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| **UNIVERSITY OF NIŠ** | | | | | | |
| **Course Unit Descriptor** | | **Faculty** | | | Faculty of Sciences and Mathematics  Department of Chemistry. | |
| **GENERAL INFORMATION** | | | | | | |
| Study program | | | | General Chemistry | | |
| Study Module (if applicable) | | | |  | | |
| Course title | | | | Advance course of instrumental chromatographic methods | | |
| Level of study | | | | ☐Bachelor x Master’s ☐ Doctoral | | |
| Type of course | | | | ☐ Obligatory x Elective | | |
| Semester | | | | ☐ Autumn x Spring | | |
| Year of study | | | | second | | |
| Number of ECTS allocated | | | | 5 | | |
| Name of lecturer/lecturers | | | | Goran Petrović, Ivan Palić | | |
| Teaching mode | | | | x Lectures ☐Group tutorials ☐ Individual tutorials  x Laboratory work ☐ Project work ☐ Seminar  ☐Distance learning ☐ Blended learning ☐ Other | | |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** | | | | | | |
| Gaining theoretical and practical knowledge in HPLC, GC/MS and GC/MS/MS analysis techniques. | | | | | | |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** | | | | | | |
| *Theorectical lectures*  Introduction, theoretical principles, structures and parts of HPLC devices. Preparing the device for sample injection. Adsorption and reversed phase chromatography. Analytical and preparative HPLC techniques. Introduction, theoretical principles, structures and parts of GC, GC/MS and GC/MS/MS devices. Types of ionization (EI, HI). Types of GC/MS and GC/MS/MS analysis (classical GC, headspace). Data analysis and software that is used (ChemStation, MassHunter, AMDIS).  *Practical training*  Analytical and preparative chromatography of selected samples. | | | | | | |
| **LANGUAGE OF INSTRUCTION** | | | | | | |
| x Serbian (complete course) ☐ English (complete course) ☐ Other \_\_\_\_\_\_\_\_\_\_\_\_\_ (complete course)  x Serbian with English mentoring ☐Serbian with other mentoring \_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | | | | |
| **ASSESSMENT METHODS AND CRITERIA** | | | | | | |
| **Pre exam duties** | **Points** | | **Final exam** | | | **points** |
| **Activity during lectures** | 10 | | **Written examination** | | |  |
| **Practical teaching** | 20 | | **Oral examination** | | | 50 |
| **Teaching colloquia** | 20 | | **OVERALL SUM** | | | 100 |
| **\*Final examination mark is formed in accordance with the Institutional documents** | | | | | | |