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| Course: | Ameliorative pedology |
| Course id: 3OРT5И05 |
| Number of ECTS: 6 |
| Teacher: | Milivoj Belic, PhD, full professor; Ljiljana Nesic, PhD, associated professor; Vladimir Ciric, PhD, assistant professor |
| Course status | Elective |
| Number of active teaching classes (weekly) |
| Lectures: 2 | Practical classes: 2 | Other teaching types: | Study research work: | Other classes: |
| Precondition courses | Soil science |
| 1. **Educational goal.** Previous findings indicate that a substantial portion of soil in agriculture is still insufficiently utilized because they require previous amelioration. For these reasons, this course aims to study the anomalous land reclamation in three main directions: application hydromeliorative, agromelioration and chemical treatment.
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| 1. **Educational outcomes** - Students who choose this course will acquire the necessary knowledge that will help them to engage in the practice and in solving problems that are related to different types of soil reclamation in order to increase its productivity
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| Course Content: **Theoretical instruction**- Introduction, genesis and evolution soil, pedogenetic factors, general pedogenetic processes, soil properties (morphological, physical and chemical). Soil classification, soil geography. Amelioration of agriculture - anomalous soil in our region and in the world. Methods of soil reclamation. Drainage and Irrigation, the classification of soil in the drainage classes, soil classification according to the amenities for irrigation, assessment of water quality for irrigation). Agricultural melioration of halomorphic and acidic soils in order to increase they fertility. Ameliorative application of organic and mineral fertilizers (humification, phosphate). Ameliorative planning areas (recultivation of degraded lands, anti-erosion measures, the use of open pits in other applications). Stationary monitoring of soil properties after application of amelioration. Soil survey as the basis for projects drainage, irrigation, construction and other engineering requirements.**Practical teaching**- Field research soil. The density of the soil. Mechanical composition of the soil. Permeability and capillary rise. Consistency of soil. Determination of CaCO3, humus and dangerous and harmful elements in the soil. Determination: active and potential acidity and quantity of lime funds for the repair of acidic soils. Determination of soil salinity, qualitative and quantitative composition of cations and anions and the required quantity of plaster repair alkaline soils. Determining the quality of the water table aquifer and its effect on salinity and / or alkalinity of the soil. |
| 1. Teaching methods

Lectures, Practice/ Practical classes, Consultations |
| Knowledge evaluation (maximum 100 points) |
| Pre-examination obligations | Mandatory | Points | Final exam  | Mandatory | Points |
| Lecture and exercise attendance | Yes | 10 | *Written part of the exam-tasks and theory* | Yes | 30 |
| Colloquium | Yes | 10 | *Oral part of the exam* | Yes | 30 |
| Seminar paper | Yes | 20 |  |
| Literature  |
| Ord. | Author | Title | Publisher | Year |
|  | Đuro Bošnjak: | Metode istraživanja i određivanja fizičkih svojstava zemljišta | JDPZ Komisija za fiziku zemljišta Novi Sad | 1997 |
|  | Milivoj Belić, Ljiljana Nešić, Vladimir Ćirić | Praktikum iz pedologije | Poljoprivredni fakultet Novi Sad | 2014 |
|  | Nikola Miljković | Meliorativna Pedologija | Poljoprivredni fakultet, Novi Sad | 2005 |
|  | Goran J. Dugalić, Boško A. Gajić | Pedologija  | Univerzitet u Kragujevcu, Agronomski fakultet u Čačku | 2012 |
|  | R. White | Principles and Practice of Soil Science Fourth Edition | Blackwell Publishing | 2006 |
|  | Hillel, D | Introduction to Environmental Soil Physics | Elsevier, Amsterdam, Netherlands | 2004 |

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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 Field and vegetable crops |
| Table 5.2 Course specification |