|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **UNIVERSITY OF NIŠ** | | | | | | | | |
| **Course Unit Descriptor** | | | **Faculty** | | Pedagogical Faculty in Vranje | | | |
| **GENERAL INFORMATION** | | | | | | | | |
| Study program | Technical Education and Informatics | | | | | | | |
| Study Module (if applicable) | / | | | | | | | |
| Course Title | Basics of Mechatronics | | | | | | | |
| Level of Study | ☐Bachelor | | | ☒ Master’s | | | | ☐ Doctoral |
| Type of Course | ☐ Obligatory | | | ☒ Elective | | | | |
| Semester | ☒ Autumn | | | ☐ Spring | | | | |
| Year of Study | Fourth | | | | | | | |
| Number of ECTS Allocated | 4 | | | | | | | |
| Name of Lecturer/Lecturers | Nenad T. Pavlović | | | | | | | |
| Teaching Mode | ☒ Lectures | | | ☐ Group tutorials | | | | ☐ Individual tutorials |
| ☒ Laboratory work | | | ☒ Project work | | | | ☐ Seminar |
| ☐ Distance learning | | | ☐ Blended learning | | | | ☐ Other |
| **Purpose and Overview (max. 5 sentences)** | | | | | | | | |
| *Getting the knowledge about the mechatronics as an interdisciplinary field. Introducing of the basic working principles of the mechatronic components and complex mechatronic systems. Introducing of implemented mechatronic systems and outlook of further development of mechatronics.* | | | | | | | | |
| **Syllabus (brief outline and summary of topics, max. 10 sentences)** | | | | | | | | |
| Introduction. Mechanical, electrical and mechatronic systems.  Structure of mechatronic systems.  Basics of development and design of mechatronic systems.  Sensors and implementation of measurement technique in mechatronics.  Actuators in mechatronic systems.  Implementation of electronics in mechatronics.  Basics of mechatronic systems control.  Modelling in mechatronics.  Realization of mechatronic systems. | | | | | | | | |
| **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** | | **10** | **Written Examination** | | | **40** | | |
| **Practical Teaching** | | **10** | **Oral Examination** | | | **40** | | |
| **Teaching Colloquia** | | **0** | **Overall Sum** | | | **100** | | |
| **\*Final examination mark is formed in accordance with the Institutional documents** | | | | | | | | |