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|  **UNIVERSITY OF NIŠ** |
| **Course Unit Descriptor** | **Faculty**  | Faculty of Sciences and Mathematics |
| **GENERAL INFORMATION** |
| Study program  | Undergraduate academic studies |
| Study Module (if applicable) | Chemistry |
| Course title | Instrumental methods in organic chemistry |
| Level of study | x☐Bachelor ☐ Master’s ☐ Doctoral |
| Type of course | x☐ Obligatory ☐ Elective |
| Semester  |  ☐ Autumn x☐Spring |
| Year of study  |  |
| Number of ECTS allocated |  |
| Name of lecturer/lecturers |  |
| Teaching mode |  x☐Lectures ☐Group tutorials ☐ Individual tutorials x☐Laboratory work ☐ Project work x☐ Seminar ☐Distance learning ☐ Blended learning ☐ Other |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| To introduce students with theoretical knowledge and practical work of modern chromatographic, instrumental and combined methods for separating of organic mixtures and structural analysis of organic compounds. |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| Ultraviolet and visible spectroscopy (UV/VIS). Interpretation of UV/Vis spectra of different classes of organic compounds. Orbital and rotational spectroscopy. Characteristics and interpretation of infrared (IR) spectra of different classes of organic compounds. Proton and Carbon Nuclear Magnetic Resonance (1HNMR and 13CNMR). Electron spin resonance (ESR). Analysis of ESR spectra. Mass spectrometry (MS). MS spectra of some organic compounds. Interpretation of the gas and liquid chromatographic methods of separation and analysis (GC and HPLC). |
| **LANGUAGE OF INSTRUCTION** |
| x☐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** | 1-5 | **Written examination** | **0-50** |
| **Practical teaching** | 0-10 | **Oral examination** |  |
| **Teaching colloquia** | 0-50 | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |