Course Unit Descriptor

Study Programme: Animal Production

Course Unit Title: Feed Quality Control

Course Unit Code: 19.ANM072

Name of Lecturer(s): Igor M. Jajić, PhD, Full Professor

Type and Level of Studies: Master Academic Studies

Course Status (compulsory/elective): elective

Semester (winter/summer): winter

Language of instruction: Serbian

Mode of course unit delivery (face-to-face/distance learning): face-to-face

Number of ECTS Allocated:6

Prerequisites: None

Course Aims:

The attainment of practical knowledge in the field of feed quality control methods, which are mostly analytical chemistry and structure determination of feeding mixtures by microscopy. Introducing students to performing biological experiments on domestic animals.

Learning Outcomes:

Ability of students to work independently in the field of feed quality control.

Syllabus:

Theory

Introduction. Sensory tests of animal feed. Physical, chemical, biological and microbiological methods of animal feed quality determination. Physical factors that cause animal feed spoilage. Chemical contaminants of animal feed. Antinutritive substances. Molds and mycotoxins in animal feed. Saprophyte and pathogen bacteria in animal feed. Pests in animal feed. Quality control of soybean thermal processing. Specificities in quality control of forage. Specificities in quality control concentrate feedstuffs. Plan for feed quality control on farms.

Practice

Animal feed sampling techniques. Preparation of the laboratory sample. Standard chemical analysis - Weende method. Determination of macro and micronutrients using optical methods. Determination lipo- and hydro- soluble vitamins by liquid chromatography. Determination of antinutritive substances (urease activity). Application of Van Soest method for the analysis of feedstuffs: neutral detergent fiber (NDF), acid detergent fiber (ADF), lignin, cellulose, hemicellulose. Quality control method by using microscopy in the production of premixes and mixtures. Determination of granulation. Performing experiments.

Required Reading:

ĐorđevićN., DinićB. (2011): Proizvodnjasmešakoncentratazaživotinje. Institutzakrmnobilje, Kruševac

StanaćevV., KovčinS. (2003): HranivaitehnologijastočnehraneiOsnoviishranedomaćihživotinja, praktikum. Poljoprivrednifakultet, NoviSad.

StojkovićJ., RajićI., RadovanovićT. (1996): Pregledіocenastočnehrane. NoviSvet, Priština.

MarjanovićN., JankovićI. (1983): Instrumentalnemetodeanalize. Udžbeniksapraktičnimprimerima, Tehnološkifakultet, Novisad, Zavodzaizdavanjeudžbenika, NoviSad.

MišovićJ., AstT. (1989): Instrumentalnemetodehemijskeanalize. Tehnološkometalurškifakultet, Beograd.

WeeklyContact Hours:	**Lectures:**2	**Practical work:**2	
Teaching Methods: Lectures, Practical classes, Consultations, study, research work			
Knowledge Assessment (maximum of 100 points):			
Pre-exam obligations	points	**Final exam**	points
Active class participation	5	written exam	
Practical work	5	oral exam	50
Preliminary exam(s)	40	…….	
Seminar(s)			
The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam, project presentation, seminars, etc.			