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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 | Metal constructions | | | | | | | | |
| Level of Study | ☒Bachelor | | | | ☐ Master’s | | | | ☐ Doctoral |
| Type of Course | ☐ Obligatory | | | | ☒ Elective | | | | |
| Semester | ☒ Autumn | | | | ☐ Spring | | | | |
| Year of Study | IV | | | | | | | | |
| Number of ECTS Allocated | 6 | | | | | | | | |
| Name of Lecturer/Lecturers | Miomir Lj. Jovanović | | | | | | | | |
| Teaching Mode | ☒ Lectures | | | | ☐ Group tutorials | | | | ☐ Individual tutorials |
| ☒ Laboratory work | | | | ☒ Project work | | | | ☐ Seminar |
| ☐ Distance learning | | | | ☐ Blended learning | | | | ☐ Other |
| **Purpose and Overview (max. 5 sentences)** | | | | | | | | | |
| *Acquiring of general knowledge in the field of constructive realisation of metal structures, types of loads and calculation methods evaluation proof of safety. Engineering Design of Structure Connections. Application of standards Eurocode EC3.* | | | | | | | | | |
| **Syllabus (brief outline and summary of topics, max. 10 sentences)** | | | | | | | | | |
| *1. Introduce to the steel and light Structures and Application, 2. Frame classification and Joint representation, Materials according to EN 10025/137, ( Stability, Strength, Fatigue, Limit state) 3. Action on structures, 4. Means of Connection the structural parts, 5. Pinned-Rigid joint approach to design, 6. Local Buckling of Section and Imperfections, 7. Design of tension members (truss) and Connections , 8. Design of Biaxial bending of frame structures and Connections,*  *9. Buckling of beam and columns , 10. Constructive realisations: Single Sided Joint configurations, Design of Beam splices, Design of Column/Conncrete Conections, 11. Welded Profiled Connections, 12. Tipical welded Connection, Check and Constructive Design , 12. EC3.8.1 EuroNorm for Metal Connections, Examples of typical joint solutions. 13. Statical Structural Analysis, 14. Instructions for exam. Preparatory examination.* | | | | | | | | | |
| 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** | | **5** | | **Written Examination** | | | | **(Three Colloquiums) 60** | |
| **Practical Teaching** | | **5** | | **Final (oral) Examination** | | | | **Max. 30** | |
| **Teaching Colloquia (projects)** | | **60** | | **Overall Sum** | | | | **100** | |
| **\*Final examination mark is formed in accordance with the Institutional documents** | | | | | | | | | |