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| **UNIVERSITY OF NIŠ** | | | | | | | | |
| **Course Unit Descriptor** | | | **Faculty** | | Faculty of Science and Mathematics | | | |
| **GENERAL INFORMATION** | | | | | | | | |
| Study Program | **Chemistry** | | | | | | | |
| Study Module (if applicable) | - | | | | | | | |
| Course Title | Modern methods of optical analysis | | | | | | | |
| Level of Study | ☐Bachelor | | | ☒ Master’s | | | | ☐ Doctoral |
| Type of Course | ☒ Obligatory | | | ☐ Elective | | | | |
| Semester | ☒ Autumn | | | ☐ Spring | | | | |
| Year of Study | 1 | | | | | | | |
| Number of ECTS Allocated | 6 | | | | | | | |
| Name of Lecturer/Lecturers | Vesna Stankov Jovanović | | | | | | | |
| Teaching Mode | ☒ Lectures | | | ☐ Group tutorials | | | | ☐ Individual tutorials |
| ☒ Laboratory work | | | ☐ Project work | | | | ☐ Seminar |
| ☐ Distance learning | | | ☐ Blended learning | | | | ☐ Other |
| **Purpose and Overview (max. 5 sentences)** | | | | | | | | |
| Acquiring theoretical and practical knowledge of modern optical instrumental methods of analysis, possibilities of their application, the selection of appropriate methods | | | | | | | | |
| **Syllabus (brief outline and summary of topics, max. 10 sentences)** | | | | | | | | |
| Introduction to optical methods of analysis. Qualitative optical spectrometric methods. Infrared spectroscopy. Raman spectroscopy. Nuclear magnetic resonance spectrometry. Electron spin resonance spectrometry. x-ray diffraction methods. Quantitative optical spectrometric methods. Atomic absorption spectrometry. Inductively coupled plasma spectrometry (optical emission and mass spectrometric detection). Atomic fluorescence spectrometry. x-ray fluorescence spectrometry. Visible and ultraviolet molecular spectrometry. Molecular fluorescent and phosphorescent spectrometry. Chemiluminescent spectrometry. Automation of optical methods of analysis. | | | | | | | | |
| **Language of Instruction** | | | | | | | | |
| ☒Serbian (complete course) | | ☒ English (complete course) | | | | | ☐ Other\_\_\_\_\_\_\_\_\_\_\_\_\_ (complete course) | |
| ☐Serbian with English mentoring | | ☐Serbian with other mentoring \_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | | | | |
| **Assessment Methods and Criteria** | | | | | | | | |
| **Pre exam Duties** | | **Points** | **Final Exam** | | | **Points** | | |
| **Activity During Lectures** | | **5** | **Written Examination** | | | **30** | | |
| **Practical Teaching** | | **20** | **Oral Examination** | | |  | | |
| **Teaching Colloquia** | | **45** | **Overall Sum** | | | **100** | | |
| **\*Final examination mark is formed in accordance with the Institutional documents** | | | | | | | | |