

**Course name:****AQUATIC INVERTEBRATES**

ECTS	3
Status	complementary
Form of final credit	credit unrated
Prerequisites	knowledge and skills in zoology and ecology

**Main field of study:****ZOOTECHNICS**

Profile of study	General-academic
The code of studies (education level)	SI (bachelor)
Semester of studies	summer
Language of instruction	English

**Course offered by:**

Name of faculty offering the course	Faculty of Animal Sciences
Name of department offering the course	Department of Nutrition, Biotechnology of Animals and Fisheries
Course coordinator	Assoc. Professor Jaroslav Chyb

**Learning outcomes of the course:**

Symbol of outcome	Description of learning outcome	Reference to	
		main field of study outcomes	discipline#
<b>KNOWLEDGE – student knows and/or understands:</b>			
_W1	the most important morphological, anatomical and systematic features of invertebrate animals found in the aquatic environment and the functioning of physiological systems in invertebrate animals	ZOO1_W01 ZOO1_W04	RZ
_W2	hydrobiological characteristics of various types of inland waters, the impact of physicochemical factors of the aquatic environment on aquatic organisms and phenomena associated with the circulation of matter and energy in the aquatic environment	ZOO1_W01	RZ
<b>SKILLS – student is able to:</b>			
_U1	identify the most important species of aquatic invertebrates based on the features of morphological and anatomical structure	ZOO1_U01 ZOO1_U20	RZ
_U2	correctly choose tools for collecting samples of planktonic, benthic and neustonic organisms	ZOO1_U01 ZOO1_U20	RZ
_U3	prepare live and preserved invertebrate preparations for observation under a magnifying glass or microscope	ZOO1_U01 ZOO1_U20	RZ
<b>SOCIAL COMPETENCE- student is ready to:</b>			
_K1	continuous deepening of knowledge about protozoa and invertebrates of the aquatic environment	ZOO1_K01	RZ
_K2	critically assess the accuracy of species identification carried out by other students	ZOO1_K09	RZ

**Teaching contents:**

<b>Lectures</b>	<b>15 hours</b>
Invertebrate systematics	

Topics of the lectures	Morphology and anatomy of protozoans Morphology and anatomy of sponges and cnidarians Morphology and anatomy of flat worms Morphology and anatomy of rotifers Morphology and anatomy of round worms Morphology and anatomy of annelids Morphology and anatomy of arthropods Morphology and anatomy of mollusks Types of inland waters Hydrobiological characteristics of rivers and lakes Influence of abiotic and biotic factors factors on aquatic invertebrates Ecological groups of water organisms (plankton, benthos, necton, neuston, periphyton)
Accomplished learning outcomes	....._W1, ....._W2, ...._K1, ...._K2
Verification methods, rules and criteria of outcome assessment	<i>Test in the form of a test covering issues discussed during lectures; a positive grade should be given for at least 55% of the correct answers to the questions asked. The share of the lecture grade in the final grade is 50%.</i>
<b>Classes</b>	<b>15      hours</b>
Topics of the classes	Sampling techniques of planktonic and benthonic animals Characteristics and observations of protozoans Characteristics and observations of sponges and cnidarians Characteristics and observations of flat worms Characteristics and observations of rotifers Characteristics and observations of round worms Characteristics and observations of annelids Characteristics and observations of arthropods Characteristics and observations of molluscs Practical training on identification of aquatic invertebrates
Accomplished learning outcomes	....._U1, ....._U2, ...._U3
Verification methods, rules and criteria of outcome assessment	<i>Test in the form of a test covering issues discussed during classes; a positive grade should be given for at least for 55% of the correct answers to the questions asked. The share of the laboratory classes grade in the final grade is 50%.</i>
<b>Seminars</b>	<b>...      hours</b>
Topics of the seminars	
Accomplished learning outcomes	

Verification methods, rules and criteria of outcome assessment	
--	--

**References:**

Basic	<i>Biology of Invertebrates – J. Pechenik. McGraw-Hill 2004</i>
Supplementary	

**Structure of learning outcomes:**

Discipline: animal husbandry and fishery (RZ)	3	ECTS*
Discipline:	...	ECTS*

**Structure of student's activities:**

Contact hours	35	hours	1,5	ECTS*
including:				
lectures	15	hours		
classes and seminars	15	hours		
consultations	4	hours		
participation in research	...	hours		
mandatory traineeships	...	hours		
participation in examinations	1	hours		
e-learning	...	hours	...	ECTS*
student own work	35	hours	1,5	ECTS*

Syllabus valid from the academic year 2021/2022

\* where 10 hours of classes = 1 ECTS (in case of 15 h → 2 ECTS)

\*\* stated with an accuracy to 0.1 ECTS, where 1 ECTS = 25 - 30 hours of classes