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| Znak univerziteta | UNIVERSITY OF NOVI SADFACULTY OF AGRICULTURE 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 8 | Znak fakulteta2 |
| Study Programme AccreditationMASTER ACADEMIC STUDIES: SOIL SCIENCE AND PLANT NUTRITION |
| Table 5.2 Course specification |

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| Course: | ***Methods of soil analysis*** |
| Course id:3МЗИ1И03 |
| Number of ECTS: 6 |
| Teacher: | Milivoj Đ.Belić, Darinka M. Bogdanović, Jarak N.Mirjana, Vladimir I. Ćirić, Čabilovski R., Ranko, Đurić S., Simonida |
| Course status | Elective |
| Number of active teaching classes (weekly) |
| Lectures: 2 | Practical classes: 2 | Other teaching types: | Study research work: | Other classes: |
| Precondition courses | passed exams in soil science, microbiology and soil fertility and fertilization at the undergraduate academic studies |
| 1. Educational goal

Introducing students to the methods of analysis of chemical, physical and biological properties of the soil |
| 1. Educational outcomes

The subject is the basis for understanding soil fertility, agricultural practices and fertilization in crop production |
| 1. Course content

***Theoretical instruction***Chemical methods of soil testing: The absorption method (colorimetry, spectrophotometry, atomic absorption spectrophotometry) Emission methods (flame photometry, inductively coupled plasma) potentiometric method (EUF method).Microbial methods for soil investigation**:** Microorganisms as indicators of soil fertility. Estimation of soil fertility on the basis of microbial abundance and activity.*Practical instruction*Soil sampling for microbial, physical and chemical analisys. Seed samples for estimation of abundance of sistematic and physiological group of microorganisms. Calculating the number of microorganisms per gramm of soil.Determination of soil organic carbon. Methods of stable isotope 15N, 32P. Methods for fractionation of phosphorus. EUF method. Determination of trace elements in soil. |
| 1. Teaching methods

Lectures, Practical classes, Consultations |
| 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 |
| Colloquium | Yes | 30 |  |
| Exercise attendance | Yes | 5 |
| *Term paper* | Yes | 10 |
| Literature  |
| Ord. | Author | Title | Publisher | Year |
|  | Bogdanović Darinka, Ubavić M., Malešević M. | Metode za utvrđivanje potreba biljaka za azotom poglavlje u monografiji «Azot agrohemijski, agrotehički, fiziološki i ekološki aspekti.» Urednik Kastori R. | Poljoprivredni fakultet, Novi Sad. | 2005 |
|  | Kastori R, Kadar, I., Sekulić, P., Bogdanović, D., Milošević, N., Pucarević, M. | Uzorkovanje zemljišta i biljaka nezagađenih i zagađenih staništa | Naučni institut za ratarstvo i povrtarstvo, Novi Sad | 2006 |
|  | Eldor A. Paul | Soil Microbiology, Ecology and Biochemistry | Elsevier | 2014 |
|  |  [Subhashini Vallabhaneni](http://www.amazon.com/Subhashini-Vallabhaneni/e/B00IT2V9MO/ref%3Ddp_byline_cont_book_1)  | Soil Microbiology- A Laboratory Manual: Protocols and Techniques | Lambert, USA | 2012 |
|  | Skoog, D., Holler, J., Crouch, S.  | Principles of instrumental analysis | Brooks/Cole, CENGAGE Learning | 2007 |
|  | Milivoj Belić, Ljiljana Nešić, Vladimir Ćirić | Praktikum iz pedologije | Poljoprivredni fakultet Novi Sad | 2014 |
|  | World Reference Base for Soil Resources | A framework for international classification, corelation and comuniction  | Food and Agriculture Organiyation of the United Nations, Rome World soil resources reports 103 | 2006 |