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|  **UNIVERSITY OF NIŠ** |
| **Course Unit Descriptor** | **Faculty**  | **Faculty of Civil Engineering and Architecture** |
| **GENERAL INFORMATION** |
| Study program  | **Civil Engineering** |
| Study Module (if applicable) | Structural engineering |
| Course title | Special metal structures |
| Level of study | Master’s  |
| Type of course | Elective |
| Semester  | Autumn  |
| Year of study  | 1st |
| Number of ECTS allocated | 5 |
| Name of lecturer/lecturers | Todor Vacev; Srđan Živković |
| Teaching mode | Lectures; Group tutorials; Seminar |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| Student is qualified for design and detailing of special metal structures.Introducing into the design and and detailing of special metal structures (towers, masts, power-line columns, chimneys, silos, bunkers, tanks, water-towers, pipelines, hydrotechnical structures, hanging structures, prestressed metal structures. |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| Introduction and application of steel structures for special civil engineering objects.Towers, masts, chimneys, and power-line columns: disposition, loads, basics of design, detailing, erection.Tanks and watertowers: disposition, loads, basics of design, detailing, erection. Silos and bunkers: disposition, loads, basics of design, detailing, erection.Pipelines and hydraulic structures (dams and locks).Hanging roof structures: fields of application, classification, bearing cables, cable connections. Hanging roof structures (cable stayed structures, single/double-layer roof structures), waved and corrugated roof structures. Prestressed metal structures: systems, application.Seminary work on two topics/structural types by student´s choice. Visiting of a construction site/finished object. |
| **LANGUAGE OF INSTRUCTION** |
| Serbian (complete course)  |
| **ASSESSMENT METHODS AND CRITERIA** |
| **Pre exam duties** | **Points** | **Final exam** | **points** |
| **Activity during lectures** |  | **Written examination** | **40** |
| **Practical teaching** | **60** | **Oral examination** |  |
| **Teaching colloquia** |  | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |