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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** |