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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 | | | | Medicinal chemistry | | |
| Level of study | | | | ☐Bachelor ☒ Master’s ☐ Doctoral | | |
| Type of course | | | | ☐ Obligatory☒ Elective | | |
| Semester | | | | ☒ Autumn ☐Spring | | |
| Year of study | | | | 2. | | |
| Number of ECTS allocated | | | | 6 | | |
| Name of lecturer/lecturers | | | | Polina D. Blagojević | | |
| Teaching mode | | | | ☒Lectures ☐Group tutorials ☒ Individual tutorials  ☒Laboratory work ☐ Project work ☒ Seminar  ☐Distance learning ☐ Blended learning ☐ Other | | |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** | | | | | | |
| *This course will explore the basic principles of the design and action of drugs. Concepts presented will be applied in discussing principles of drug discovery, drug development, drug/receptor interactions and structure/activity relationships.* Total synthesis of selected pharmaceutical products will also be discussed. | | | | | | |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** | | | | | | |
| Biopharmaceutical properties of drug substances, pharmacological activity. Drug/receptor interactions.  Drug design. Combinatorial chemistry; libraries of compounds. Molecular descriptors and topological indices; molecular modeling (molecular mechanics, force fields, geometry optimization, conformational space). (Q)SAR analysis. Search of the chemical literature. Retrosynthetic analysis. Strategies in synthesis of bioactive and pharmacologically active substances; examples of total synthesis of pharmaceutical products. | | | | | | |
| **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 + student presentations** | **10+10** | | **Written examination** | | | **30** |
| **Practical teaching** | **10** | | **Oral examination** | | | **10** |
| **Teaching colloquia** | **30** | | **OVERALL SUM** | | | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** | | | | | | |