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|  **UNIVERSITY OF NIŠ** |
| **Course Unit Descriptor** | **Faculty**  | Faculty of Sciences and MathematicsDepartment of Chemistry |
| **GENERAL INFORMATION** |
| Study program  | Chemistry |
| Study Module (if applicable) | Research and development; High school chemistry professor; |
| Course title | Selected chapters of organic chemistry |
| Level of study | ☐Bachelor ☒ Master’s ☐ Doctoral |
| Type of course | ☒ Obligatory ☐ Elective |
| Semester  |  ☒ Autumn ☐Spring |
| Year of study  | first |
| Number of ECTS allocated | 7 |
| Name of lecturer/lecturers | Olga Jovanović |
| Teaching mode | ☒ Lectures ☐Group tutorials ☐ Individual tutorials ☒ Laboratory work ☐ Project work ☐ Seminar ☐Distance learning ☐ Blended learning ☐ Other |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| Gaining knowledge about the photochemical and electrochemical reactions. The structure, properties, and reactions of organic compounds of sulphur, phosphorus and silicon. Gaining knowledge about the properties, obtaining and reactions of heterocyclic organic compounds. |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| The photochemical reactions (photoreduction, photolysis, cycloaddition, isomerization and rearrangement, chemiluminescence and bioluminescence). The electrochemical reactions (electroreduction, electrooxidation). Organic compounds of phosphorus: phosphorus ylides, phosphorus nucleophile. Comparison of properties of Si and C and their compounds, nucleophilic substitution on silicon, silyl-ethers as protective groups. The organic compounds of sulfur (anions stabilized sulfur, allyl sulfides, sulfonium salt, sulfur ylides, cations stabilized sulfur, thiocarbonyl compounds, sulfoxides, thioacetals, allyl sulfides, epoxides, and [2,3] - sigmatropic rearrangement). The nomenclature of heterocyclic compounds. The structure, reactions, synthesis and application of three-,four-, five-, six-membered and larger heterocyclic compounds. Heterocyclic compounds with more than one heteroatom in the ring. Condensed heterocyclic compounds. |
| **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** | 40 |
| **Practical teaching** | 10 | **Oral examination** |  |
| **Teaching colloquia** | 45 | **OVERALL SUM** | 100 |
| **\*Final examination mark is formed in accordance with the Institutional documents** |