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|  **UNIVERSITY OF NIŠ** |
| **Course Unit Descriptor** | **Faculty**  | Faculty of Electronic Engineering |
| **GENERAL INFORMATION** |
| Study program  | Electronics and Microsystem |
| Study Module (if applicable) | Electronic Devices and Microsystem |
| Course title | Microsensors and Microsystems |
| Level of study |  Bachelor x Master’s ☐ Doctoral |
| Type of course |  Obligatory x Elective |
| Semester  |  Autumn xSpring |
| Year of study  | 5 |
| Number of ECTS allocated | 5 |
| Name of lecturer/lecturers | Janković D. Nebojša |
| Teaching mode |  xLectures ☐Group tutorials ☐ Individual tutorials xLaboratory work x Project work ☐ Seminar ☐Distance learning ☐ Blended learning ☐ Other |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| Acquiring the knowledge needed to understand the application of modern sensors in measuring and controlling systems. Students became capable of understanding the microsytem principals and independently be able to connect sensors with microcontrollers forming a basic microsystem.  |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| Introduction to microsensors technologies. Integrated microsensors: thermal, optical, magnetic, velocity and accelerometer sensors, chemical sensors, biosensors. Microsystems design and operation. Microsensors and microcontrollers. Interface circuits. Analog to digital conversion. Data processing in time domain. Microcontroller programming. Standards and protocols.  |
| **LANGUAGE OF INSTRUCTION** |
| xSerbian (complete course) x 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** | **40** | **Oral examination** | **50** |
| **Teaching colloquia** |  | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |