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| **UNIVERSITY OF NIŠ** |
| **Course Unit Descriptor** | **Faculty** | Faculty of Mechanical Engineering in Nis |
| **GENERAL INFORMATION** |
| Study Program | **Mechanical Engineering** |
| Study Module (if applicable) | - |
| Course Title |  Ubiquitous computing |
| Level of Study |  Bachelor | ☐ Master’s | x Doctoral |
| Type of Course | ☐ Obligatory | ☒ Elective |
| Semester | ☒ Autumn | ☐ Spring |
| Year of Study | II |
| Number of ECTS Allocated | 10 |
| Name of Lecturer/Lecturers | Miroslav D. Trajanovic |
| Teaching Mode | ☒ Lectures | ☐ Group tutorials | ☐ Individual tutorials |
| ☒ Laboratory work | x Project work | x Seminar |
| ☐ Distance learning | ☐ Blended learning | ☐ Other |
| **Purpose and Overview (max. 5 sentences)** |
| To enable students to perform the independent, methodologically founded research in the field of ubiquitous computing. Students will be capable to independently analyse a case study, related to application of the ubiquitous computing technologies in the selected domain, including development of relevant domain and application models. |
| **Syllabus (brief outline and summary of topics, max. 10 sentences)** |
| * Basic concepts and principles of ubiquitous computing
* Paradigms of Internet-of-Services and Internet-of-Things: technologies, business models, architectures and models, standards, domain applications
* Cyber Physical Systems
* Basic concepts and principles of Wireless Sensor Networks: technologies, interoperability in Wireless Sensor Networks, models and ontologies of Wireless Sensor Networks
* Domain applications of Wireless Sensor Networks: environment, manufacturing and logistics, healthcare and prevention, clinical applications, agriculture, military, etc.

Defining requirements, business models and modelling the architectures of ubiquitous computing in the selected domain |
| **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** |  | **Written Examination** |  |
| **Practical Teaching** | **70** | **Oral Examination** | **30** |
| **Teaching Colloquia** |  | **Overall Sum** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |