Course Unit Descriptor

Study Programme: Animal Production

Course Unit Title: Mathematical Models and Software in Animal Nutrition

Course Unit Code: 19.ANM067

Name of Lecturer(s): Professor Dragan Glamočić, Assistant Professor Mirko Ivković

Type and Level of Studies: Master Academic Degree

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:

Acquisition of practical knowledge from the field of mathematical models and modern software in animal nutrition. Training students for direct work with software in feed production, as well as for improving animal nutrition.

Learning Outcomes:

Ability of professional application of knowledge. Ability to use and analyze scientific literature, gather and interpret relevant information for making judgments, devise and defend arguments and solve problems in animal nutrition. Ability to communicate information, ideas, problems and solutions.

Syllabus:

Theory
Spreadsheets. Mathematical modeling and application of mathematical models in animal nutrition. Application of optimization of rations, diets and premixes. Mathematical models for the evaluation of the energy value of feedstuffs and diets. Mathematical models for the evaluation of feed values. Mathematical models for calculating the nutritional requirements of animals. Computer programs for the preparation of rations, diets and premixes.
Practice
Using spreadsheets. Using programs for the evaluation of the energy value of food, determining the feed values, calculating the needs of domestic animals, preparing rations, diets and premixes.

Required Reading:

Glamočić D. (2002): Ishrana preživara – praktikum. Univerzitet u Novom Sadu, Poljoprivredni fakultet, Novi Sad.
National Research Council (2001): Nutrient requirement of dairy cattle. National Academies Press, Washington, USA.
France, J., Kebreab E. (2008): Mathematical models in animal nutrition. Cab International, Wallingford, UK.

Weekly Contact Hours:	**Lectures:** 2	**Practical work:** 2

Teaching Methods:

Lectures, Practice/ Practical classes

Knowledge Assessment (maximum of 100 points):

Pre-exam obligations	Points	**Final exam**	points
Active class participation	10	written exam	20
Practical work	10	oral exam	20
Preliminary exam(s)	40	…….	