

Study Programme: Master academic studies - ANIMAL PRODUCTION			
Course Unit Title: INDUSTRIAL FEED PRODUCTION			
Course Unit Code: 19MST1107			
Name of Lecturer(s): Assist. Prof. Dejan Beuković, PhD			
Type and Level of Studies: MASTER ACADEMIC STUDIES			
Course Status (compulsory/elective): Elective			
Semester (winter/summer): Summer			
Language of instruction: English			
Mode of course unit delivery (face-to-face/distance learning): Face to face			
Number of ECTS Allocated: 6			
Prerequisites: -			
Course Aims: Detailed introduction to nutrients, technique and technology of production and improvement of industrial production technology.			
Learning Outcomes: Students' ability to work independently in animal feed factories and produce quality animal feed.			
Syllabus: <i>Theory</i> Introduction. Factors that caused the emergence and development of the animal feed industry. The needs of animals and their breeders when it comes to animal feed. Nutrients – Sources of nutrients. Plant, animal and synthetic protein sources. Additives - Additions to feed mixtures. Nutrient additives - Amino acids and NPN, vitamins, microelements, microelements. Non-nutritive additives-Technological, to increase digestibility, growth stimulators, metabolism regulators, probiotics and prophylactics, odor and taste corrigents, antioxidants, emulsifiers, preservatives, organic acids, drugs, buffers, colors and other additives. Methods of improving the nutritional value of nutrients before integration into feed mixtures: Cold and hot, dry and hydrothermal methods: peeling, grinding and grinding, cold rolling, steaming and rolling, coking, toasting, micronizing, extruding, pelleting, sprouting grains, separation of protein and carbohydrates fraction, improving the nutritional value of bulk foods. Technique and technology for the production of fodder mixtures. Mills for grinding and grinding granular feed. Mixers and mixing of nutrients and supplements. Pelletizers and pelleting of fodder mixtures. Practical production of fodder mixtures. Perspectives and directions for improving the technology of industrial fodder production. <i>Practice</i> The role of standardization in the economy: quality and quality control, quality assurance according to the standards of the ISO 9000 series, deviations in the production of animal feed. Determination of the nutritional value of fodder by the Weende method. Macro- and microelements. Antinutritional substances - urease and glucosinolates. Determination of NaCl and acidity in mixtures. Buffer capacity of nutrients. Microscopic analysis of food. Overview and evaluation of individual groups of nutrients. Biological testing of food.			
Required Reading:			
Weekly Contact Hours:	Lectures: 2	Practical work: 2	
Teaching Methods: Lectures and Practical classes, Consultations if needed.			
Knowledge Assessment (maximum of 100 points):			
Pre-exam obligations	points	Final exam	points
Active class participation	10	written exam	-

Practical work	-	oral exam	50
Preliminary exam(s)	-	
Seminar(s)	40		
The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam, project presentation, seminars, etc.			