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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 | Ubiquitous computing |
| 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 | 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)** |
| *Acquiring theoretical and practical knowledge in ubiquitous computing domain, particularly fundamental concepts, method and technologies for design and implementation of mobile and ubiquitous systems, applications and services. Theoretical and practical knowledge about principles, methods, technologies and software tools for development of mobile and ubiquitous applications and services in ubiquitous computing.* |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| **Ubiquitous computing vision. Mobile and ubiquitous computer, communication and sensor devices. Advanced wireless and ad-hoc networks. Positioning technologies and location-based ubiquitous applications. Sensing and acquisition of context in ubiquitous computing and development of ubiquitous context-aware systems, applications and services. Smart labels (barcodes) and RFID. Data management in mobile and ubiquitous computing. Wireless sensor network platforms and systems. Human interaction with ubiquitous computer systems. Activity recognition. Wearable computing. Privacy and security in ubiquitous computing. Advance applications and services: smart home, ubiquitous health care, intelligent transportation systems, monitoring and control, environmental protection, etc.****Practical work on design and implementation of ubiquitous system components and application over the set of lab exercise and practical project that follows topics covered at theoretical classes.** |
| **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** |