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| Course: | Food analysis |
| Course id:3МЗИ1И14 |
| Number of ECTS: 6 |
| Teacher: | Prof. dr Boris Popović, Prof. dr Dubravka Štajner |
| Course status | Elective |
| Number of active teaching classes (weekly) |
| Lectures: 2 | Practical classes: 2 | Other teaching types: | Study research work: | Other classes: |
| Precondition courses | None/navesti ako ima |
| 1. Educational goal

The aim of the course is to achieve scientific skills and academic skills, develop creative abilities and mastering specific practical skills needed for future career development that are aligned with the directions of development of modern scientific disciplines in the world. |
| 1. Educational outcomes

Developing the ability of students to follow modern achievements in science and profession, developing the ability to solve problems using scientific methods and procedures in the process of plant growing and the production of healthy food as well as developing critical and creative thinking. |
| 1. Course content

Theoretical classes:Introduction. Classical methods of chemical analysis-volumetric titration. Introduction to instrumental analysis. Spectroscopic methods. Spectrophotometry and fluorimetry. Atomic absorption spectroscopy. Chromatographic methods. High performance liquid chromatography (HPLC). Gas chromatography (GC). Electroanalytical methods of analysis. The choice of methods of analysis. Sampling and preparation of food for analysis. Analyses of selected components of plant foods.Research:Sampling and preparation of food for analysis. Determination of the total nitrogen content, sugar, fat, pigment and antioxidant in foods. Application of potentiometric and conductometric determination. Spectrophotometric determination. Atomic absorption spectroscopy. Application of high performance liquid chromatography-HPLC for analysis of certain food ingredients. |
| 1. Teaching methods

Depending on the number of applicants, lectures and practical classes will be held or consultations and seminar |
| Knowledge evaluation (maximum 100 points) |
| Pre-examination obligations | Mandatory | Points | Final exam (izabrati) | Mandatory | Points |
| Lecture attendance | No |  | *Theoretical part of the exam/Oral part of the exam/Written part of the exam-tasks and theory* | Yes | 40 |
| Test | Yes | 30 |  |
| Exercise attendance | No |  |
| colloquium | Yes | 30 |
| Literature  |
| Ord. | Author | Title | Publisher | Year |
|  | S. Nielsen | Chemical analysis of Food, Techniques and Applications | Elsevier Science | 2012 |
|  | D. Skoog, D. West, F. Holler | Bases of Analytical chemistry | Školska knjiga, Zagreb | 1999 |

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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 |