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| Course: | *Agroecology* |
| Course id:3ОRT3O09 |
| Number of ECTS:6 |
| Teacher: | Prof. dr Dragiša MIlošev, Doc. dr Srđan Šeremešić |
| Course status | Mandatory |
| Number of active teaching classes (weekly) |
| Lectures:3 | Practical classes:2 | Other teaching types: | Study research work: | Other classes: |
| Precondition courses | None/navesti ako ima |
| 1. Educational goal

The aim of this subject is to introduce students with the components of the agroecosystem and their interactions. Knowledge gained in this course will allow students to understand the natural processes which underlie the practices of crop production and determine the formation and pathways of the primary organic matter flow in the agroecosytems. |
| 1. Educational outcomes

Students should learn to identify the specific elements of the agroecosystems, understand their role, which will enable them to analyze and understand the problems that can arise in the process of food production. By attending this subject student will gain knowledge how to efficiently manage cropping system to achieve sustainability in the semi-arid environment.  |
| 1. Course content

Crop production as a part of the agricultural production. The aim of Agroecology, agriculture in light of Agroecology. Production of organic matter and the factors that influence its formation. Biosphere, agrosphere, agricultural biotopes, agrobiocenosis, biological balance, development of agro-biocenosis. The vegetative factors, function, ecological valence, amplitude of crop adjustment. Climate as a factor of crop growth, leaf area, day length, photoperiodism. The effect of temperature on the growth and development of plants, the cardinal temperature points, net primary productivity, agricultural assessment of climate. Water as an ecological and productive factor, the air humidity, the occurrence of drought. Land vegetation as a factor, anthropogenic soil, the balance of humus in soil, porosity, buffering capacity of the soil, chemical and biological properties of the soil, soil structure. Crop as a factor of production, man as a factor of production, physiographic factors. Agricultural zoning of Serbia and Vojvodina. Laws of yield formation.*Practical classes*:The sunlight as a vegetation factor. Heat as vegetation factor, calculation of the mean daily temperature, effective temperature, temperature sum, vernalization. Water as a factor of vegetation, water balance in crop production, calculation of the air-dry crop yield. Agricultural evaluation of the climate, climatograms. Soil vegetation as a factor. Anthropogenic soil. Soil quality. Agricultural zoning. |
| 1. Teaching methods

Lectures, Practical classes, Consultations and Seminars.  |
| Knowledge evaluation (maximum 100 points) |
| Pre-examination obligations | Mandatory | Points | Final exam | Mandatory | Points |
| Lecture attendance | No | 5 | Oral part of the exam | Yes | 45 |
| Test | No | 20 |  |
| Exercise attendance | Yes |  |
| *Practical classes oral exam*  | Yes | 30 |
| Literature  |
| Ord. | Author | Title | Publisher | Year |
|  | Miguel Altieri  | Agroecology: The Science of Sustainable Agriculture | Westview Press | 1995 |
|  | Stefan R. Gliessman | Agroecology: ecological processes in sustainable agriculture | CRC Press | 1997 |
|  | Frencis C. et al.  | Agroecology: The Ecology of Food Systems | Jurnal of Sustainable Agriculture | 2003 |
|  | Adel El Titi | Soil Tillage in Agroecosystems | CRC Press | 2002 |
|  | Milošev, D., Šeremešić, S. | Agroecology (Handbook) | Faculty of Agriculture, UNS | 2010 |

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