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|  **UNIVERSITY OF NIŠ** |
| **Course Unit Descriptor** | **Faculty** | **Faculty of Electronic Engineering** |
| **GENERAL INFORMATION** |
| Study program  | Control Systems, Electronics and Microsystems, Telecommunications |
| Study Module (if applicable) | Automatic Control, Computer Control Systems and Measurement Techniques, Electronics, Telecommunications and Signal Processing |
| Course title | Telemetry |
| Level of study |  Bachelor ☐**X** Master’s ☐ Doctoral |
| Type of course | Obligatory **X** Elective |
| Semester  |  **X** Autumn ☐Spring |
| Year of study  | **First** |
| Number of ECTS allocated | **4** |
| Name of lecturer/lecturers | DeniæB. Dragan, Periæ H. Zoran |
| Teaching mode | **X** Lectures **X** Group tutorials **X**  Individual tutorials**X** Laboratory work ☐ Project work ☐ Seminar**X** Distance learning ☐ Blended learning ☐ Other |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| The course has the goal to introduce students with basic transmission techniques of measurement signals and with a number of modern measurement systems configurations for remote measurement. Capability of basic problems defining related to transmission of measurement signals and to realisation of modern measurement systems for remote measurement. Designing of simple telemetry systems examples and estimation fulfillment of standards. Capability of working with modern measurement systems for distant measurement. |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| Basic terms and definitions; pneumatic telemetry systems; analog telemetry systems, frequency and pulse-width modulation; transmitters; two-wire transmitters, serial and parallel power sources; analysis of concrete two-wire transmitter examples, analogue and digital telemetry systems; delta modulation; digital telemetry systems; FSK (frequency-shift keying) modulation; pulse code modulation (PCM); digital transmitters; digital two-wire transmitters; universal asynchronous receiver-transmitter; computer based telemetry systems; standard interface systems; modems; automotive telemetry systems; fiberoptic telemetry systems; industrial telemetry systems, biotelemetry, virtual instrumentation and Internet in telemetry systems; connection of distant measurement systems, distributed virtual laboratories; telemetry system testing; telemetry standards. |
| **LANGUAGE OF INSTRUCTION** |
| **X** 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 65** | **Final exam**  | **Points 35** |
| **Activity during lectures** | **5** | **Written examination**  | **20** |
| **Practical teaching** | **20** | **Oral examination**  | **15** |
| **Teaching colloquia** | **40** | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |