecture)					
Course No.	08600V		Semester	5	
Format	Lectures		ECTS-Credits	1,5	SWS 3,5
Course contents	Overview of pathological conditions and processes in the whole organism including their definition and their specific nomenclature. General disease principles and mechanisms as well as classification of pathological processes in the organism as a whole.				
Institutions	WE12				

General Pathology with Exercises (practice)					
Course No.	08600Ü		Semester	5	
Format	Exercise		ECTS-Credits	0,5	SWS 0,5
Course contents	Overview of pathological conditions and processes in the whole organism including their definition and their specific nomenclature. General disease principles and mechanisms as well as classification of pathological processes in the organism as a whole.				
Institutions	WE12				

Special Pharmacology and Toxicology					
Course No.	08701		Semester	6	
Format	Lectures		ECTS-Credits	2,0	SWS 2,0
Course contents	Drug and drug properties:pKa value, molecular weight, isomerism forms, binding properties, receptor effects and internal signaling pathways, modes and forms, dose and dose-response relationships, side effect and toxic effect, drug kinetics, types and sites of absorption of drugs and influencing factors, protein binding and distribution of drugs, compartments, elimination of active ingredients: excretion, biotransformation forms and Influencing factors, possible consequences of repeated drug administration (tolerance, resistance and dependence, resistance, allergy development, cumulation, etc.), pharmogenetics (animal species differences in AM effect).				
Institutions	WE14				

Special Virology II					
Course No.	08251		Semester	6	
Format	Lectures		ECTS-Credits	1,0	SWS 1,0
Course contents	The lecture series "Special Virology II" deepens the knowledge of viral infections in domestic, pet and wild animals. In an organ-based approach, students learn which viruses cause changes in different organs (pathogenesis) and which differential diagnoses are possible. In addition, current topics in veterinary virology, such as African swine fever, will be discussed.				
Institutions	WE05				

Virological Exercises					
Course No.	08253		Semester	6	
Format	Exercise		ECTS-Credits	1,0	SWS 1,0
Course contents	In the virology internship, students learn the most common methods of virus diagnostics. These include direct and indirect detection methods, such as the ELISA, the HA test, the HA inhibition test, the plaque test and quantitative (real-time) PCR. After an introduction to virus diagnostics, participants will conduct these experiments themselves in small groups of 6-8 students under the guidance of a tutor and discuss their results. In addition, important topics such as the preparation of samples and the prevention of contamination are addressed.				
Institutions	WE05				

Special Bacteriology and Mycology						
Course No.	08352		Semester	6		
Format	Lectures		ECTS-Credits	1,0	SWS	1,0
Course contents	Students can... - Taxonomic classification of pathogens, explanation of pathogen properties - Explaining the pathogenesis of infectious diseases - explain the symptoms of infectious diseases - define the habitats of the pathogens - explain relevant diagnostic methods - specific therapy and prophylaxis recommendations - explain infectious epidemiological aspects of the respective infectious disease (reservoirs, prevalences, transmission routes, etc.)					
Institutions	WE07					

Bacteriology and Mycology (practical course)						
Course No.	08354		Semester	6		
Format	Exercise		ECTS-Credits	2,0	SWS	2,0
Course contents	Protective measures when dealing with infectious agents; Collection and dispatch of materials for bacteriological examination. Conducting an examination including preparation of an antibiogram of isolated pathogens, microscopy in bacteriology, technique and objectives of cultural examination; microscopic imaging and culture of representatives of the most important bacterial genera in veterinary medicine; molecular biological diagnostics of bacteria by means of polymerase chain reaction and DNA-DNA hybridization; precipitation reaction for the detection of group-specific polysaccharide antigen in streptococci; Identification of some biochemical features for species differentiation in the family Enterobacteriaceae; Detection of colonies suspected of Salmonella by means of polyvalent sera; phage typing of Salmonella; microscopic representation of shoot and filamentous fungi of veterinary importance, with special consideration of the possibilities of differentiation by assessing their vegetative and generative reproduction structures; culture of mushrooms; molecular biological methods for the fine typing of bacteria, molecular detection of virulence factors.					
Institutions	WE07					

