|  |
| --- |
|  **UNIVERSITY OF NIŠ** |
| **Course Unit Descriptor** | **Faculty**  | Electronic Engineering |
| **GENERAL INFORMATION** |
| Study program  | Electrical Engineering and Computing |
| Study Module (if applicable) | Telecommunications |
| Course title | Basics of Electronics |
| Level of study | [x] Bachelor [ ]  Master’s [ ]  Doctoral |
| Type of course | [x]  Obligatory [ ]  Elective |
| Semester  |  [x]  Autumn [ ] Spring |
| Year of study  | 2 |
| Number of ECTS allocated | 6 |
| Name of lecturer/lecturers | Petković M. Predrag, Pavlović D. Vlastimir, Milovanović P. Dragiša |
| Teaching mode |  [x] Lectures [ ] Group tutorials [ ]  Individual tutorials [x] Laboratory work [ ]  Project work [ ]  Seminar [ ] Distance learning [ ]  Blended learning [ ]  Other |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| Acquiring basic knowledge of electronics, amplifying techniques, oscillators, rectifiers and voltage regulators. Students will be able to recognize schematics, understand the principle of operation, and to understand the application of basic electronic circuits: amplifiers, oscillators of sinewave signals, rectifiers and voltage regulators. |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| Diodes and diode circuits. Bipolar transistor, operating point and and load line. Model of bipolar transistors. MOSFET transistor,operating point and and load line. Model MOSFET transistors. Basic amplifier stages with bipolar and MOSFET transistor. Multistage amplifiers. Amplifier with direct coupling. Differential and operational amplifier. Application of operational amplifiers. Negative feedback. Oscillators. Large-signal amplifiers. Rectifiers and voltage regulators. |
| **LANGUAGE OF INSTRUCTION** |
| [x] Serbian (complete course) [x]  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** | **20** |
| **Practical teaching** | **10** | **Oral examination** | **20** |
| **Teaching colloquia** | **40** | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |