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| **UNIVERSITY OF NIŠ** | | | | | | | | |
| **Course Unit Descriptor** | | | **Faculty** | | Faculty of Mechanical Engineering | | | |
| **GENERAL INFORMATION** | | | | | | | | |
| Study Program | **Mechanical Engineering** | | | | | | | |
| Study Module (if applicable) | - | | | | | | | |
| Course Title | Optical Elements in Mechatronics | | | | | | | |
| Level of Study | ☒Bachelor | | | ☐ Master’s | | | | ☐ Doctoral |
| Type of Course | ☐ Obligatory | | | ☒ Elective | | | | |
| Semester | ☒ Autumn | | | ☐ Spring | | | | |
| Year of Study | III | | | | | | | |
| Number of ECTS Allocated | 6 | | | | | | | |
| 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)** | | | | | | | | |
| *Complement of the basic knowledge in physics in the fields of geometric optics, wave optics and optical transformation.*  *Gaining new knowledge in the field of lens, apertures, optical instruments and digital image processing.*  *The ability to calculate and use the optical elements in order to realize corresponding functions in mechatronic devices.*  *The ability to measure and calibrate by means of optical devices.* | | | | | | | | |
| **Syllabus (brief outline and summary of topics, max. 10 sentences)** | | | | | | | | |
| Geometric optics. Wave optics. Optical transformations. Lens. Apertures. Optical instruments. Basics of digital image processing. | | | | | | | | |
| **Language of Instruction** | | | | | | | | |
| ☒Serbian (complete course) | | ☐ English (complete course) | | | | | ☐ Other \_\_\_\_\_\_\_\_\_\_\_\_\_ (complete course) | |
| ☒Serbian with English mentoring | | ☒Serbian with German mentoring | | | | | | |
| **Assessment Methods and Criteria** | | | | | | | | |
| **Pre exam Duties** | | **Points** | **Final Exam** | | | **Points** | | |
| **Activity During Lectures** | | **10** | **Written Examination** | | | **30** | | |
| **Practical Teaching** | | **30** | **Oral Examination** | | | **30** | | |
| **Teaching Colloquia** | | **0** | **Overall Sum** | | | **100** | | |
| **\*Final examination mark is formed in accordance with the Institutional documents** | | | | | | | | |