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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 | | | | **Genetics** | | |
| Level of study | | | | ☒Bachelor ☐ Master’s ☐ Doctoral | | |
| Type of course | | | | ☒ Obligatory ☐ Elective | | |
| Semester | | | | ☒ Autumn ☐Spring | | |
| Year of study | | | | Third | | |
| Number of ECTS allocated | | | | 8 | | |
| 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)** | | | | | | |
| *Understanding of basic principles of inheritance at the level of cell, species and population. Introduction to genetic determination and regulation of all processes in the cell and organism. Knowledge of the genome organization and expression of bacteriophages, viruses, prokaryotes and eukaryotes.  The adoption of the basic laws of inheritance and variability of traits in individuals and populations.* | | | | | | |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** | | | | | | |
| **From genotype to phenotype – basic genetic principles and terms. The organization of the genome of bacteriophages, viruses, prokaryotes and eukaryotes. Corellation of structure and function in chromosomes. Genetics of bacteriophages, viruses, prokaryotes and eukaryotes. Chromosomal and gene mutation. Mechanisms of DNA reparation. Genetic control of cell cycle. Apoptosis. Trasduction of signals. Genetics of tumor. Genetic determination of sex. Genetics of aging. Mendelian genetics. Population genetics.** | | | | | | |
| **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** | | | **10** |
| **Practical teaching** | **20** | | **Oral examination** | | | **30** |
| **Teaching colloquia** | **30** | | **OVERALL SUM** | | | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** | | | | | | |