

Module code	M_WE_SEM6 PARAZYT 1
Field of study	Veterinary medicine
Module name, also the name in English	Veterinary parasitology and invasiology 1 Parazytologia i Inwazjologia Weterynaryjna 1
Language of instruction	Polish
Module type	mandatory
Level of studies	uniform Master's degree studies
Form of study	full-time
Year of study in the field of study	III
Semester of study in the field of study	VI
ECTS credits, divided into contact/non-contact hours	4 (2,2 /1,8)
Academic title/degree, name of the person responsible for the module	Krzysztof Tomczuk, prof. dr hab.
Unit teaching the course	Department of Parasitology and Fish Diseases Sub-Department of Parasitology and Invasive Diseases
Module objective	Reviewing the parasites of companion animals, livestock, free-living animals and humans (protozoa and flatworms – flukes and tapeworms) occurring both in Poland and elsewhere in the world, as well as parasitic diseases important from the point of view of economics, sanitation, and invasiology. Building awareness of the importance of protozoan and flatworm parasitic zoonoses. Mastering knowledge of general parasitology. Presenting the principles of modern diagnosis, therapy and prevention of protozoan and flatworm invasive diseases.
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 knows the concepts of parasitology and general invasiology e.g., parasite transmission pathways.
	K2. The student knows the most common parasitic infections of humans and animals (protozoa, flukes, tapeworms)
	K3. The student knows diagnostic methods as well as antiparasitic drugs and the basics of therapy and prevention of parasitic diseases (protozoa, flukes, tapeworms)
	Skills:
	S1. The student is able to perform a parasitological examination and recognise specific infestations.
	S2. The student is able to apply an appropriate treatment for the basic disease entities and propose preventive measures (protozoa, flukes, tapeworms)
	Social competences:
Sc1. The student is aware of the dangers of parasitic zoonotic diseases (protozoa, flukes, tapeworms)	
Prerequisites and additional requirements	Sequentiality

<p>Module program content</p>	<p>General Parasitology issues. Basic terms and definitions used in parasitology and invasiology</p> <p>Methods for recognising parasite infestations. Coproscopic diagnosis, examination of scrapings, blood, mucus and tissues for the presence of parasites</p> <p>Exercises – Detailed parasitology presented in a systematic layout, Type: Euglenozoa (Trypanosoma, Leishmania); Type: Metamonada (Giardia, Spironucleus)</p> <p>Type: Parabasal ( Histomonas, Trichomonas)</p> <p>Type: Alveolata – Subtype: Apicomplexa (Eimeria, Isospora, Toxoplasma, Hamondia, Neospora, Besnoitia, Sarcocystis, Cryptosporidium, Hepatozoon, Plasmodium, Babesia, Theileria, Subtype: Ciliophora (Balantidium, Buxtonella, Ictiophthirus, Chilodonella)</p> <p>Type: Amebozoa (Entamoeba, Naegleria, Acanthamoeba, Balamutia, Hartmanella)</p> <p>Type: Microspora (Encephalitozoon, Nosema, Loma, Glugea, Pleistophora) Fascioliasis and other ruminant trematodes. Bird flukes and tapeworms. Human trematodes; drugs used to treat diseases caused by flukes. Carnivore tapeworms. Moniesiosis and anoplocephalosis. Human tapeworms. Infestations of tapeworm larval stages.</p> <p>Lectures – Parasitoses in the host system. In particular, protoparasitoses, fluke and tapeworm infestations as a clinical problem in carnivores, horses, pigs, ruminants, birds and humans. Antiprotozoal drugs, drugs used to treat fluke and tapeworm infestations. The clinical aspects of parasitic zoonoses caused by protozoa, flukes and tapeworms</p>
<p>Recommended reading list or required reading</p>	<p>Core literature:</p> <ol style="list-style-type: none"> <li>1. <a href="https://www.esccap.org/">https://www.esccap.org/</a></li> <li>2. Principles of Veterinary Parasitology: John Wiley And Sons Ltd 2015</li> <li>3. Eckert J. Friedchoff K.T., Zanner H., Deplazes P.: <i>Lerbuch der Parasitologie fur die Tiermedizin</i>. Enke Verlag Stuttgart 2004</li> <li>4. Schnieder T.: <i>Veterinarmedizinische Parasitologie</i> Parey Verlag Stuttgart 2006</li> <li>5. Mehlhorn H., Duwel D., Raether W.: <i>Diagnose und Therapie der Parasiten von Haus-, Nutz- und Heimtieren</i>. Gustav Fischer Verlag Stuttgart New York 1993</li> </ol> <p>Optional</p> <ol style="list-style-type: none"> <li>1. O. Wilford Olsen: <i>Animal Parasites: Their Biology and Life Cycles</i>.</li> <li>2. R.C. Anderson: <i>Nematode Parasites of Vertebrates. Their development and transmission</i>.</li> <li>3. Harold W. Brown, Franklin A. Neva: <i>Basic Clinical Parasitology</i>.</li> <li>4. J.H. Whitlock: <i>Diagnosis of veterinary parasitisms</i>.</li> <li>5. William J. Foreyt, Bill Foreyt: <i>Veterinary parasitology</i>.</li> <li>6. A. Zajac, Gary A. Conboy: <i>Veterinary clinical parasitology</i></li> </ol>

Planned forms/activities/teaching methods	Lectures, practical classes, multimedia presentations, live presentations, including hand-on classes / including microscopy, fixed macroscopic preparations, laboratory studies, parasitological preparations, autopsy studies,																																						
Verification methods and ways of documenting the achieved learning outcomes.	<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.</p> <p>Verification of skills in performing basic parasitological diagnostic methods (oral credit test after the 4th practical class); content discussed during the 2nd, 3rd and 4th practical class: practical verification of skills in 2 indicated diagnostic methods.</p> <p>Knowledge – students are obliged to successfully pass 2 tests.</p> <p>The first test (K-1) concerns the knowledge of General Parasitology – the material covered during lectures 1-3 and practical class 1 (the test part consists of 30 single-choice questions). To obtain a passing grade, students must score at least 61% on the test and receive a passing grade from the method skill test.</p> <p>rating scale: 61-68% - 3.0; 69-76% - 3.5; 77-84% - 4.0; 85-92% - 4.5; 93-100% - 5.0.</p> <p>The second test (K-2) concerns protozoan infestations – the material covered during lectures 4-11 and practical classes 5-11 (test form; 30 single-choice questions); the grading scale is the same as above.</p>																																						
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Degree of achievement of major learning outcomes:	K1- WE_W06, WE W08 + K2 - WE_W06 , WE_W08, WE_W16 +, WE_W17 + K3- WE_W18 + S1- WE_U3 + S2-WE_U25,WE_U31 + Sc1- WE_K1,WE_K 9 +
Elements and values affecting the final grade	The condition to pass the semester is a positive grade in both tests – K1 and K2 and attendance at min. 13 practical classes and getting credit for all of them. Final semester grade entered into the course credit report: 50% K1; 50% K2 (grade – arithmetic mean), semester grade will be taken into account when calculating the final grade for the course