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|  **UNIVERSITY OF NIŠ** |
| **Course Unit Descriptor** | **Faculty**  | **Faculty of Sciences and Mathematics****Department of Biology and Ecology** |
| **GENERAL INFORMATION** |
| Study program  | **Biology** |
| Study Module (if applicable) | / |
| Course title | **Experimental Biochemistry** |
| Level of study | ☐Bachelor ☒ Master’s ☐ Doctoral |
| Type of course | ☐ Obligatory ☒ Elective |
| Semester  |  ☒ Autumn ☐Spring |
| Year of study  | Second |
| Number of ECTS allocated | 6 |
| Name of lecturer/lecturers | Tatjana Mitrović |
| Teaching mode |  ☒Lectures ☐Group tutorials ☐ Individual tutorials ☒Laboratory work ☐ Project work ☐ Seminar ☐Distance learning ☐ Blended learning ☐ Other |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| *Acquiring of knowledge about the techniques for isolation and characterisation of biomolecules.*  |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| **Basics of good laboratory practice (GLP). Experimental materials and techniques for their preparation (grinder, blender, French press, homogenisator, sonicator). Protein solubilisation. Protein separation (centrifugation, ultracentrifugation, electrophoresis, dialysis, chromatography). Protein sequencing. Protein detection (Western blot, immunostaining, RIA, ELISA, MS, NMR). Nucleic acids isolation. Nucleic acids electrophoresis. Southern blot, Northern blot. Nucleic acids sequencing. PCR, RT-PCR and Real Time PCR. DNA chips.** |
| **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+5** | **Written examination** | **/** |
| **Practical teaching** | **20** | **Oral examination** | **40** |
| **Teaching colloquia** | **30** | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |