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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 | Virtual and Augmented Reality Systems |
| Level of study | [ ] Bachelor [x]  Master’s [ ]  Doctoral |
| Type of course | [ ]  Obligatory [x]  Elective |
| Semester  |  [ ]  Autumn [x] 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)** |
| *Introduction to the field of virtual and augmented reality in terms of basic devices, algorithms, and techniques that are used to implement these systems. Students will gain knowledge on basic principles, devices, techniques, and algorithms used in implementing virtual and augmented reality systems.* |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| **Introduction of the field of virtual and augmented reality with historical overview. Virtual reality system architecture. Input and output devices for virtual reality. Gestural and haptic interfaces. Geometric modeling of virtual objects. Kinematic and physical modeling. Virtual worlds. Augmented reality in the reality-virtuality continuum. Classifications of augmented reality systems. Techniques for pose estimation in augmented reality systems. Augmented virtual environments. Application areas and examples of virtual and augmented reality systems.** |
| **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** |