Module code	M_WE_SEM7 PW 1E/2E SS ROŚ
Field of study	Veterinary medicine
Module name	Plant substances in prevention and therapy of animals Substancje roślinne w profilaktyce i terapii zwierząt
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	IV
Semester of study in the field of study	VII
ECTS credits, divided into contact/non-contact hours	1 (0.7/0.3)
Academic title/degree, name of the person responsible for the module	Dr hab. Beata Łebkowska-Wieruszewska
Unit teaching the module	Department of Pharmacology, Toxicology and Environmental Protection
Module objective	Acquainting students with basic definitions in herbal medicine, principles of harvesting and quality assessment of plant materials. Acquainting students with the knowledge concerning the characteristics of species of plants and medicinal fungi including their use as a source of pharmacognostic substances; acquiring abilities to recognize species of medicinal plants represented in the native flora and others commonly encountered as domestic and garden plants; applying particular plants, fungi and substances of plant origin in prevention and therapy of animals. Developing competence in the informed and responsible application of knowledge gained in the course.
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 basic definitions: plant raw material/substance, groups of compounds, chemical compounds, biological activity, pharmacological activity of plant raw materials, synergism and antagonism between compounds present in a single plant and in a multi-component plant drug.
	K2 Understands the issue of variability of active compounds in plants and effects resulting from it, knows the principles of raw material harvesting.
	K3 Knows medicinal plant and fungi species, pharmaceutical raw materials, feed additives, dietary supplements, functional foods.
	K4 Knows the effects of plants, fungi and substances of plant origin on animal organisms at the body, tissue and molecular level.
	K5 Is able to analyze information about plant raw materials in pharmacopoeias. Knows the terms: pharmacopeial and non-pharmacopeial raw materials.
	K6 Understands the purposefulness of using plant raw materials in pharmaceutical industry,
	Skills:
	S1 Is able to define what is a plant material, an active compound

	S2 Is able to demonstrate that various types of interactions occur between compounds present in plants
	S3 Understands the purposefulness of appropriate behaviour during harvesting and assessment of plant raw material quality.
	S4 Can identify medicinal plants and fungi occurring in Poland and others commonly found as house and garden plants.
	S5 Can determine the indications and contraindications for the use of plant substances and fungi in animal prophylaxis and therapy and avoid the risks that arise from irresponsible consumption of medicinal plants.
	Social competences:
	C1 uses medicines of herbal origin in a responsible manner, and when choosing a medicine of herbal origin he or she is guided primarily by the patient's good
	C2 understands the progress of introducing new drugs of plant origin, independently finds information about new drugs of plant origin
Prerequisites and additional requirements	-
Module programme content	*Lecture topics:* 1. General knowledge, basic definitions (plant raw material/substance, groups of compounds, active compounds determining biological and pharmacological activity of plant raw materials), phenomenon of synergism and antagonism in plants, variability of active compounds, origin of plant raw materials, principles of collection, methods of identity testing, standardization, types of plant drugs, ways of their preparation. [3hrs]. 2. Presentation of data on raw materials of plant origin found in various pharmacopoeias. Pharmacopeial and nonpharmacopeial raw materials. [3hrs]. 3. Characterization of chemical compounds and substances found in plants and their applied importance (types of plant raw materials and basic methods of obtaining them). [3hrs]. 4. Review of higher plants and fungi that produce biologically active substances. Possibilities of using natural substances extracted from plants and fungi in prevention and therapy of animals. [3hrs]. 6. Characteristics of selected veterinary plant products used in the treatment and prevention of animal diseases. [2hrs].
List of core and supplementary literature	Core literature 1. Prajapati N. Purohit S., Sharma A., Kumar T., A handbook of medicinal plants. A complete source book, Agrobios (India), Jodhpur, 2012, 2. A. Alberts i P. Mullen, Psychoactive plants and fungi. SUPPLEMENTARY LITERATURE: 1) Kohlmünzer S., 2000r., "Pharmacognosy", 2) Scientific articles

Planned forms/activities/teaching methods	Lecture, multimedia presentations, group work on issues, discussion, preparation for the assessment, preparation for the classes
Verification methods and ways of documenting the achieved learning outcomes.	Checking of knowledge is done in written form, after completion of all subject blocks. There will be one written colloquium per semester consisting of open and closed descriptive tasks and test tasks. The total points earned on the colloquium are expressed on a relative percentage scale, where 100% is the maximum number of points possible to gain on the colloquium. The scope of knowledge tested on the colloquium includes lecture topics. The basis for passing the module is obtaining a minimum of 51% of percentage points from the written colloquium. In addition, attendance at at least 85% of the classes in the module plan is required to pass the course. Percentage points from the colloquium are converted into grades according to the following scale: very good -91-100%., plus good -81-90% points, good -71-80%., plus sufficient -61-70%., sufficient -51-60%., insufficient -0-50%.

ECTS credits	CONTACT		
		Hours	ECTS
	Lecture/exercises	15	0.6
	credit/Revision credit	3	0.1
	TOTAL contact hours	18	0.7
	NON-CONTACT HOURS		
	preparation for classes	3	0.1
	project preparation	2	0.07
	preparation for the exam	4	0.13
	TOTAL non-contact hours/ ECTS credits	9	0.3
	attendance at practical classes	15	0.6
	Consultations		
	credit/revision credit	3	0.1
	TOTAL with direct involvement of the teacher	18	0.7

Relation of module learning outcomes to major learning outcomes	W1 --- A.W16.+, A.W20.+, B.W9.+ W2 --- A.W16.++, B.W9.+ W3 --- A.W16.++, A.W20.+, B.WB.3.+, B.W4.+, B.W9.+ W4 --- A.W16.++, A.W20.+, B.W9.+ W5 --- A.W16.++, A.W20.+, B.WB.3.+, B.W4.+, B.W9.+ U1 --- A.U19.+, B.U13.+ U2 --- A.U19.+, B.U13.+ U3 --- A.U19.+, B.U13.+ U4 --- A.U19.+, B.U13.+ U5 --- A.U19.++, B.U13.++ K1 --- K1+ K2 --- K8+

Elements and values affecting final grade	Module Assessment:
	Colloquium - 100% of weighting
	The basis for passing the module is obtaining a minimum of 51% of percentage points from the written colloquium.