



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	<input checked="" type="checkbox"/> Bachelor	<input type="checkbox"/> Master's	<input type="checkbox"/> Doctoral
Type of Course	<input type="checkbox"/> Obligatory	<input checked="" type="checkbox"/> Elective	
Semester	<input checked="" type="checkbox"/> Autumn	<input type="checkbox"/> Spring	
Year of Study	IV		
Number of ECTS Allocated	6		
Name of Lecturer/Lecturers	Miomir Lj. Jovanović		
Teaching Mode	<input checked="" type="checkbox"/> Lectures	<input type="checkbox"/> Group tutorials	<input type="checkbox"/> Individual tutorials
	<input checked="" type="checkbox"/> Laboratory work	<input checked="" type="checkbox"/> Project work	<input type="checkbox"/> Seminar
	<input type="checkbox"/> Distance learning	<input type="checkbox"/> Blended learning	<input type="checkbox"/> 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/Concrete Connections, 11. Welded Profiled Connections, 12. Typical 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
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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			