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|  **UNIVERSITY OF NIŠ** |
| **Course Unit Descriptor** | **Faculty** | Faculty of Electronic Engineering  |
| **GENERAL INFORMATION** |
| Study program  | Control Systems |
| Study Module (if applicable) | Computer Control Systems and Measurement Techniques |
| Course title | Mobile Communication Systems |
| Level of study |  Bachelor X Master’s ☐ Doctoral |
| Type of course |  Obligatory X Elective |
| Semester  |  Autumn XSpring |
| Year of study  | 1 |
| Number of ECTS allocated | 4 |
| Name of lecturer/lecturers | Marković V. Vera |
| Teaching mode | XLectures ☐Group tutorials ☐ Individual tutorials☐Laboratory work ☐ Project work ☐ Seminar☐Distance learning ☐ Blended learning ☐ Other |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| *Objectives: Mastering the knowledge and skills in mobile communication systems. Introduction to the basic principles and techniques of mobile communications, as well as the specifics of current and future mobile systems and services that they offer.* *Outcomes: Ability to understand the basic principles of mobile communication. Knowledge of the architecture and functioning of the most important representatives of 2G, 2.5G and 3G mobile systems. Knowledge of the basic principles of LTE systems and trends in mobile communications development.* |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| The evolution of mobile communication systems. Cellular approach. Propagation modeling in mobile communications. GSM system. Mobile station. Base station. Other parts of the system architecture. Features and services of the GSM system. 2,5G mobile systems. Architecture, features and services of 3G systems (UMTS). Techniques for fast packet access - HSPA and HSPA +. LTE systems - basic features and architecture. Development trends of mobile communications systems. The fixed-mobile convergence. Regulations in the field of mobile communications systems and safety of non-ionizing radiation. |
| **LANGUAGE OF INSTRUCTION** |
| XSerbian (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** | **10** | **Written examination** | **20** |
| **Practical teaching** |  | **Oral examination** | **20** |
| **Teaching colloquia** | **50** | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |