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|  **UNIVERSITY OF NIŠ** |
| **Course Unit Descriptor** | **Faculty**  | Faculty of Science and Mathematics |
| **GENERAL INFORMATION** |
| **Study program**  | **Physics** |
| Study Module (if applicable) | Experimental and Applied Physics |
| Course title | Sensors and Transducers Physics |
| 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 | 6 |
| Name of lecturer/lecturers | Zoran Pavlović |
| Teaching mode |  [x] Lectures [ ] Group tutorials [ ]  Individual tutorials [x] Laboratory work [ ]  Project work [x]  Seminar [ ] Distance learning [ ]  Blended learning [ ]  Other |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| The course aims to introduce students to the concepts of physical measurements and the sensors and the transducer.Acquired knowledge is necessary for further scientific and professional work, research work and application of sensors, transducer and measurements. |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
|  Overview of errors and statistical measurements data analysis, characteristics of signal and transducer dynamic characteristics. Methods measurements of physical quantities. Physical electronics of electronic components and sensors: force and stress, displacement, pressure, fluid flow rate, temperature, liquid level, humidity, magnetic induction, timing sensors, optical and photo sensors, fiber optics, nuclear and cosmic radiation, and others. Acquisition and data processing. A computer measuring systems and robots. Modern technology of the sensor.  |
| **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** | **5** | **Written examination** | **20** |
| **Practical teaching** | **15** | **Oral examination** | **20** |
| **Teaching colloquia** | **40** | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |