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| **UNIVERSITY OF NIŠ** | | | | | | |
| **Course Unit Descriptor** | | **Faculty** | | | Faculty of Electronic Engineering | |
| **GENERAL INFORMATION** | | | | | | |
| Study program | | | | Electrical Engineering and Computing | | |
| Study Module (if applicable) | | | | Telecommunications | | |
| Course title | | | | Digital Telecommunications 1 | | |
| Level of study | | | | x☐Bachelor ☐ Master’s ☐ Doctoral | | |
| Type of course | | | | x☐ Obligatory☐ Elective | | |
| Semester | | | | ☐ Autumn x☐Spring | | |
| Year of study | | | | 2. | | |
| Number of ECTS allocated | | | | 6 | | |
| Name of lecturer/lecturers | | | | Perić H. Zoran, Nikolić R. Jelena | | |
| 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)** | | | | | | |
| The goal is to gain the knowledge in the field of continuous signal digitalization and in the field of different kinds of transmission systems. Student who passes the final exam is able to apply the theoretical knowledge in solving practical problems related to the digitalization of continuous signals and to signal transmission through different systems. | | | | | | |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** | | | | | | |
| Features of the speech and image signals. Uniform and nonuniform scalar quantization. Asymptotic analysis of scalar quantization and algorithm for optimal scalar quantizer design. Standards for digitalization of continuous signals. PCM transmission system and its features. Synchronization of RAM. Delta modulation and different types of delta modulation. DPCM transmission system and its features. ADPCM transmission system and its features. | | | | | | |
| **LANGUAGE OF INSTRUCTION** | | | | | | |
| x☐Serbian (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** | **5** | | **Written examination** | | | **20** |
| **Practical teaching** | **10** | | **Oral examination** | | | **20** |
| **Teaching colloquia** | **45** | | **OVERALL SUM** | | | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** | | | | | | |