



UNIVERSITY OF NIŠ

Course Unit Descriptor

Faculty

Faculty of Mechanical Engineering

GENERAL INFORMATION

Study Program	Mechanical Engineering		
Study Module (if applicable)	-		
Course Title	Industrial Furnaces		
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	Mladen M. Stojiljković		
Teaching Mode	<input checked="" type="checkbox"/> Lectures	<input checked="" type="checkbox"/> Group tutorials	<input type="checkbox"/> Individual tutorials
	<input checked="" type="checkbox"/> Laboratory work	<input type="checkbox"/> Project work	<input checked="" type="checkbox"/> Seminar
	<input type="checkbox"/> Distance learning	<input type="checkbox"/> Blended learning	<input type="checkbox"/> Other

Purpose and Overview (max. 5 sentences)

Introduce students to the basics of industrial furnaces (materials, fuels, combustion, heat transfer), classification, principles of calculations and sizing, as well as different types of furnaces. Students are supposed to acquire knowledge for industrial furnaces design and maintenance.

Syllabus (brief outline and summary of topics, max. 10 sentences)

(1) Materials of industrial furnaces. (2) Fuels and combustion. (3) Thermal fundamentals. Gases flow. Heat transfer. Metal heating. Air heating. Mass and heat balance. (4) Elements and equipment. (5) Classification and principles of calculations. (6) Furnaces for metal heating. (7) Furnaces for metal melting. (8) Furnaces in non-metal industry. (9) Furnaces in chemical industry. (10) Furnaces for waste combustion.

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	Max. 50 (depending on pre exam duties)

Practical Teaching	5	Oral Examination	50
Teaching Colloquia	5+5=10	Overall Sum	100

***Final examination mark is formed in accordance with the Institutional documents**