

Code of subject	M_WE_SEM1 WZBN ANG
Field of study	Veterinary Medicine
Name of the training module including the Polish name	The use of animals in scientific experiments Wykorzystanie zwierząt w badaniach naukowych
Language of instruction	English
Module type	Mandatory
Level of studies	Long-cycle master's degree studies
Form of study	Full-time
Location in the programme (year)	I
Location in the programme (semester)	1
Number of ECTS credits with a division into contact/noncontact	2 (1.4/0.6)
Name and surname of the person in charge	Dr hab. Urszula Kosior-Korzecka, Assoc. Prof.
Unit offering the subject	Sub-Department of Pathophysiology, Department of Preclinical Veterinary Sciences, Faculty of Veterinary Medicine
Aim of the module	The purpose of the module is to familiarize the students with the principles and legal basis for the use of animals in scientific experiments and acquiring the ability to prepare documentation necessary to obtain the permission of the ethics committee for conduction of the experiments.
Learning outcomes – The description of the intended learning outcomes that a student should achieve after the completion of the module should be provided. The outcomes for all forms of classes used should be presented.	<p>Knowledge:</p> <p>K1. Understanding and ability to present the regulations regarding the acquisition and breeding of animals as well as care for animals and their use for scientific purposes.</p> <p>K2. Ability to present the principles of health and safety at work with laboratory animals.</p> <p>K3. Ability to present knowledge of genetics and genetic modification of animal species used in experimental procedures.</p> <p>Skills:</p> <p>S1. Ability to plan experimental procedures taking into account 3R principle. Ability to prepare an application to the local ethics committee for permission for animal testing in accordance with applicable regulations.</p> <p>S2. Ability to recognize signs of anxiety and pain characteristic for the animal species. Ability to describe the principles of early and humanitarian termination of procedure.</p> <p>S3. Ability to indicate alternative methods to animal experiments as well as the benefits and threats resulting from their use.</p> <p>Social competences:</p> <p>SC1. Awareness of the need for further education and self-improvement.</p> <p>SC2. Open to active participation in group.</p>
Preliminary and additional requirements	-----
Contents of the training module – a compact description	LECTURES:

	<p>Applicable European regulations in the field of animal acquisition and breeding, animal care and the use of animals for scientific or educational purposes. Acquisition and maintenance of laboratory animals intended for scientific experiments. Ethics committees for animal experimentation. Principles and regulations for maintenance of companion and farm animal species and their use in scientific experiments. Planning and carrying out procedures and experiments. The principles of the 3Rs: Replacement, Reduction and Refinement. Application to local ethics committee for permission for animal experiments. Retrospective evaluation of experiment. Genetics and genetic modifications of animal species intended for use or used in procedures on the example of a domestic mouse. Alternative methods to experiments on living organisms. Benefits and risks of using genetic engineering techniques and research using animal cells cultured <i>in vitro</i>.</p> <p>CLASSES (auditory):</p> <p>Ethical principles of the relationship between people and animals. The value of animal life. Arguments for and against the using of animals for scientific or educational purposes. Anatomy and physiology of animals intended for use or used in procedures, in particular domestic mouse, brown rat, guinea pig and European rabbit. Husbandry of animals used in procedures (including species biology). Standards for maintenance of these animals (environment, cages, feed) and enriching their environment. Daily care over animals. Animal behavior. Recognizing the species specific signs of distress, pain and suffering in animals used in procedures. Handling of animals. Preparation of animals for procedures. Rules for early and humanitarian termination of the procedure. Microbiology, health and hygiene of animals intended for use in procedures. Practical preparation of the application to the local ethics committee for animal experimentation. Health and safety rules for working with animals intended for use in procedures, in particular for domestic mice, brown rats, guinea pigs and European rabbit.</p>
Recommended and obligatory reading list	Notes from lectures and classes, scientific publications, document templates
The intended forms/activities/ teaching methods	Lectures, presentations, discussions, seminars
Methods of verification and documentation forms of the achieved learning outcomes	<p>K - written test in the field of classes, written final test in the field of lectures</p> <p>S - evaluation of the draft documentation prepared during the classes (only theoretical classes), answers to questions during the classes, written test</p> <p>SC - participation in the discussion, written test</p>

Balance of ECTS credits	<table border="0"> <thead> <tr> <th colspan="3">Contact hours</th> </tr> <tr> <th></th> <th>Number of hours</th> <th>ECTS</th> </tr> </thead> <tbody> <tr> <td>Lectures</td> <td>15</td> <td>0.6</td> </tr> <tr> <td>Classes</td> <td>10</td> <td>0.4</td> </tr> <tr> <td>Consultation</td> <td>5</td> <td>0.2</td> </tr> <tr> <td>Credits</td> <td>5</td> <td>0.2</td> </tr> <tr> <td>In total:</td> <td>35</td> <td>1.4</td> </tr> <tr> <th colspan="3">Non-contact hours</th> </tr> <tr> <td>Preparation for classes</td> <td>5</td> <td>0.2</td> </tr> <tr> <td>Studying the literature</td> <td>5</td> <td>0.2</td> </tr> <tr> <td>Preparation for the tests</td> <td>5</td> <td>0.2</td> </tr> <tr> <td>In total:</td> <td>15</td> <td>0.6</td> </tr> </tbody> </table>	Contact hours				Number of hours	ECTS	Lectures	15	0.6	Classes	10	0.4	Consultation	5	0.2	Credits	5	0.2	In total:	35	1.4	Non-contact hours			Preparation for classes	5	0.2	Studying the literature	5	0.2	Preparation for the tests	5	0.2	In total:	15	0.6
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Relationship between subject learning outcomes and veterinary studies learning outcomes	<p>K1 – B.W9+++ K2 – B.W9+++ K3 – A.W14+ S1 – A.U19+++ B.U1+++ A.U4+ S2 – A.U19+++ B.U1+++ A.U4+ S3 – A.U19+++ B.U1+++ A.U4+ C1 – K8++ C2 – K1++ C3 – K9++</p>																																				
Impact of selected compounds to final grade	<p>The condition for passing the module is attendance at the classes and positive grades from both written test in the field of classes and written test in the field of lectures. The final grade is made up of:</p> <ol style="list-style-type: none"> 1. the grade from the written test in the field of classes (50%) 2. the grade from the written test in the field of lectures (50%) 																																				