Parasitological Exercises						
Course No.	08651		Semester	6		
Format	Exercise		ECTS-Credits	2,0	SWS	2,0
Course contents	Educational objective: Acquisition of in-depth knowledge of the morphology of parasites of veterinary importance and their developmental stages, including their detection techniques. Deepening knowledge of their epidemiology, pathogenesis, clinic, diagnosis, zoonotic significance, therapy and control. Course contents: The most important pathogens in veterinary medicine from the respective subfields of parasitology, i.e. protozoology, helminthology and akarology/entomology, are treated.					
Institutions	WE13					

Clinical Laboratory Diagnostics						
Course No.	08953		Semester	6		
Format	Exercise		ECTS-Credits	2,0	SWS	2,0
Course contents						
Institutions	WE20					

Food Hygiene I

Course No.	08400		Semester	6		
Format	Lectures		ECTS-Credits	1,0	SWS	1,0
Course contents	- Introduction to the topic of food hygiene, - Continuation of the curriculum on "Bacteriology, Mycology and Virology", - Preparation for the "Food Testing and Technology" exercises - Residues/contaminants in food - Chemical testing of foodstuffs Students will be able to... - Explain the principles of food safety - explain the basics of food microbiology (influences on the survival, death and reproduction of microorganisms) - provide an overview of the health damage caused by food - Explain the basics of food spoilage					
Institutions	WE08					

Special Pathology with Exercises (lecture)

Course No.	08601a		Semester	6		
Format	Lectures		ECTS-Credits	1,2	SWS	1,2
Course contents	Students will be able to... - Explain the principles of food safety - explain the basics of food microbiology (influences on the survival, death and reproduction of microorganisms) - provide an overview of the health damage caused by food - Explain the basics of food spoilage					
Institutions	WE12					

Special Pathology with Exercises (practice)

Course No.	08602a		Semester	6		
Format	Exercise		ECTS-Credits	0,5	SWS	0,5
Course contents	- Learning how to handle infectious sample material - Learning simple conventional and molecular methods of bacteriological and mycological infection diagnostics - Learning working techniques that are necessary when dealing with infectious agents - infectiological case descriptions, different strategies for the diagnosis of different pathogens relevant to veterinary medicine					
Institutions	WE12					

Dairy Hygiene

Course No.	08410		Semester	6		
Format	Lectures		ECTS-Credits	2,0	SWS	2,0
Course contents						
Institutions	WE08					

Meat Hygiene I

Course No.	08450		Semester	6		
Format	Lectures		ECTS-Credits	1,0	SWS	1,0
Course contents	Overview of vertical and horizontal operations in the food chains					
Institutions	WE09					

Organ Block 2: Gynaecology / Andrology (OZL)

Course No.	088802		Semester	6		
Format	Lectures		ECTS-Credits	2,0	SWS	2,1
Course contents	- Students are aware of the physiological and pathological aspects of the action of sex hormones/sexual cycle in male and female animals of different animal species.					

	- Students are able to examine and assess female and male animals with regard to their sexual health, breeding suitability and udder health. Aspects relating to animal welfare, food hygiene and economic efficiency also play a role here. - Students are able to recognise and assess reproductive diseases and disorders and to carry out the right therapeutic measures. This includes, among other things, aspects of infertility, pregnancy, obstetric issues and neonatology.
Institutions	WE18

Organ Block 3: Gastro (OZL)					
Course No.	088803		Semester	6	
Format	Lectures		ECTS-Credits	2,5	SWS 2,7
Course contents	The block encompasses a network of the specialties of internal medicine, surgery (horse, ruminants, pigs, small animals) and pathology regarding the gastrointestinal tract.				
Institutions	WE17				

Organ Block 4: Liver (OZL)					
Course No.	088804		Semester	6	
Format	Lectures		ECTS-Credits	0,8	SWS 0,6
Course contents	- Students should know and understand the causes and pathomechanisms of liver and pancreas diseases in different animal species. - The students should be able to know, apply and evaluate the diagnostic possibilities for differentiating diseases of the liver and pancreas in different animal species. - Students should know and understand causative agents of infectious liver and pancreatic diseases and ways of diagnosis/detection. - With knowledge of the causes and their possible diagnostics, the students should develop therapy plans and, if necessary, therapies. strategies for prophylaxis. A detailed description of the learning content can be found in the Learning Objectives Catalogue.				
Institutions	WE12				

Organ Block 5: Kidney (OZL)					
Course No.	088805		Semester	6	
Format	Lectures		ECTS-Credits	0,5	SWS 0,4
Course contents	- Students should understand the structure and function of the kidney and the urinary tract - Students should explain how to control kidney function - Students should describe the examination of the kidneys and urinary tract - Students should explain the morphological changes and dysfunctions of the kidney and urinary tract - Students should be able to recognize and assess the most important clinical manifestations of diseases of the kidney and urinary tract - Students should be able to apply necessary treatments				
Institutions	WE02				

Organ Block 6: Respiratory tract (OZL)					
Course No.	088807		Semester	6	
Format	Lectures		ECTS-Credits	0,7	SWS 1,1
Course contents	- Students should know and understand the causes and pathomechanisms of respiratory diseases of the different animal species. - The students should be able to know, apply and evaluate the diagnostic possibilities of differentiating respiratory diseases of the different animal species. - Students should know and understand infectious agents in the respiratory tract and ways to diagnose them. - Students should be able to develop therapy/prophylaxis plans and strategies based on their knowledge of causes and diagnostic options.				

Institutions	WE17

Organ Block 8: Circulation (OZL)

Course No.	088808		Semester	6	
Format	Lectures		ECTS-Credits	1,0	SWS 0,7
Course contents	- Students should know and understand the causes and pathomechanisms of cardiovascular diseases in different animal species. - The students should be able to know, apply and evaluate the diagnostic possibilities of differentiating between cardiovascular diseases of the different animal species. - Students should know and understand cardiac infectious agents and ways to diagnose them. - Students should be able to develop therapy/prophylaxis plans and strategies based on their knowledge of causes and diagnostic options.				
Institutions	WE17				

Course No.	99996		Semester	6	
Format	Seminars		ECTS-Credits	4,0	SWS 4,0
Course contents					
Institutions	WE02				

Cross-sectional teaching: Interdisciplinary Case Work

Course No.	08817		Semester	6	
Format	Seminars		ECTS-Credits	4,0	SWS 4,0
Course contents	Using a blended learing approach, students solve a portfolio of clinical and VPH case studies from the broad field of veterinary medicine. Cases strengthen interdisiplinary thinking. They are provided at the online platform QuerVet for self-guided learning. Discussion rounds in presence complement and deepen the theoretical understanding and interdisciplinary problem-solving competencies.				
Institutions	WE17				

Clinical Case Work - Small animals and pets

Course No.	08950		Semester	6	
Format	Exercise		ECTS-Credits	2,0	SWS 2,0
Course contents	Presentation and interactive discussion of clinic patients (dogs, cats, pets, reptiles) with internal, dermatological, oncological, neurological, surgical and ophthalmological diseases; problem-oriented case processing; Preparation of problem-oriented medical reports On the basis of a large number of clinical cases, the student should learn the problem-oriented case processing including anamnesis and clinical examination (anamnesis and clinical examination, preparation of a problem list, differential diagnoses, diagnostic plan, evaluation of the findings, preparation of a therapy plan, prognostic assessment				
Institutions	WE20				

Clinical Case Work - Farm Anmimals

Course No.	08851		Semester	6	
Format	Exercise		ECTS-Credits	2,0	SWS 2,0
Course contents	Demonstration of clinic patients (ruminants, pigs) with internal and surgical diseases, reproductive disorders (pigs) and case studies of herd diseases The students are able to draw up a differential diagnosis list for a sick farm animal (ruminant or pig) based on the findings of the clinical examination. They can name further investigations that contribute to the concretization of the diagnosis and can give a prognosis, taking into account economic aspects, and formulate a treatment plan or preventive measures for a food-producing animal.				
Institutions	WE18				

Clinical Case Work - Equine					
Course No.	08800		Semester	6	
Format	Exercise		ECTS-Credits	2,0	SWS 2,0
Course contents	As part of this exercise, hospital patients with particularly frequent or particularly interesting orthopaedic, surgical, internal medicine or reproductive medical conditions are examined by students in groups of 2-3 or examination findings are provided and the case is then presented to the semester in a presentation of about 20 minutes. This should be as interactive as possible and invite people to think/discuss with us, for which another 10 minutes are available. The aim is not to start from the diagnosis, but from the clinical leading symptom and to work out by the students how to proceed and what findings result from the individual examination steps. Participants are students of the 6th semester				
Institutions	WE17				

6.2.2 Courses of the 4th Year

EU Regulations on Veterinary Medicinal Products, Controlled Substances, and Medicated Feed						
Course No.	08710		Semester	7		
Format	Lectures		ECTS-Credits	2,0	SWS	2,0
Course contents	Introduction to European and German veterinary medicines law, special features of the use, prescription and dispensing of medicinal products for food-producing animals, BTM Act, BTMVV, prescriptions of medicinal products (prakt. Exercise)					
Institutions	WE14					

Galenics (practical course)						
Course No.	08711		Semester	7		
Format	Exercise		ECTS-Credits	1,0	SWS	1,0
Course contents	- Basic knowledge of different dosage forms and their production - Labelling of medicinal products - Calculation of the maximum dispensing prices of medicinal products according to the Medicinal Products Price Regulation - Prescription of drugs and narcotics					
Institutions	WE14					

Clinical Radiology II						
Course No.	08975		Semester	7		
Format	Lectures		ECTS-Credits	2,0	SWS	2,0
Course contents	This lecture deals with the physical basics of X-ray technology and systematic image reporting. Based on the distal limb of the horse, standard projections and X-ray anatomy are explained and common pathological findings are shown.					
Institutions	WE17					

Animal Epizootic Control I						
Course No.	08360		Semester	7		
Format	Lectures		ECTS-Credits	1,0	SWS	1,0
Course contents	Students will be able to: - Explain the objectives, strategies and methods of animal disease control - reproduce and explain the content of the relevant animal health regulations (Animal Diseases Act, Livestock Traffic Ordinance, Animal Vaccine Ordinance, Pig Husbandry Hygiene Ordinance) - Identify national and supranational databases and data collection in the context of animal disease control and explain their functions - Designate national and supranational bodies and bodies in the context of animal disease control and explain their tasks - Evaluation of research and control of animal diseases in animal populations on the basis of infection epidemiological indicators					
Institutions	WE07					

Anesthesia & Intensive Care Block Course						
Course No.	088819		Semester	7		
Format	Exercise		ECTS-Credits	1,5	SWS	1,5
Course contents	In the block course Anesthesiology/Internal Medicine, the theoretical knowledge is applied and deepened at several practical stations. The work is done in small groups.					
Institutions	WE17					

Anaesthesia and Pain Management

Course No.	08813		Semester	7		
Format	Lectures		ECTS-Credits	1,0	SWS	1,0
Course contents	This lecture deals with the topic of anesthesia and pain management in all animal species.					
Institutions	WE17					

Food Science – Practical Course I

Course No.	08402		Semester	7		
Format	Exercise		ECTS-Credits	2,0	SWS	2,0
Course contents	Carrying out general and special investigations on the subject of fish and fish products, microbiology I, and II, histology, sensory analysis Practical examination of food, vegetarian and vegan substitutes as well as various medications. other food groups					
Institutions	WE08					

Food Science

Course No.	08401		Semester	7		
Format	Lectures		ECTS-Credits	2,0	SWS	2,0
Course contents	This lecture provides an overview of food preservation as well as the various effects of microbiological factors on food intoxication and food spoilage					
Institutions	WE08					

Special Pathology with Exercises (practice)

Course No.	08602		Semester	7		
Format	Exercise		ECTS-Credits	0,5	SWS	0,5
Course contents	Preparation of pathological-anatomical diagnoses and differential diagnoses and epicritical assessment of the etiology and relevance with regard to the clinic					
Institutions	WE12					

Pathologic-Anatomical Demonstrations I

Course No.	08605		Semester	7		
Format	Exercise		ECTS-Credits	1,0	SWS	1,0
Course contents	Preparation of pathological-anatomical diagnoses and differential diagnoses and epicritical assessment of the etiology and relevance with regard to the clinic					
Institutions	WE12					

Special Pathology with Exercises (lecture)

Course No.	08601		Semester	7		
Format	Lectures		ECTS-Credits	1,2	SWS	1,2
Course contents	Preparation of pathological-anatomical diagnoses and differential diagnoses and epicritical assessment of the etiology and relevance with regard to the clinic					
Institutions	WE12					

Dairy Analysis – Practical Course

Course No.	08411		Semester	7		
Format	Exercise		ECTS-Credits	2,0	SWS	2,0
Course contents	Demonstration or implementation of corresponding practical exercises under supervision. e.g. determination and assessment of milk quality, product training/sensory analysis of milk, dairy products, butter and cheese. Preparation of a report, diagnosis and evaluation of milk and dairy products					
Institutions	WE08					

Meat Hygiene II

Course No.	08453		Semester	7	
Format	Lectures		ECTS-Credits	2,0	SWS 2,0
Course contents	A detailed description of the learning content can be found in the Learning Objectives Catalogue.				
Institutions	WE08				

Organ Block 6: Birth (OZL)					
Course No.	088806		Semester	7	
Format	Lectures		ECTS-Credits	2,4	SWS 2,4
Course contents					
Institutions	WE18				

Organ Block 9: Blood (OZL)					
Course No.	088809		Semester	7	
Format	Lectures		ECTS-Credits	1,4	SWS 1,4
Course contents	- Students should know and understand the causes and pathomechanisms of anemias, vascular diseases and neoplasms of the hematopoietic organs. - Students should be able to know, apply and evaluate the diagnostic possibilities of differentiating between anaemia and hematopoietic neoplasms. - Students should know and understand infectious agents in the blood and hematopoietic system and ways to diagnose them. - Students should be able to develop therapy/prophylaxis plans and strategies based on their knowledge of causes and diagnostic options. A detailed description of the learning content can be found in the Learning Objectives Catalogue.				
Institutions	WE12				

Organ Block 10: Movement (OZL)					
Course No.	088810		Semester	7	
Format	Lectures		ECTS-Credits	2,0	SWS 2,0
Course contents	A detailed description of the learning content can be found in the Learning Objectives Catalogue.				
Institutions	WE17				

Cross-sectional teaching: Interdisciplinary Case Work					
Course No.	08777		Semester	7	
Format	Seminars		ECTS-Credits	4,0	SWS 4,0
Course contents	A detailed description of the learning content can be found in the Learning Objectives Catalogue.				
Institutions	WE16				

Clinical Case Work - Small and Pet Animals					
Course No.	08951		Semester	7	
Format	Exercise		ECTS-Credits	2,0	SWS 2,0
Course contents	Presentation and interactive discussion of clinic patients (dogs, cats, pets, reptiles) with internal, dermatological, oncological, neurological, surgical and ophthalmological diseases; problem-oriented case processing; Preparation of problem-oriented medical reports On the basis of a large number of clinical cases, the student should learn the problem-oriented case processing including anamnesis and clinical examination (anamnesis and clinical examination, preparation of a problem list, differential diagnoses, diagnostic plan, evaluation of the findings, preparation of a therapy plan, prognostic assessment)				
Institutions	WE20				

Clinical and Herd Health Case Presentations in Ruminants, Camelids and Pigs					
Course No.	08852		Semester	7	
Format	Exercise		ECTS-Credits	1,0	SWS 2,0
Course contents	As part of the course, cases (individual animals and herd problems) in the field of internal and surgical diseases and reproductive medicine and udder health will be presented and worked on in dialogue with the students.				
Institutions	WE18				

Clinical Case Work II - Equine					
Course No.	08801		Semester	7	
Format	Exercise		ECTS-Credits	2,0	SWS 2,0
Course contents	Within the framework of this exercise, hospital patients with particularly frequent or particularly interesting orthopaedic, surgical, internal medicine or reproductive medicine clinical pictures are examined by students in groups of 3 or examination findings are provided and the case is then presented to the semester in a presentation of approx. 30 minutes. This should be made as interactive as possible and invite people to think along with each other, for which another 15 minutes are available. The aim is not to start from the diagnosis, but from the clinical leading symptom and to work out by the students how to proceed and what findings result from the individual examination steps. Participants are students of the 7th semester				
Institutions	WE17				

Clinical Coaching (EVC)					
Course No.	08997		Semester	7	
Format	Exercise		ECTS-Credits	1,0	SWS 1,0
Course contents	The general coaching course entitled Clinical Coaching is the first block of an event consisting of a total of three blocks "Emergency Medicine and Coaching Course": In the 'general coaching course', communicative, didactic and leadership skills are specifically trained. These skills are taught to students in practical exercises. The completion of this block is a mandatory prerequisite for participation in the blocks 'Specialist Coaching' and 'Emergency Medicine' in the 8th semester.				
Institutions	WE05				

Forensic Veterinary Medicine					
Course No.	08815		Semester	8	
Format	Lectures		ECTS-Credits	2,0	SWS 2,0
Course contents	- Introduction to the basics of jurisprudence; - Veterinarian in court; - Veterinary certificates, protocols, expert opinions; Introduction to the Civil Code; - General Sales Law; - Purchase of animals, sale of consumer goods, other purchase of horses, special law on the sale of animals in the trade in farm animals; - General liability law; - Special Liability Law for Veterinarians, Legal Liability, Contractual Liability; contract for work; Contract of employment; - Terms & Conditions; - Purchase examination; General and special due diligence (injection, infusion, rectal examination, colic, anesthesia, castration); - Liability cases in practice and clinic, professional indemnity insurance, liability veterinarian/blacksmith; Keepers - Medicines Act (repurposing, therapy emergency), equine passport, animal insurance; - Animal Welfare Law, Doping, Euthanasia, Veterinary Fee Schedule (GOT)				
Institutions	WE18				

Lecture on Laboratory Animal Science						
Course No.	08560		Semester	8		
Format	Lectures		ECTS-Credits	1,0	SWS	1,0
Course contents	- Legislation relevant to laboratory animal science (TierSchG, TierSchVersV, TierSchTrV, EC 1/2005, Directive 63/2010 EU, ETS 123) - Husbandry and hygiene of laboratory animals - Import and export of laboratory animals - Breeding strategies - Generation of transgenic mouse lines - Anatomy, physiology and biology of the most commonly used laboratory animal species (mouse, rat, rabbit, pig, chicken) - Load assessment - Pain detection and treatment - Anesthesia and animal welfare-friendly killing methods - Commonly used animal models in biomedical research - Alternative methods to animal experiments					
Institutions	WE11					

Animal Disease Control II						
Course No.	08361		Semester	8		
Format	Lectures		ECTS-Credits	2,0	SWS	2,0
Course contents	Students will be able to ... - Designate reportable and notifiable animal diseases - Explain the content and purpose of regulations adopted for the control of these animal diseases - Explain the characteristics (etiology, pathogenesis, infection epidemiology and diagnostics) of these animal diseases that are relevant for control - Discuss the pros and cons of control programs					
Institutions	WE07					

Diseases of Reptiles, Amphibians and Pets						
Course No.	08962		Semester	8		
Format	Lectures		ECTS-Credits	1,0	SWS	1,0
Course contents	Within the framework of the module lectures, students should learn about the most important diseases of reptiles, amphibians and fish in a practical way.					
Institutions	WE20					

Diseases of Bees and Fish						
Course No.	08963		Semester	8		
Format	Lectures		ECTS-Credits	1,0	SWS	1,0
Course contents	The students of veterinary medicine are to be given an insight into selected areas of bee biology based on their knowledge of general zoology. Based on this and equipped with the knowledge of general parasitology, as well as microbiology and animal disease theory, an overview of the diseases of honey bees is provided. The focus is on the diseases that are relevant in practice. legal provisions relevant to official veterinarians in the context of the detection and control of notifiable bee diseases conveyed in a practical way.					
Institutions	WE03					

General Ophthalmology (V)						
Course No.	08954		Semester	8		
Format	Exercise		ECTS-Credits	2,0	SWS	2,0

Course contents	Cross-species knowledge in the field of general ophthalmology including ophthalmological diagnostics, problem-oriented case processing and diagnosis, therapy and surgery of eye diseases. Diseases of the orbit, eyelids, conjunctiva, nictitating membrane, cornea, anterior chamber of the eye, lens, vitreous and retina, bulb, uveitis and glaucoma, neurophthalmology.
Institutions	WE20

Practical Course Food Hygiene II

Course No.	08403		Semester	8	
Format	Exercise		ECTS-Credits	2,0	SWS 2,0
Course contents	Carrying out general and special investigations on the subject of raw sausage / cured products, boiled and cooked sausages, eggs and delicatessen, poultry, insects as food-producing animals and plant-based foods				
Institutions	WE08				

Special Pathology with Exercises (practice)

Course No.	08602c		Semester	8	
Format	Exercise		ECTS-Credits	0,5	SWS 0,5
Course contents	A detailed description of the learning content can be found in the Learning Objectives Catalogue.				
Institutions	WE12				

Pathologic-Anatomical Demonstrations II

Course No.	08606		Semester	8	
Format	Exercise		ECTS-Credits	1,0	SWS 1,0
Course contents	A detailed description of the learning content can be found in the Learning Objectives Catalogue.				
Institutions	WE12				

Special Pathology with Exercises (lecture)

Course No.	08601c		Semester	8	
Format	Lectures		ECTS-Credits	1,2	SWS 1,2
Course contents	A detailed description of the learning content can be found in the Learning Objectives Catalogue.				
Institutions	WE12				

Practical Course Meat Hygiene and Inspection

Course No.	08452		Semester	8	
Format	Exercise		ECTS-Credits	3,0	SWS 3,0
Course contents					
Institutions	WE08				

Poultry Diseases

Course No.	08750		Semester	8	
Format	Lectures		ECTS-Credits	2,0	SWS 2,0
Course contents	As part of this event, the most important diseases of poultry will be presented. In addition to the etiology, pathogenesis, diagnosis, therapy and prophylaxis of infectious diseases, the husbandry of poultry and laboratory diagnostic methods are also discussed. This is intended to give students an overview, but in-depth self-study is required.				
Institutions	WE15				

Organ Block 11: Nerves (OZL)						
Course No.	088811		Semester	8		
Format	Lectures		ECTS-Credits	1,0	SWS	1,0
Course contents	A detailed description of the learning content can be found in the Learning Objectives Catalogue.					
Institutions	WE20					

Organ Block 13: Metabolism (OZL)						
Course No.	088813		Semester	8		
Format	Lectures		ECTS-Credits	2,0	SWS	1,5
Course contents	A detailed description of the learning content can be found in the Learning Objectives Catalogue.					
Institutions	WE18					

Organ Block 14: Udder (OZL)						
Course No.	088814		Semester	8		
Format	Lectures		ECTS-Credits	1,5	SWS	1,1
Course contents	The students know the physiological and pathological aspects of the action of sex hormones/sexual cycle in male and female animals of different animal species. - Students are able to examine and assess female and male animals with regard to their sexual health, breeding suitability and udder health. Aspects relating to animal welfare, food hygiene and economic efficiency also play a role here. - Students are able to recognise and assess reproductive diseases and disorders and to carry out the right therapeutic measures. This includes, among other things, aspects of infertility, pregnancy, obstetric issues and neonatology.					
Institutions	WE18					

Organ Block 15: Skin (OZL)						
Course No.	088815		Semester	8		
Format	Lectures		ECTS-Credits	1,0	SWS	0,8
Course contents	A detailed description of the learning content can be found in the Learning Objectives Catalogue.					
Institutions	WE12					

Organ Block 16: System (OZL)						
Course No.	088816		Semester	8		
Format	Lectures		ECTS-Credits	1,0	SWS	0,6
Course contents	The students are able to master the subject matter covered by systemic diseases at the level of level 2 and 3. They can assess the course of the disease and react to it therapeutically or preventively					
Institutions	WE20					

Course No.	99998		Semester	8		
Format	Seminars		ECTS-Credits	4,0	SWS	4,0
Course contents						
Institutions	WE04					

Cross-sectional teaching: Interdisciplinary Case Work						
Course No.	08819		Semester	8		
Format	Seminars		ECTS-Credits	4,0	SWS	4,0
Course contents	Using a blended learing approach, students solve a portfolio of clinical and VPH case studies from the broad field of veterinary medicine. Cases strengthen interdisiplinary thinking. They are provided at the online platform QuerVet for self-guided learning.					

