Module code	M_WE_SEM8 CHKON 2
Field of study	Veterinary medicine
Module name, also the name in English	Diseases of horses. Block II
	Choroby koni – Blok II
Language of instruction	English
Module type	Obligatory
Level of studies	Long-cycle master's degree studies
Form of study	Full-time
Year of study in the field of study	IV
Semester of study in the field of study	VIII
ECTS credits, divided into contact/non-contact hours	10 pts. (5.5/4.5)
Academic title/degree, name of the person responsible for the module	Prof. dr hab. Zbigniew Grądzki
Unit teaching the module	Sub-department of Andrology and Biotechnology of Reproduction, Department of Animal Reproduction, Department of Animal Surgery, Department of Internal Animal Diseases, Sub-department of Clinical Diagnostics and Veterinary Dermatology, Faculty of Veterinary Medicine, University of Life Sciences in Lublin
Module objective	This module aims to familiarise students with the specificity of equine reproduction, diagnostics and treatment of fertility disorders and to provide theoretical and practical knowledge of basic equine surgical procedures as well as equine orthopaedics, ophthalmology, dentistry and dermatology.
The learning outcomes for the module include a description of the knowledge, skills and social competences that the student will gain after completing the module.	Knowledge:
	K1 The student has knowledge of the regulation of the sexual cycle in mares and the specificity of reproduction in mares, has knowledge of recognition and treatment of fertility disorders in horses
	K2. The student has knowledge of the causes and principles of diagnosis and treatment of the most common clinical cases requiring surgical intervention in the country, has knowledge of the validity and methodology for performing orthopaedic, ophthalmic and dental procedures on horses
	K3. The student has knowledge of infectious and non-infectious agents that cause skin lesions in horses and has knowledge of methods of diagnosing and treating skin diseases
	Skills:
	S1. The student is able to make an anamnesis and clinical examination for fertility evaluation, make a diagnosis of fertility disorders in horses and apply an appropriate treatment, is able to perform basic obstetric and gynaecological procedures in mares, perform conservative and surgical birth assistance in mares, perform artificial insemination procedure
	S2. The student is able to perform a clinical examination for diseases requiring surgery, indicate appropriate additional tests, assist in surgical procedures and monitor the animal patient during surgery
	S3. The student is able to implement effective treatments for skin diseases in horses

	Social competences:
	C1. Adheres to the rules of professional ethics
	C2. Has the habit of continuous improvement of knowledge and professional skills
	C3. Has the repertoire of interpersonal communication skills and is able to act in uncertain and stressful environment
Prerequisites and additional requirements	Passing the course Diseases of horses Block I

Module program content	Lecture topics (Equine reproduction) 1. Development and recognition of pregnancy by the mare's body. 2. Early embryonic mortality in mares. 3. Pregnancy pathology in mares. 4. Physiology of the postpartum period in mares. 5. Postpartum disorders in mares. 6. Neurohormonal regulation of the oestrous cycle, pregnancy and lactation in mares. 7. Disorders of oestrus and the oestrous cycle in mares. 8. Immunological and genetic causes of infertility in mares. 9. Ovarian pathology in mares. 10. Uterine inflammatory diseases in mares. 11. Vaginal, uterine cervical and fallopian tube disorders in mares. 12. Mammary gland disorders in mares. 13. Postpartum management of the foal and health assessment of the foal in the early period of life, orphan foal rearing. 14. Malformations and selected foal diseases. 15. Equine reproductive biotechnology. Topics of classes (Equine reproduction) 1. Anatomy and physiology of the reproductive system in mares. 2. Clinical examination of the reproductive system in mares (study plan). 3. Evaluation of the phases of the oestrous cycle in mares. 4. Hormonal control of cyclic sexual activity in mares. 5. Evaluation of breeding suitability and insemination of mares. 6. Physiological delivery and assistance with physiological delivery in mares. 7. Management of difficult births in mares using correction and "by force" methods. 8. Management of difficult births in mares using fetotomy. 9. Caesarean section in mares. 10. Management of the mare after surgical procedures on reproductive organs. 11. Surgical treatment of postpartum perineal injuries. Episioplasty. Rectovaginal fistula. 12. Pregnancy diagnosis in mares. Management of twin pregnancies. 13. Diagnostics of diseases of the reproductive system in mares (collecting material for microbiological and cytological tests, endometrial biopsy). 14. Endoscopy of the mare's uterus and ablation of endometrial cysts. 15. Embryo transfer in mares. Lecture topics (Equine surgery) 1. Equine ophthalmologic conditions part 1 and part 2 2. Surgical diseases of the equine head region 3. Surgical diseases of the equine upper respiratory tract 4. Surgical diseases of the withers and neck region 5. Surgical treatment of wounds in horses 6. Surgical diseases of the equine urinary system 7. Treatment of tendon injuries in horses

