

Module of classes:

**CARP CULTURE**

ECTS	3
Status	complementary
Form of final credit	credit unrated
Prerequisites	knowledge and skills in animal husbandry

**Field of study:**

**ZOOTECHNICS**

Profile of study	General-academic
The code of the form of study and the level of study	bachelor
Semester of study	summer
Language of study	English

**The leading faculty, department and the lecturer of the module:**

Name of the competent unit for the coordinator	Faculty of Animal Sciences, Department of Nutrition, Biotechnology of Animals and Fisheries
Course coordinator	Assoc. Professor Jarosław Chyb

**Learning outcomes of the module/subject**

The code of the description component (symbol of the effect)	Description	Relation to (code)	
		field effect	discipline#

**KNOWLEDGE – the student knows and/or understands:**

CCU_W1	systematic groups of animals, fish class biology, evolutionary adaptation to the environment; functioning of ecosystems, principles of nature and environmental protection	ZOO1_W01	RZ
CCU_W2	principles and techniques of fish nutrition, production methods and evaluation of feeds	ZOO1_W09	RZ
CCU_W3	basic species, fish breeds, has detailed knowledge of their breeding, production technology and environmental requirements	ZOO1_W11	RZ
CCU_W4	fish species occurring in Poland, their importance for fisheries management and prospects for their protection, knows the techniques and methods of fishing and the production of stocking material	ZOO1_W16	RZ
CCU_W5	basic species and strains of fish, detailed principles of their culture, breeding, production technology and environmental requirements	ZOO1_W18	RZ

**SKILLS – the student can:**

CCU_U1	characterize processes and relationships that occur inside and between groups of organisms in the pond	ZOO1_U01	RZ
CCU_U2	assess animal welfare, identify basic disease entities and take preventive measures, apply zootechnical prevention, plan and organize a cycle of fish production technologies; plan and carry out disinfection in fish farm facilities	ZOO1_U10	RZ
CCU_U3	use the right equipment, depending on the type of use; apply health and safety rules in handling fish	ZOO1_U15	RZ

**SOCIAL COMPETENCE- the student is ready to:**

CCU_K1	compliance with the principles of professional ethics, taking responsibility for animal welfare as well as shaping and condition of the natural environment	ZOO1_K04	RZ
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CCU_K2	thinking and acting in an entrepreneurial way, presenting an active attitude to create individual entrepreneurship	ZOO1_K08	RZ
CCU_K3	taking care of own safety and the safety of persons participating in a given undertaking, as well as care for one's own health and physical fitness	ZOO1_K10	RZ

### Teaching content:

<b>Lectures</b>	<b>15</b>	<b>hours</b>
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Subjects of lectures	<p>Characteristic of carp farming. Characteristic of carp ponds</p> <p>Methods for increasing the productivity of carp ponds. Principles of carp farming.</p> <p>Planning of the pond stocking.</p> <p>Farming cycles. Methods of spawning induction</p> <p>Control of the hatching process. Technology of fry rearing</p> <p>Carp feeding. Wintering and health control</p> <p>Annual work cycle on a carp farm</p>
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Realized learning outcomes	CCU_W1, CCU_W2, CCU_W3, CCU_W4, CCU_W5, CCU_K1-K3
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Verification methods and criteria of effects evaluation	<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.</i>
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<b>Classes (laboratories)</b>	<b>15</b>	<b>hours</b>
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Subjects of the classes	<p>Pond vegetation. Negative impact of emergent plants on the conditions of fish in ponds</p> <p>Plankton and benthos as the main source of natural food for carp</p> <p>Fish pests in carp ponds. Changes of oxygen content in pond water</p> <p>Carp anatomy</p> <p>Control catch of fish. Fish harvesting equipment</p> <p>Conditions of fish transport</p> <p>Hormonally controlled reproduction of carp</p> <p>Schedule of work on a carp farm</p>
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Realized learning outcomes	CCU_U1, CCU_U2, CCU_U3
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Verification methods and criteria of effects evaluation	<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.</i>
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<b>Seminars</b>	<b>0</b>	<b>hours</b>
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Subjects of the seminars	
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Realized learning outcomes	<i>code of learning outcomes of the seminars</i>
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Verification methods and criteria of effects evaluation	<i>together with participation in the final evaluation</i>
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### Literature:

Basic	<ol style="list-style-type: none"> <li>Opuszyński K. 1987. <i>Fresh-water pond ecosystem managed under a moderate European climate. Managed Aquatic Ecosystems</i> (ed. R.G. Michael), 63-91.</li> <li>Billard R. 1999. <i>Carp – Biology and culture</i>. Springer, New York</li> <li>Horvath L., Tamas G., Seagrave C. 2002. <i>Carp and pond fish culture</i>. Fishing News Books. Blackwell Science</li> </ol>
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Supplementary	<p>1. <i>Jhingran V.G., Pullin R.S.V. 1988.A hatchery manual for the common, Chinese and Indian major carps. Asian development Bank, ICLARM, Manila, Philippines.</i></p> <p>2. <i>Podhorec P., Gosiewski G., Ben Ammar I., Sokolowska-Mikolajczyk M., Chyb J., Milla S., Boryshpolets S., Rodina M., Linhartova Z., Biro D., Stejskal V., Kouril J. (2017). The effect of GnRHα with or without dopamine inhibitor on reproductive hormone levels and sperm quality in tench Tinca tinca. Aquaculture, 470, 91-94</i></p>
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**Structure of learning outcomes:**

Dyscipline – animal husbandry and fishery (RZ)	3	ECTS*
Dyscipline –...	...	ECTS*

**Structure of student's activities:**

classes carried out with direct participation of the teacher	39	hours	1,6	ECTS*
including:				
lectures	15	hours		
classes and seminars	15	hours		
consultations	6	hours		
participation in research	0	hours		
mandatory practices and internships	0	hours		
participation in the exam and credits	3	hours		
classes carried out with the use of e-learning	0	hours	...	ECTS*
student's own work	36	hours	1,4	ECTS*

) \* - Reported to the nearest to 0,1 ECTS, where 1 ECTS = 25-30 hours of classes

) # discipline code: RZ - zootechnics and fishery, PB - biological sciences