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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 operating systems |
| 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 | Dragan H. Stojanović |
| Teaching mode |  [x] Lectures [x] Group tutorials [ ]  Individual tutorials [x] Laboratory work [x]  Project work [x]  Seminar [ ] Distance learning [ ]  Blended learning [ ]  Other |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| *Comprehension of technologies, development directions, as well as design and implementation of contemporary operating systems and system software. Theoretical and practical knowledge about advanced concepts, internal design and implementation of contemporary operating systems and system software.* |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| **Advanced concepts, algorithms, technologies and implementation of contemporary operating systems components, such as process/thread management, process synchronization and communication, memory management, U/I device drivers, file system and network services. Multimedia operating systems. Security and protection in operating systems. Operating systems of multi-processor computers. Distributed operating systems. Operating system of mobile and embedded computers. Special purpose operating systems. Design and implementation of contemporary operating systems and system software. System programming of contemporary operating systems. Practical work on design and implementation of operating system components and appropriate system software over the set of lab exercise and practical project.** |
| **LANGUAGE OF INSTRUCTION** |
| [x] Serbian (complete course) [ ]  English (complete course) [ ]  Other \_\_\_\_\_\_\_\_\_\_\_\_\_ (complete course)[x] 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** | **40** |
| **Practical teaching** | **10** | **Oral examination** |  |
| **Teaching colloquia** | **40** | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |