

Module code	M_WE_SEM7 PARAZYT 2
Field of study	Veterinary medicine
Module name, also the name in English	Veterinary parasitology and invasiology 2 Parazytologia i Inwazjologia weterynaryjna 2
Language of instruction	English
Module type	obligatory
Level of studies	uniform Master's degree studies
Form of study	full-time and part-time
Year of study in the field of study	IV
Semester of study in the field of study	VII
ECTS credits, divided into contact/non-contact hours	3 (1.5 / 1.5)
Academic title/degree, name of the person responsible for the module	Krzysztof Tomczuk, prof. dr hab.
Unit teaching the module	Department of Parasitology and Fish Diseases, Faculty of Veterinary Medicine
Module objective	Discussion of parasitic nematodes and ectoparasites of animals and humans in Poland and worldwide, as well as discussion of parasitic diseases they cause, which is of great importance from the economic, sanitary and invasiological point of view. To raise awareness of the importance of parasitic zoonoses. Presentation of the principles of modern diagnostics, therapy and prevention of diseases caused by nematodes and ectoparasites. Co-occurrence of parasitoses and occurrence of clinical correlations. .
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 - knows the concepts of parasitology and invasiology in terms of nematode and ectoparasite infestations, routes of transmission of these parasites.
	K2 - knows the most common infestations of parasitic nematodes and external parasites in humans and animals.
	K3. knows diagnostic methods as well as antiparasitic drugs and the basics of therapy and prevention of parasitic diseases caused by nematodes and ectoparasites
	Skills:
	S1 - is able to perform a parasitological examination and recognise specific nematode and ectoparasite infestations.
	S2 - is able to apply appropriate treatment to basic nematode and ectoparasite diseases and suggest preventive management.
	Social competences:
U1. Is aware of the dangers of parasitic zoonoses caused by parasitic nematodes and ectoparasites.	
Prerequisites and additional requirements	Veterinary parasitology and invasiology 1