	8. Surgical treatment of colic in horses part 1 and part 2 9. Treatment of long bone fractures in horses 10. Selected orthopaedic diseases of the thoracic limb in horses 11. Selected orthopaedic diseases of the pelvic limb in horses 12. Selected diseases of the hoof 13. Dentistry and dental diseases in horses Topics of classes (Equine Surgery) 1. Examination plan, introduction to the course, organisational matters 2. Orthopaedic examination plan, equine orthopaedic examination 3. Equine ophthalmic diagnosis 4. Diagnostic anaesthesia 5. Peripheral nerve palsies 6. Preparing the horse for radiographic examination. Performing X-rays on horses 7. Radiographic evaluation of traumatic lesions in horses. 8. Treatment of wounds in horses 9. Treatment of internal and abdominal hernias. 10. Stallion castration, cryptorchid castrations, complications after castration 11. Equine orthopaedic examination - practical examination, ultrasound, function tests part 1 12. Equine orthopaedic examination - hands-on examination, ultrasound, function tests 12 . Equine orthopaedic examination - practical examination, ultrasound, function tests part 2 13. Hoof cleaning, treatments for the hoof, orthopaedic shoeing 14. Diseases of the hoof Lecture Topics (Veterinary Dermatology) 1. Allergic diseases of horses (atopy, food allergy, hypersensitivity to insect bites/stings, urticaria) 2. Equine autoimmune diseases, equine parasitic diseases (scabies infestations, insect infestations, fungal diseases) Topics of Classes (Veterinary Dermatology) 1. Principles of diagnostic testing of equine diseases, clinical examination, specificity of skin lesions in horses and additional tests in diagnostic testing of skin diseases 2. Principles of treatment of skin diseases – allergic diseases (food allergy, hypersensitivity to insect bites/stings, atopy), autoimmune diseases (pemphigus, lupus, immunological vasculitis) ectoparasitic invasions, mycoses, hormonal dermatoses, bacterial complications

List of core and supplementary literature	Primary literature (Equine reproduction) 1. Dietz O., Huskamp B.: Clinical practice: Horses 2. Noakes D., Parkinson T., England G.: Arthur´s Veterinary Reproduction and Obstetrics. 2001. 3. Singer P.L.: Pathways to pregnancy and parturation. 1999. Additional Literature (Equine Reproduction) 1. Samper J.C.: Equine breeding management and Artificial Inseminations. 2009. 2. Wilson D.A., Kramer J., Constantinescu G.M., Branson K.R.: Manual of equine field surgery. Elsevier, 2006. 4. Current professional journals Primary literature (Equine surgery) 1. Dietz O, Huskamp B. Clinical practice: Horses Additional literature (Equine surgery) 1. Publications indicated by the class instructor in the field of discussed educational content 2. Wilson D.A., Kramer J., Constantinescu G.M., Branson K.R.: Manual of equine field surgery. Elsevier, 2006. Primary literature (Equine dermatology) 1. Scott D.W., Miller H.W.: Equine Dermatology. Saunders, Elsevier Science, 2003 2. Lloyd D. H. , Littlewood J. D. , Craig J. M. , Practical horse dermatology Additional literature (Equine dermatology) 1. Current professional journals
Planned forms/activities/teaching methods	Lectures, recitation sections, laboratory and hand-on classes, field practice, demonstrations and practical demonstrations, consultations

Verification methods and ways of documenting the achieved learning outcomes.	K1, K2, K3 – current student assessment during classes, written course completion assessment. The theoretical part of the course in equine reproduction is passed after the completion of lectures and classes; the credit has a written form – a test. The test includes 50 closed-ended and semi-open-ended questions. The minimum credit threshold is 30 points, i.e. (60%) correct answers. At values below this threshold, the student will receive a failing grade (2.0). Scale of grades as follows: 0-33 pts - 3.0 (sufficient 34-37 pts. - 3.5 (sufficient plus) 38-41 pts. – 4,0 (good) 42-45 pts. - 4.5 (good plus) 46-50 pts. - 5.0 (very good) Credit for the theoretical part of equine surgery is given in written, descriptive and test form. Test credit is practiced for equine ophthalmology. The test set contains 20 single-choice questions. The test scoring rules are as follows: 20 pts. - 5.0 18-19 pts. – 4,5 16-17 pts. – 4,0 14-15 pts. – 3,5 12-13 pts. – 3,0 9-11 pts. – 2,5 10 pts. and below - 2,0 A written formula of 6 open-ended descriptive questions is practiced for credit of theoretical material in operative surgery. The rules of evaluation and the grading scale are in accordance with the provisions of the Book of Education Quality. In addition, students in groups of several prepare detailed descriptions of selected equine surgical procedures. Such descriptions are considered a medical history. The theoretical part of veterinary dermatology is passed in a single-choice test. The test set contains 50 questions. The minimum credit threshold is 30 points, i.e. (60%) correct answers. At values below this threshold, the student will receive a failing grade (2.0). Scale of grades as follows: 30-33 pts. - 3.0 (sufficient) 34-37 pts. - 3.5 (sufficient plus) 38-41 pts. – 4,0 (good) 42-45 pts. - 4.5 (good plus) 46-50 pts. - 5.0 (very good) S1, S2, S3 - Observation and assessment of student's practical skills during practical credit. Practical credit for equine reproduction takes place in the Department's exercise room using the necessary instrumentation, apparatus and dead fetuses or isolated reproductive organs of mares. The instructor will assign the student one of the tasks listed below: 1. Independent preparation of instrumentation for the resolution of difficult deliveries, including instrumentation for the fetotomy procedure 2. Performance of manual correction of abnormal fetal postures, positions and alignments

	3. Independent performance of the fetotomy procedure 4. Evaluation of reproductive organs of mares using ultrasound examination and collection of material for cytological and bacteriological tests from endometrium 5. Performance of vulvar and perineal plasty in cases of injury during a severe delivery During the task, the instructor observes the student and notes steps in the procedures that are performed incorrectly or inaccurately. The task is followed by a summary of the procedure with an indication of its strengths and weaknesses. A positive or negative grade is given by the instructor taking into account the student's involvement and the correctness and accuracy of the task. In order to obtain a positive final mark the student must successfully pass the theoretical part (test) and the practical part. Verification of practical skills of students in the course Equine Surgery is based on observation while performing veterinary medicine procedures under the supervision of the instructor. The evaluation is given during a clinical examination performed on a live animal or on phantoms. The grading scale is consistent with the Book of Education Quality. A student's correct completion of a specific activity is recorded as passed. The list of practical skills reviewed includes, but is not limited to, examination of the horse in motion, oral examination, surgical table preparation, etc. Practical credit is recorded in the day one skills log. Practical credit in veterinary dermatology consists in the student performing a clinical dermatologic examination and additional tests. The grade for the practical exam is determined by the instructor using the traditional grading scale. The final grade in veterinary dermatology is the arithmetic mean of the grades from both parts, i.e. theoretical and practical. Final grades are entered into the records according to the following scale: Grade point average for the theoretical and practical parts: from 2.0 to 2.75 - unsatisfactory from 2.76 to 3.25 - sufficient from 3.26 to 3.75 - sufficient plus from 3.76 to 4.25 - good from 4.26 to 4.75 - good plus from 4.76 to 5.0 - very good The weighting of the partial grades in relation to the final grade is distributed symmetrically and is 50% each. C.1, C.2, C.3 Observation and evaluation of the student's attitude during didactic classes. The student is evaluated by analyzing his/her approach to the pet owner, ability to converse with the owner, ability to work with other veterinarians and the ability to make decisions and act under stress.

ECTS credits	Contact • Participation in lectures - 60 hours. (2.07 ECTS) • Class attendance – 90 hours (3.09 ECTS) • Participation in consultations connected with preparation for the credit - 5 hrs. (0.17 ECTS) • Attendance for partial credit - 5 hours. (0.17 ECTS) Non-contact • Preparation for laboratory classes - 50 hrs. (2.5 ECTS) • Preparation for partial credit - 20 hrs. (1.0 ECTS) • Study of professional literature - 20 hrs. (1.0 ECTS)
The workload of activities that requires direct participation of an academic teacher	• Participation in lectures - 60 hours. (2.07 ECTS) • Class attendance – 90 hours (3.09 ECTS) • Participation in consultations connected with preparation for the credit - 5 hrs. (0.17 ECTS) • Attendance for partial credit - 5 hours. (0.17 ECTS) Total 160 hours – 5.5 ECTS
Relation of module learning outcomes to course learning outcomes.	K1 – B.W2. +++ K2 – B.W3. +++ K3 – B.W3. +++ K1 – B.W5. +++ K2 – B.W5. +++ K3 – B.W5. +++ K1 – B.W6. +++ K2 – B.W6. +++ K3 – B.W6. +++ S1 – B.U2. +++ S2 – B.U2. +++ S3 – B.U2. +++ S1 – B.U13. +++ S2 – B.U13. +++ S2 – B.U14 +++ S3 – B.U2. +++ S3 – B.U3. +++ S3 – B.U6. +++ S3 – B.U13. +++ C1 – K2 +++ C2 – K7 +++ C2 – K8 +++ C3 – K10 +++
Elements and values affecting the final grade	The pass mark for Equine Diseases, Block II is the arithmetic mean of the grades obtained from equine reproduction, equine surgery and equine dermatology. This grade is then taken into account when calculating the final exam grade, which is the arithmetic mean of the partial passing grades earned in each discipline. The weighting of the Block II grade is 50%.