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|  **UNIVERSITY OF NIŠ** |
| **Course Unit Descriptor** | **Faculty**  | Faculty of Electronic Engineering |
| **GENERAL INFORMATION** |
| Study program  | **Computing and Informatics** |
| Study Module (if applicable) | Software Engineering |
| Course title | Advanced Software Engineering |
| Level of study | [ ] Bachelor [x]  Master’s [ ]  Doctoral |
| Type of course | [ ]  Obligatory [x]  Elective |
| Semester  |  [x]  Autumn [ ] Spring |
| Year of study  | 1 |
| Number of ECTS allocated | 4 |
| Name of lecturer/lecturers | Dejan D. Rančić, Aleksandar Lj. Milosavljević |
| Teaching mode |  [x] Lectures [x] Group tutorials [ ]  Individual tutorials [ ] Laboratory work [x]  Project work [ ]  Seminar [ ] Distance learning [ ]  Blended learning [ ]  Other |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| *Learning advanced methods for the development and evolution of software and methods for measuring the quality of software products and processes. Theoretical and practical knowledge on advanced methods, techniques and tools for the development and evolution of software products and quality measurement of software products and processes.* |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| **A brief review of software engineering. The evolution of software. Configuration management. Software metrics. Estimating the cost of software. Quality management. Improvement of the software process. Rapid software development - agile methods, extreme programming, prototyping. Reusable software. Component based software engineering. Security software development. Real-time software development. The development of multi-tier software systems. Methods of empirical research in software engineering.** |
| **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** | **10** | **Written examination** |  |
| **Practical teaching** | **30** | **Oral examination** | **30** |
| **Teaching colloquia** | **30** | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |