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| **UNIVERSITY OF NIŠ** | | | | | | |
| **Course Unit Descriptor** | | **Faculty** | | | **Electronic Engineering** | |
| **GENERAL INFORMATION** | | | | | | |
| Study program | | | | Telecommunications | | |
| Study Module (if applicable) | | | | Telecommunications and Signal Processing | | |
| Course title | | | | Lasers Techniques and Applications | | |
| Level of study | | | | Bachelor  Master’s  Doctoral | | |
| Type of course | | | | Obligatory  Elective | | |
| Semester | | | | Autumn Spring | | |
| Year of study | | | | 1 | | |
| Number of ECTS allocated | | | | 4 | | |
| Name of lecturer/lecturers | | | | Paunović V. Vesna | | |
| Teaching mode | | | | Lectures Group tutorials  Individual tutorials  Laboratory work  Project work  Seminar  Distance learning  Blended learning  Other | | |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** | | | | | | |
| Introduction to the laser light sources, their excitation and structures, and applications in various fields of technology, medicine and consumer products. | | | | | | |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** | | | | | | |
| Laser techniques as part of optoelectronics and its role in electronics, especially in telecommunications. Spontaneous and stimulated emission. Semiconductor lasers and their applications in telecommunications. The characteristics and limitations of the laser. Quantum optoelectronics. Sources and transmissions of light. Complex optical and electro-structures of telecommunication systems. Design, construction and manufacturing base excitation optoelectronic circuits. | | | | | | |
| **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** | **15** | | **Written examination** | | | **25** |
| **Practical teaching** | **15** | | **Oral examination** | | | **25** |
| **Teaching colloquia** | **20** | | **OVERALL SUM** | | | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** | | | | | | |