<p>Module program content</p>	<p>Practical classes Overview of nematode and arthropod infestations from a systematic perspective</p> <p>PHYLUM: Nematoda - nematodes</p> <p>Division: Secernentea</p> <p>Order: Ascaridida Ascarididae, Anisakidae, - Heterakidae, Ascaridiidae</p> <p>Order: Strongylida Strongylidae, Chabertidae, Syngamidae, - Ancylostomatidae, -Trichostrongylidae, Molineidae, Amidostomatidae, Ornitostrongylidae, Dictyocaulidae, Metastrongylidae, Protostrongylidae, Crenosomatidae, Angiostrongylidae, Filaroididae.</p> <p>Order: Oxyurida Oxyuridae</p> <p>Order: Rhabditida Strongyloididae, Rabbididae, Cephalobidae</p> <p>Order: Spirurida Thelazidae, Spirocercidae, Habronematidae, Filariidae, Onchocercidae</p> <p>Division: Adenophora</p> <p>Order: Enoplida Trichuridae, Trichinellidae, Diactophymatidae</p> <p>Phylum: Arthropods – Arthropoda,</p> <p>Division: arachnids (Arachnida) Subdivision: Acari – mites</p> <p>Order: Ixodida – Metastigmata Family: Ixodidae Genera: Dermacentor, Ixodes, Rhipicephalus, Hyalomma, Boophilus, Amblyomma, Family: Argasidae: Argas, Carios, Ornithodoros, Otobius</p> <p>Order: Gamasida - Mesostigmata Genera: - Dermanyssus, Ornithonyssus, Pneumonyssus, Varroa</p> <p>Order: Trombidiformes - Prostigmata Families: Demodicidae - Demodex, Cheyletiellidae Cheyletiella, Trombiculidae - Neotrombicula, Tarsonemidae - Acarapis</p> <p>Order: Sarcoptiformes – Astigmata Families - Sarcoptidae - Sarcoptes, Notoedres; Psoroptidae - Psoroptes, Chorioptes, Otodectes; Knemidocoptidae - Knemidocoptes, Laminisioptidae - Laminisioptes</p> <p>Order: Oribatida</p> <p>Division: insects (Insecta)</p> <p>Order: Mallophaga Genera - Bovocola, Trichodectes, Felicola, Wernieckiella, Reticulipeuris, Menopon.</p> <p>Order: Anoplura Genera: Hematopinus, Linognathus, Solenoptes, Pediculus, Phthirus, Haemodipsus.</p> <p>Order: Siphonaptera – Aphaniptera Genera: Ctenocephalides, Pulex, Xenopsylla, Ceratophyllus, Tunga.</p> <p>Order: Heteroptera Genera - Cimex, Triatoma</p> <p>Order: Diptera, Subdivision - Brachycera; Families: Fanniidae – Fannia, Glosinidae – Glosina, Tabanidae – Chryspos, Haematopota, Tabanus, Muscidae – Musca, Stomoxis, Haematobia, Hydroatea Morelia Calliphoridae – Calliphora, Lucilla, Sarcophagidae – Sarcophaga, Wohlfahrtia</p> <p>Oestridae; Oestrus, Rhinoestrus, Gasterophilus, Hypoderma, Cephonemia, Hippoboscidae; Hippobosca, Melophagus, Lipoptena, Neolipoptena, Ornitomia,</p> <p>Order: Diptera, Subdivision: Nematocera; Families: Culicidae – Anopheles, Aedes, Culex, Stegomyia, Psychodidae; Phlebotomus,</p>
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	<p>Lutzomyia, Simuliidae; Simulium, Ceratopogonidae – Culicoides Subphylum: Mandibulata Division: Crustacea - Order: Maxillopoda Subdivision: Pentastomida - Linguatulida Phylum: Annelida; Division: Hirudinea -</p> <p>Lectures Clinical aspects of coliform nematode and ectoparasitic infestations from the perspective of a host: carnivores, horses, ruminants, pigs, birds and humans . Strategies for controlling nematode infestations and available drugs for the treatment of nematode diseases. Ectoparasites of carnivores, humans, pigs, horses, sheep and their control. Available preparations used for the control of external parasites. Environmental determinants of infestations (protozoa, helminths, ectoparasites) and environmental contamination with developmental forms of parasites from the perspective of animal and human health. Parasitoses of game animals (hare, roe deer, deer, boar). Parasitic zoonoses caused by nematodes and arthropods</p>
<p>List of core and supplementary literature</p>	<p>Required literature:</p> <ol style="list-style-type: none"> 1. Principles of Veterinary Parasitology. Dennis Jacobs, Mark Fox, Lynda Gibbons, Carlos Hermosilla. ISBN: 978-0-470-67042-2 2. Animal Parasites: Their Biology and Life Cycles. O. Wilford Olsen. Burgess, Minneapolis, Minn. 3. Nematode Parasites of Vertebrates. Their Development and Transmission. Anderson, R. C. CABI Publishing, Wallingford UK. 2000. 672. ISBN 0–85199–421–0 4. Clinical Parasitology. Zeibig Elizabeth. 9781416060444 5. Basic Clinical Parasitology. Harold W. Brown, Franklin A. Neva. ISBN-10: 9780813820538 6. Veterinary Clinical Parasitology 8th Edition. Anne M. Zajac (Editor), Gary A. Conboy (Editor). ISBN-13: 978-0813820538. 7. Veterinary Parasitology Reference Manual (Paperback); 2001 Edition. William J. Foreyt. ASIN : B01FOD9JM2 8. Diagnostic Parasitology for Veterinary Technicians 5th Edition. Charles M. Hendrix DVM PhD (Author), Ed Robinson CVT (Author). ISBN-13: 978-0323389822 9. https://www.esccap.org/
<p>Planned forms/activities/teaching methods</p>	<p>Lectures, practical classes, multimedia presentations, live presentations, including hand-on classes / including microscopy, fixed macroscopic preparations, laboratory studies, parasitological preparations, autopsy studies,</p>

<p>Verification methods and ways of documenting the achieved learning outcomes.</p>	<p>Abilities - the student is required to pass the practical classes in the form of verification of their ability to recognise the parasites presented at the practical classes - the control of the instructor during the practical classes. Knowledge – passing colloquia Colloquium 3 (K-3) covers knowledge of infestations caused by trematodes and tapeworms, XII- XVIII lectures and XII -XIX practical classes. test form - 30 single-choice questions Colloquium 4 (K-4) covers knowledge of infestations caused by nematodes, XIX- XXVI lectures and XX -XXVI practical classes. test form - 30 single-choice questions Final exam; the condition to be admitted to the exam is a positive grade from both colloquia and attendance at minimum 13 practical classes. The exam is conducted in the form of a test - 120 single-choice questions, time: 100 min. The questions cover the whole material presented in lectures (XXX 1-hour lectures) and practical classes (XXX 2-hour practical classes) Rating scale: 61-68% - 3.0; 69-76% - 3.5; 77-84% - 4.0; 85-92% - 4.5; 93-100% - 5.0.</p>																																									
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<p>Degree of achievement of major learning outcomes:</p>	<p>K1- WE_W06, WE W08 K2 - WE_W06 , WE_W08 WE_W16 WE_W17 K-3 WE_W18 S1- WE_U3 S2-WE_U25, WE_U31 C1- WE_K1, WE_K 9</p>																																									

Elements and values affecting the final grade	The final mark for the course VETERINARY PARASITOLOGY AND INVASIONOLOGY recorded in the minutes: 80% - exam result + 20% - colloquium (K1-4) mark (expressed as an arithmetic mean). In the event of top-down suspension of classes at the University and the necessity of remote teaching, remote methods of verification of achieved learning outcomes are allowed in the form of tests, including the exam test or conversation on the platform Teams.
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