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| Course: | **PLANT AND ANIMAL PHYSIOLOGY** |
| Course id: 3OOP3O11 |
| Number of ECTS: 6 |
| Teacher: | Ivana Maksimović, Aleksandar Božić, Marina Putnik-Delić |
| Course status | Mandatory |
| Number of active teaching classes (weekly) |
| Lectures: 4 | Practical classes: 2 | Other teaching types: | Study research work: | Other classes: |
| Precondition courses |  |
| 1. Educational goal

Acquiring knowledge about the physiological processes in crop plants domestic animals. The envisaged forms of teaching provide a clear insight into the physiological processes and enable students to understand and correctly interpret the different physiological parameters and environmental factors that affect them.  |
| 1. Educational outcomes

Students achieve an average 75% of success by completing the pre-examination activities and exams, which enables them to understand easier teaching subjects specific for all branches of organic agriculture. |
| 1. Course content

*Theoretical part:*Plant physiology: Introduction. Physiology of yield (CO2 assimilation, water regime, temperature, light, etc.), Crop nutrition, uptake and transport of nutrients, impact of crop nutrition on yield and quality. Essential macro- and micronutrients (N, P, K, Ca, Mg, Fe, ....), regulation of growth and development. General animal anatomy. Basics of chemistry and physics in physiology. Anatomy and Physiology of cells and tissues. Nervous system. Senses. Endocrine system. Sceletal tissue and metabolism of minerals. Muscles. Blood and its functions. Immunology. Cardiovascular system. Respiratory system. The kidneys and urinary tract. Regulation of acid-base balance. Digestive tract. Metabolism. Vitamins. Skin. Regulation of body temperature. Reproduction. Lactation. Bioenergetics and growth. *Practical part:*Forms of plasmolysis and determination of the osmotic potential of the cell. Sampling of plant material. Determination of water and minerals (K, Ca, P). Determination of the intensity of transpiration, leaf area, root volume and surface. Determination of concentration of photosynthetic pigments and their separation by chromatography. Determination of the number of erythrocytes, leukocytes and leukocytes formulas, hemoglobin concentration. Determination of blood groups. Measurement of blood pressure. Breathing - lung volumes, spirometry. Physiology of non-ruminants and ruminant digestion. Mammary gland. Metabolism. Vitamins. The endocrine system. Kidneys. The nerves and muscles. Specific features of the physiology of birds and fish.  |
| 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 | 2x20 |  |
| Exercise attendance | Yes | 5 |
| Literature  |
| Ord. | Author | Title | Publisher | Year |
|  | Kastori R, Maksimovic  | Ishrana biljaka | Vojvodjanska akademija nauka i umetnosti, Novi Sad | 2008 |
|  | Maksimovic I, Pajevic S. | Praktikum iz fiziologije biljaka | Poljoprivredni fakultet i Prirodno-matematicki fakultet, Novi Sad | 2002 |
|  | Stojić V | Veterinarska fiziologija | Naučna knjiga, Beograd | 2004 |
|  | Todorović-Joksimović M, Božić A | Praktikum iz fiziologije domaćih životinja |  |  |

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| Znak univerziteta | UNIVERSITY OF NOVI SADFACULTY OF AGRICULTURE 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 8 | Znak fakulteta2 |
| Study Programme AccreditationORGANIC AGRICULTURE, BSc |
| Table 5.2 Course specification |