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| Course: | *Soil Science and Land Reclamation* |
| Course id:3ОАЕ1О02 |
| Number of ECTS: 6 |
| Teacher: | PhD Milivoj Đ. Belić, PhD Vladimir I.Ćirić, PhD Atila F. Bezdan |
| Course status | Mandatory |
| Number of active teaching classes (weekly) |
| Lectures:3 | Tutorials: 2 | Other teaching types: | Study research work: | Other classes: |
| Precondition courses | None |
| Educational goal is to introduce students with the characteristics of soil processes; genesis, evolution, causes of variability and geographic distribution laws of soil cover and soil classification and to familiarize students with the theoretical foundations and practice in a field of Soil science, Geodesy and Land reclamation. |
| Educational outcomesStudents will have increased knowledge about soil science that will enable them to understand the problems related to the soil in agricultural production and will have basic knowledge of soil science and land reclamation, which will enable them to better understand the problems related to agronomic practices. |
| Course content*Theoretical instruction*-Opening lecture, Minerals and rocks as a basis for the genesis of soil, Morphological characteristics, physical properties, soil as a dispersed system, mechanical composition, clay, organic matter, Soil colloids, Organo - mineral complex, structure, porosity, water and water regime, air and air regime, thermal properties and thermal regime, physic-mechanical properties, chemical properties, the elements that constitute the pedosphere, absorptive capacity, soil solution, reaction, acidity and alkalinity of soil pH, buffering and oxidation-reduction potential , biological soil properties, soil genesis, classification and soil classification,*Practical teaching*-primary-petrogene and secondary minerals, igneous rocks, sedimentary rocks, metamorphic rocks, field research plots, soil density, soil texture, Water permeability and capillary rise, Plasticity soil, Determination of humus in the soil, Determination of CaCO3, Determination of active soil acidity, potential acidity and determine the amount of lime needed funds for the repair of acid soils, Determination of adsorption complex, Determination of total soluble salts in the soil and the required quantity of plaster for the repair of alkaline soils. Field practice - Introducing different parent rocks and profiles of the most frequent types of soil in Vojvodina.Land reclamation: measures and measurement principles, plans and maps, the fundamentals of land management, introduction to land reclamation, hydrological basics, fundamentals of hydraulics, flood control, drainage systems, irrigation systems. |
| Teaching methodsLectures, Practice/ Practical classes, Consultations, Research work |
| Knowledge evaluation (maximum 100 points) |
| Pre-examination obligations | Mandatory | Points | Final exam  | Mandatory | Points |
| Lecture attendance | Yes/No | 5 | *Oral exam* | Yes | 30 |
| Test | Yes/No | 60 | Also possible: written tests, project presentations, seminar papers etc. |
| Practical work | Yes/No | 5 |
|  | Yes/No |  |
| Literature  |
| Ord. | Author | Title | Publisher | Year |
|  | Nikola Miljković | Osnovi Pedologije | Prirodno-matematički fakultet, Novi Sad | 1996 |
|  | Nikola Miljković | Meliorativna Pedologija | Poljoprivredni fakultet, Novi Sad | 2005 |
|  | Goran J. Dugalić, Boško A. Gajić | Pedologija | Univerzitet u Kragujevcu, Agronomski fakultet u Čačku | 2012 |
|  | Milivoj Belić, Ljiljana Nešić, Vladimir Ćirić | Praktikum iz pedologije | Poljoprivredni fakultet Novi Sad | 2014 |
|  | Hillel, D. | Introduction to Environmental Soil Physics | Elsevier, Amsterdam, Netherlands. | 2004 |
|  | Robert E. White | Principles and Practice of Soil Science | Blackwell publishing, Fourth edition | 2006 |
|  | FAO irrigation and drainage papers, http://www.fao.org/ |