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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 | Structural construction analysis |
| Level of Study | ☒Bachelor | ☐ Master’s | ☐ Doctoral |
| Type of Course | ☐ Obligatory | ☒ Elective |
| Semester | ☐ Autumn | ☒ Spring |
| Year of Study | IV |
| Number of ECTS Allocated | 5 |
| 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)** |
| *Introduction to Structural Analysis and Design. Engineering Calculation of main test and parts of crane structures.* *Acquirement of Ability to creations typical structural analysis and Engineering solution of Constructions. FEM modeling. Building of Ability of Computer applications and practical realisations.*  |
| **Syllabus (brief outline and summary of topics, max. 10 sentences)** |
| *1. Introduce to the Supporting Structures of Industrial Machines and Objects, 2. Classification of methods and Engineering access, 3. Action to Supporting Constructions, 4. FEM techniques of Structural Analysis, 5. Linear and nonlinear statical Analysis, 6. Modal Analysis, 7. Dynamical Analysis (Frequency Analysis, Transient Analysis, Seismic Analysis),*   *8. Beam, Rod, Plate and Solid Finite Element Model applications, 9. Examples (Latice an Continual Structures), 10. Instructions for Exam.*  |
| 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** |