	Discussion rounds in presence complement and deepen the theoretical understanding and interdisciplinary problem-solving competencies The seminar also includes the cross-section of poultry
Institutions	WE18

Clinical Case Work - Poultry					
Course No.	08751		Semester	8	
Format	Exercise		ECTS-Credits	2,0	SWS 2,0
Course contents	On the basis of case studies, important ornamental bird, pigeon and poultry diseases as well as their diagnosis, therapy and prophylaxis are explained and discussed.				
Institutions	WE15				

Specialist Coaching and Emergency Medicine					
Course No.	08998		Semester	8	
Format	Exercise		ECTS-Credits	6,0	SWS 5,0
Course contents	Building on the course Clinical Coaching of the 7th semester, the course Emergency Medicine with the preceding Specialist Coaching imparts basic knowledge and skills of emergency medicine in a peer teaching concept. The 'Specialist Coaching' block prepares students for the role of a coach at a specific emergency ward. In the 'Emergency Medicine' block, hands-on skills as well as decision-making processes in emergency situations are learned and deepened using 16 cross-species and model-based emergency stations. The theoretical preparation for the emergency course takes place on the basis of blended learning modules via tet.folio.				
Institutions	WE03				

6.2.3 Courses of the 5th Year

Final clinical rotation – Pathology						
Course No.	08609		Semester	9		
Format	Exercise		ECTS Credits	2,0	SWS	4,0
Course contents	The aims of the basic rotation are - Problem- and case-oriented teaching of basic principles of general and special pathology and pathohistology - Teaching the reasons, possibilities and limitations of post-mortem diagnostics - Learning the dissection technique - Getting to know examples of organ and whole-body changes - Writing own autopsy reports - Introduction to biopsy diagnostics (service function for clinicians or for living animals) - Getting to know the tasks and functions of an animal pathology institute - Independently prepare and give a problem-oriented presentation in seminar style					
Institutions	WE12					

Final clinical Rotation – Farm Animal Clinic*						
Course No.	08803		Semester	9		
Format	Exercise		ECTS Credits	24,6	SWS	20,0
Course contents	Consultation of clinic patients (dogs, cats, pets, reptiles) with internal, dermatological, oncological, neurological, ophthalmic and surgical diseases as part of clinical rotation; problem-oriented case processing; preparation of medical reports; Participation in journal clubs; interactive discussion of cases in small groups; X-ray image interpretation; Introduction to anesthesia; Fundamentals of sterility and surgical assistance; Participation in the emergency service (first aid measures, taking X-rays, emergency laboratory tests); Surgical exercises The student should practice problem-oriented case processing on the basis of clinical cases within the framework of rotational teaching (anamnesis and clinical examination, list of problems, differential diagnoses, diagnostic plan, evaluation of findings, preparation of a therapy plan, prognostic assessment); dealing with the client and patient; emergency management; Practicing simple operations					
Institutions	WE20					

Final clinical Rotation - Small Animal Clinic*						
Course No.	08803		Semester	9		
Format	Exercise		ECTS Credits	24,6	SWS	20,0
Course contents	Students of the 9th and 10th semesters each take part in the daily routine of the clinic for eight weeks. In the first week, reproductive medicine on horses is taught in Bad Saarow. In the following introductory week at the Equine Clinic, students are introduced through various structured courses, after which the students are divided into internal medicines, surgery/orthopaedics and emergency services/anaesthesia for two weeks each, including night and weekend services. The clinic patients are distributed to the students, examined by them and presented daily during the ward rounds. In the morning, the program focuses on working in the clinic on special examinations/treatments, while in the afternoon seminars, journal clubs and student case presentations take place. As part of the rotation, two case presentations/medical reports must be prepared as well as two weeks of on-site service or telephone on-call duty at night and on weekends.					
Institutions	WE18					

Final clinical Rotation – Equine Clinic*					
Course No.	08803		Semester	9	
Format	Exercise		ECTS Credits	24,6	SWS 20,0
Course contents	As part of the clinical rotation of the Farm Animal Clinic (Ruminants and Camellids Department, Pig Department, Poultry Department), students are involved in the activities of the Farm Animal Hospital, take part in ambulance trips and visit farm animal farms as part of herd management. Students take part in the clinic's emergency and weekend services. Before practical skills are carried out on patients under supervision, the necessary know-how is imparted in the clinic's 'Skills Lab'.				
Institutions	WE17				

* selectable