|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **UNIVERSITY OF NIŠ** | | | | | | |
| **Course Unit Descriptor** | | **Faculty** | | | Faculty of Science and Mathematics | |
| **GENERAL INFORMATION** | | | | | | |
| **Study program** | | | | **Physics** | | |
| Study Module (if applicable) | | | |  | | |
| Course title | | | | Physics Measurements and Sensors | | |
| Level of study | | | | Bachelor  Master’s  Doctoral | | |
| Type of course | | | | Obligatory  Elective | | |
| Semester | | | | Autumn Spring | | |
| Year of study | | | | 1 | | |
| Number of ECTS allocated | | | | 6 | | |
| Name of lecturer/lecturers | | | | Zoran Pavlović | | |
| Teaching mode | | | | Lectures Group tutorials  Individual tutorials  Laboratory work  Project work  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.  Acquired knowledge is necessary for further scientific and professional work, research work and application of sensors and measurements. | | | | | | |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** | | | | | | |
| 1. Sensors, converters, characteristics of measuring signals. Overview of theory errors and statistical measurements data analysis.  2. Dynamics and static characteristics of inverters and sensors.  3. Methods measurement of physical quantities.  4. Acquisition and Data Processing. A computer measuring systems.  5. Physical Electronics of electronic components and sensors: force and stress, displacement, pressure, fluid flow rate, temperature, liquid level, humidity, magnetic induction, timing sensors, optical sensors, fiber optics, nuclear and cosmic radiation, and others.  6. Modern technology of the sensor.  7. A computer measuring systems and robots. | | | | | | |
| **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** | **10** | | **Written examination** | | | **30** |
| **Practical teaching** | **20** | | **Oral examination** | | | **30** |
| **Teaching colloquia** | **10** | | **OVERALL SUM** | | | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** | | | | | | |