

Course Unit Descriptor

Study Programme: Animal science			
Course Unit Title: Sustainable production systems in aquaculture			
Course Unit Code: 19MST1I27			
Name of Lecturer(s): Assoc. Prof. Miroslav I. Urosevic, PhD			
Type and Level of Studies: Postgraduate academic studies, MSc.			
Course Status (compulsory/elective): elective			
Semester (winter/summer): winter			
Language of instruction: English, German			
Mode of course unit delivery (face-to-face/distance learning): face-to-face			
Number of ECTS Allocated: 6			
Prerequisites: No			
Course Aims: Acquiring knowledge in the field of sustainable production in aquaculture, education and training of students for professional and competent performance of work in the cultivation of aquatic organisms (invertebrates, fish, amphibians, and reptiles), as well as scientific and research work closely related to practice.			
Learning Outcomes: The student is able to understand and successfully solve complex problems related to the cultivation of invertebrates, fish, amphibians, and reptiles in the context of sustainable development. Ability to work in the production of aquatic organisms in various forms of economic entities, as well as basic knowledge related to activities in scientific research and educational institutions. The formation of specialists with academic education, who have expanded and deepened their knowledge in the field of fisheries and aquaculture, upgraded the knowledge and skills acquired in the first degree academic studies.			
Syllabus: Theory Economic importance of production in aquaculture: aquatic plants, invertebrates, fish, amphibians and reptiles; Impact of climate change on production in aquaculture; Consumer demands related to ecologically acceptable production systems in aquaculture; Sustainable production of certain types of aquatic organisms; Importance of non-native species of aquatic organisms for Serbia and the region; Application of modern technologies in order to reduce environmental pollution; Recirculating Aquatic Systems; Aquaponics; Management in the reproduction of aquatic organisms; Production and application of food for aquatic organisms in accordance with the principles of sustainable development and circular economy; The influence of cultivation methods and nutrition on the chemical and nutritional composition of aquatic organisms; Application of modern technologies in purification of production water in aquaculture; Disease prevention in aquaculture; Ecological and other standards for aquaculture production in the European Union. Practice Visit business entities and scientific/educational institutions that deal with the production and processing of aquatic organisms.			
Required Reading:			
<ul style="list-style-type: none"> • Anonimous (2022) Agriculture Organization of the United Nations. Fisheries Department. The State of World Fisheries and Aquaculture, 2022, Towards Blue Transformation. Food & Agriculture Org.; • Anonimous (2023) Agriculture Organization of the United Nations. Fisheries Department. The State of World Fisheries and Aquaculture, 2023, Revealing the true cost of food to transform agrifood systems. Food & Agriculture Org.; • Shipton, T.A. (2021) Guidelines for feed use in carp and trout production systems in Central Asia and Eastern Europe (Vol. 1224). Food & Agriculture Org.. • Bregnballe J. A guide to recirculation aquaculture: an introduction to the new environmentally friendly and highly productive closed fish farming systems. Food & Agriculture Org.; 2022 Oct 12. 			
Weekly Contact Hours: 2 + 2		Lectures: 30/ semester	Practical work: 30/ semester
Teaching Methods: Lectures and Practical classes, Consultations on disposal			
Knowledge Assessment (maximum of 100 points): 100			
Pre-exam obligations	points	Final exam	points
Active class participation	5	Written exam	15
Practical work	5	Oral exam	25
Preliminary exam(s)			

Essay	50		
The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam, project presentation, essay, etc.			