

Module code	SEM9 PW 1G/2G CHIR EXP
Field of study	Veterinary medicine
Module name	Experimental surgery Chirurgia eksperymentalna
Language of instruction	English
Module type	elective
Level of studies	Long-cycle Master's Degree studies
Mode of study	Full-time
Year of study in the field of study	V
Semester of study in the field of study	IX
ECTS credits, divided into contact/non-contact hours	1 (0,67/0,33)
Academic title/degree, name of the person responsible for the module	Dr hab. n. vet. Tomasz Szponder
Unit teaching the module	Department and Clinic of Animal Surgery
Module objective	The aim of the module is to familiarize with selected animal models used in experimental surgery. Learning the diagnostic and surgical methods used in experimental surgery. Learning about the ways of anesthesia for laboratory and experimental animals.
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 Understands the principles of anesthesia and postoperative analgesia used in experimental animals
	K2. Knows the basic experimental models used in experimental surgery
	K3 Knows selected surgical methods and diagnostic procedures used in experimental surgery
	Skills:
	S1. Is able to decide on an appropriate method of anesthesia for experimental animals.
	S2. Is able to plan an experiential project using experimental animals by means of appropriate surgical techniques in a variety of animal species
	S3. Is able to monitor the course of an experiment and has the ability to evaluate experimental test results
	Social competences:
	C1. Is ready for directed further education and self-improvement in the field of experimental surgery.
	C2. Is prepared for taking ethical responsibility in the use of experimental animals for scientific purposes.
	C3. Is aware of the importance of social, professional and ethical responsibility for the health and welfare of experimental animals
	Prerequisites and additional requirements

Module programme content	<ol style="list-style-type: none"> 1. Methods and techniques of anesthesia and palliative management in laboratory and experimental animals - 2 hrs. 2. Intensive care and postoperative care of experimental animals. Operative and postoperative monitoring- 2 hours. 3. Selected experimental surgical models involving the shell, digestive, respiratory, urinary, cardiovascular, and musculoskeletal systems in experimental animals - 2 hrs. 4. Selection of surgical equipment and implants and suture materials for research. - 2 hrs. 5. Minimally invasive surgical techniques -2 hrs. 6. Ways of collecting samples for examination - 2 hours. 7. Additional tests - techniques of performance and interpretation of results. Medical documentation of ongoing research- 2 hours.
List of core and supplementary literature	<ol style="list-style-type: none"> 1.M. Sirois: Laboratory Animal Medicine: principle and Procedures, Mosby 2004. 2. Denneman P: Anesthesia and Analgesia in Laboratory Animals, NY Academic Press, 2008. 3. Quesenberry K et al: Ferrets, rabbits and rodents. Clinical Medicine and Surgery, 3rd Edition, Saunders, 2011.
Planned forms/activities/teaching methods	Multimedia presentations, demonstrations of specialized equipment, practical classes, self-study
Verification methods and ways of documenting the achieved learning outcomes.	<p>Verification of the achieved learning outcomes is obtained through evaluation of student activity during the classes (active - plus "+", inactivity - minus "-"). A student should earn at least seven plus points (8 "+") to receive credit for the module. In the practical part, students participate in surgical procedures, perform anesthesiological monitoring, etc. A student should earn at least seven plus points (7 "+") to receive credit for this module. The final credit for a module is a sum of plus ('+') points of at least 15. In addition, attendance at at least 85% of the exercises in the module plan is required to pass the course.</p> <p>The written final assessment consists of 25-30 single-choice test questions. Questions relate to material presented in class. A student is required to earn a minimum of 61% of the total possible points for the final exam to receive a passing grade.</p> <p>The criteria used in the final evaluation are consistent with the Book of Education Quality</p>

ECTS credits	CONTACT		
		Hours	ECTS
	Practical classes	15	0.5
	Consultations	3	0.1
	credit pass/resit exam	2	0.07
	TOTAL contact hours	20	0.67
	NON-CONTACT HOURS		
	preparation for classes	4	0.13
	learning from books	2	0.07
	exam preparation	4	0.13
	TOTAL non-contact hours/ ECTS credits	10	0.33
	attendance at practical classes	15	0.5
	Consultations	3	0.1
	credit pass/resit exam	2	0.07
	TOTAL with direct involvement of the teacher	20	0.67
The workload of activities that require direct participation of an academic teacher	5 hrs. tutorials 10 hrs. laboratory classes 3 hrs. consultations 2 hrs. credit		
Relation of module learning outcomes to major learning outcomes	K1 – A.W16+++ K2-A.W12+++ K3-B.W4+++ S1- B.U11+++ S2-B.U7+++ S3-B.U12+++ C1-K)8+++ C2-K)2+++ C3-K)1+++		
Elements and values affecting final grade	Final grade: - attendance at classes - 5% weight - active student participation in classes - 10% weight - practical handling of experimental equipment and animals - 20% weight - grade in test credit pass - 65% weight		