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| Course: | Basis of animal nutrition |
| Course id: 3OST4O17 |
| Number of ECTS: 6 |
| Teacher: | Igor M. Jajić, PhD, Associate Professor |
| Course status | Mandatory |
| Number of active teaching classes (weekly) |
| Lectures: 3 | Practical classes: 3 | Other teaching types: | Study research work: | Other classes: |
| Precondition courses | None/navesti ako ima |
| 1. Educational goal

Introducing students to the importance, functions and methods of utilization and symptoms of deficiency of nutrients in animal nutrition. Also, students will be familiar with methods of determining nutrient and calculating the nutritional value of feed and mixtures. |
| 1. Educational outcomes

Students have gained basic knowledge in animal nutrition. They are trained with the methods of sampling for laboratory analysis, the basic chemical analysis of feed, digestibility determination and calculation of nutritional value of feed and feeding mixtures by different systems of assessment. |
| 1. Course content

Theoretical classes: Composition of plants and animals. Nutrients and their role in nutrition: Water - importance, functions, meeting the needs, water quality. Proteins - importance, composition, biological value, amino acids, non-protein nitrogen. Metabolism in non-ruminants and ruminants. Fat - importance in nutrition, and classification. Fat in animal feed. Metabolism, synthesis and deposition in organism. Essential fatty acids. Carbohydrates - importance in nutrition, and classification. Mono-, di-, and polysaccharides. Metabolism in non-ruminants and ruminants. Vitamins - importance and needs. Fat and water soluble vitamins. Their content and utilization from nutrients. Mineral elements - macro and micronutrients. Additives. Feeding experiments. Digestibility and balance in the diet. Metabolism of energy and systems of energy value assessment in feed and feeding mixtures.Practical classes: exercise, other forms of instruction, study research: Testing the quality of feed. Feed sampling. Mass measurement. Determination of basic parameters of feed: moisture, protein, fat, crude fiber, Ca, P (Weende method), as well as fractions of crude fiber - NDF, ADF, lignin (Van Soest method). Energy value of nutrients: TDN, starch value, nutritious barley units, nutritious oat units. The Yugoslav net energy system, NRC energy systems. Digestibility and balance in the diet. |
| 1. Teaching methods

Lectures, Practical classes, Consultations, study, research work |
| Knowledge evaluation (maximum 100 points) |
| Pre-examination obligations | Mandatory | Points | Final exam (izabrati) | Mandatory | Points |
| Lecture attendance | Yes | 5 | *Oral part of the exam* | Yes | 50 |
| Test | Yes | 40 |  |
| Exercise attendance | Yes | 5 |
| *Ovde se mogu pojaviti i kolokvijumi i seminarski rad (npr. Test, Term paper)* | No |  |
| Literature  |
| Ord. | Author | Title | Publisher | Year |
|  | Obračević, Č. | Osnovi ishrane domaćih životinja | Naučna knjiga, Beograd | 1990 |
|  | Jovanović, R., Glamočić, D., Dujić, D. | Ishrana domaćih životinja | Poljoprivredni fakultet, Novi Sad | 2001 |
|  | Glamočić, D. | Ishrana preživara - Praktikum | Poljoprivredni fakultet, Novi Sad | 2002 |

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| Znak univerziteta | UNIVERSITY OF NOVI SADFACULTY OF AGRICULTURE 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 8 | Znak fakulteta2 |
| Study Programme AccreditationUNDERGRADUATE ACADEMIC STUDIES ANIMAL SCIENCE |
| Table 5.2 Course specification |