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|  **UNIVERSITY OF NIŠ** |
| **Course Unit Descriptor** | **Faculty**  | Faculty of Sciences and MathematicsDepartment of Biology and Ecology |
| **GENERAL INFORMATION** |
| Study program  | Biology |
| Study Module (if applicable) | / |
| Course title | Laboratory animals in biological research |
| Level of study | [x] Bachelor [ ]  Master’s [ ]  Doctoral |
| Type of course | [ ]  Obligatory [x]  Elective |
| Semester  |  [x]  Autumn [ ] Spring |
| Year of study  | third |
| Number of ECTS allocated | 5 |
| Name of lecturer/lecturers | Ljubiša Đorđević |
| Teaching mode |  [x] Lectures [ ] Group tutorials [ ]  Individual tutorials [ ] Laboratory work [ ]  Project work [x]  Seminar [ ] Distance learning [ ]  Blended learning [ ]  Other |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| Acquiring basic knowledge in animal physiology. Learning about how to plan experiments with laboratory animals in order to minimize animal sacrifice. Getting Acquainted with the biological characteristics of the experimental animal. Familiarization with ethical principles during the work with laboratory animals |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| Finding an adequate animal model for research. The rule "3R" in biological research. The ethics of working with animals. Supply of laboratory animals. Standards of good laboratory practice. Taking care of animals, reproduction and breeding. Risks and precautions in working with laboratory animals. Treatments (biological, chemical, physical). Methods for administering of chemical and biological agents. Surgical methods. Biopsies. Parabiosis. Dissections. Preparations. Controls. Heterogeneous and homogeneous populations. Methods of randomization. Transgenic and knockout animals. Animal clones in biological research. |
| **LANGUAGE OF INSTRUCTION** |
| [x] 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 learning** | **5** |  |  |
| **Test** | **20** | **Oral examination** | **30** |
| **Teaching colloquia** | **30** | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |