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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 |

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| Course: | *Soil science* |
| Course ID: 3ORT2O06 |
| Number of ECTS: 7 |
| Teacher: | Milivoj Dj. Belic PhD, full professor; Ljiljana M. Nesic PhD, associate professor; Vladimir I. Ciric PhD, assistant professor |
| Course status | Mandatory |
| Number of active teaching classes (weekly) |
| Lectures: 4 | Practical classes: 2 | Other teaching types: | Study research work: | Other classes: |
| Precondition courses | None |
| 1. Educational goal

This course is designed to introduce students with properties of soil, processes of genesis, evolution, causes of variability and laws of geographical distribution of land cover, as well as classification of soil.  |
| 1. Educational outcomes

After passing this course, students will expand knowledge of soil science that will allow them to understand problems related to soil in intensive agriculture. |
| 1. Course content

*Theoretical lectures*: Introduction lecture, Minerals and rocks as a material for soil forming, Morphological properties of soil, Physical properties of soil, Chemical properties of soil, Soil as a dispersion system, Mechanical composition of soil, Clay, Organic matter, Soil colloids, Organo-mineral complex, Porosity, Water and water properties of soil, Heat and thermal properties of soil, Air and air conditions of soil, Elements that are part of pedosphere, Sorption capacity, Soil solution, Reaction (pH), Acidity and alkalinity of soil, Buffer capacity and oxidation-reduction potential, Biological properties of soil, Genesis of soil, Systematisation and classification of soil*Practical lectures*: Primary– petrogene and secondary minerals, Igneous rocks, Sedimentary rocks, Metamorphic rocks, Field research of soil, Soil density, Mechanical composition of soil, Water permeability and capillary rise, Soil plasticity, Determination of humus in soil, Determination of CaCO3, Determination of active soil acidity, Determination of potential soil acidity and required amount of lime agent for improvement of acidic soils, Determination of characteristic of adsorption complex, Determination of easily soluble salts in soil and required amount of gypsum for improvement of alkaline soils *Field work*:Introduction of different parent materials and profiles of the most common soil types in Vojvodina. |
| 1. Teaching methods

 Lectures, Practice/ Practical classes, Consultations, study |
| Knowledge evaluation (maximum 100 points) |
| Pre-examination obligations | Mandatory | Points | Final exam  | Mandatory | Points |
| Lecture attendance | Yes | 5 | *Written part of the exam/Oral part of the exam* | Yes | 60 |
| Test | Yes | 20 |  |
| Exercise attendance | Yes | 5 |
| Colloquium | Yes | 10 |
| Literature  |
| Ord. | Author | Title | Publisher | Year |
|  | Aleksandar Kukin, Vladimir Hadžić, Ljiljana Nešić, Milivoj Belić | Agrogeologija | Poljoprivredni fakultet, Novi Sad | 2007. |
|  | Nikola Miljković | Osnovi Pedologije | Prirodno-matematički fakultet, Novi Sad | 1996. |
|  | Nikola Miljković | Meliorativna Pedologija | Poljoprivredni fakultet, Novi Sad | 2005. |
|  | Miodrag Živković, Aleksandar Đorđević | Pedologija (prva knjiga) geneza , sastav i osobine zemljišta | Poljoprivredni fakultet,Beograd | 2003. |
|  | Milivoj Belić, Ljiljana Nešić, Vladimir Ćirić | Praktikum iz pedologije | Poljoprivredni fakultet Novi Sad | 2014 |
|  | Husnija Resulović i Hamid Čustović | Pedologija- Opći dio (Knjiga 1) | Univerzitet u Sarajevu, Sarajevo | 2002. |
|  | Goran J. Dugalić, Boško A. Gajić | Pedologija  | Univerzitet u Kragujevcu, Agronomski fakultet u Čačku | 2012 |
|  | Robert E. White | Principles and practice of soil science | Blackwell publishing | 2006. |
|  | M.R. Ashman and G. Puri | Essential soil science | Blackwell publishing | 2006. |
|  | Hillel, D. | Introduction to Environmental Soil Physics | Elsevier, Amsterdam, Netherlands. | 2004 |