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| **Faculty of Sciences and Mathematics, UNIVERSITY OF NIŠ** |
| **Course Unit Descriptor** | **Faculty** |  |
| **GENERAL INFORMATION** |
| Study program  | **Postgraduate** |
| Study Module (if applicable) | Research and development |
| Course title | Theoretical inorganic chemistry |
| Level of study | ☐ Bachelor ☒ Master’s ☐ Doctoral |
| Type of course | ☒ Obligatory ☐ Elective |
| Semester  | ☒ Autumn ☐ Spring |
| Year of study  | Second |
| Number of ECTS allocated | 4 |
| Name of lecturer/lecturers | Ružica S. Nikolić |
| Teaching mode | ☒ Lectures ☒ Group tutorials ☐ Individual tutorials☐ Laboratory work ☐ Project work ☐ Seminar☐ Distance learning ☐ Blended learning ☐ Other |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| *Understanding of molecule formation, prediction of bond type in molecules. Prediction of molecule properties and methods of investigation according of chemical bond type.* |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| *Wave-mechanic model of atom structure. Wave function. Atomic orbitals (s-, p-, d-). Chemical bond. Molecular-orbital theory of small molecules and ligands. Chemical bonds in coordination compounds. Ionic bond. Structure of metals.* |
| **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** | **10** |
| **Practical teaching** | **15** | **Oral examination** | **20** |
| **Teaching colloquia** | **50** | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |