



UNIVERSITY OF NIŠ

Course Unit Descriptor

Faculty

Faculty of Mechanical Engineering

GENERAL INFORMATION

Study Program	Mechanical Engineering		
Study Module (if applicable)	-		
Course Title	TRANSIENT PROCESSES IN ENERGY AND PROCESS ENGINEERING		
Level of Study	<input type="checkbox"/> Bachelor	<input type="checkbox"/> Master's	<input checked="" type="checkbox"/> Doctoral
Type of Course	<input type="checkbox"/> Obligatory	<input checked="" type="checkbox"/> Elective	
Semester	<input type="checkbox"/> Autumn	<input checked="" type="checkbox"/> Spring	
Year of Study	I		
Number of ECTS Allocated	10		
Name of Lecturer/Lecturers	Živković S. Dragoljub, Blagojević D. Bratislav, Stefanović P. Velimir, Stojanović V. Branislav		
Teaching Mode	<input checked="" type="checkbox"/> Lectures	<input type="checkbox"/> Group tutorials	<input type="checkbox"/> Individual tutorials
	<input type="checkbox"/> Laboratory work	<input checked="" 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)

- To introduce students to various phenomena occurring during transport processes in energy and process engineering.
- To enable students for independent problem solving based on scientific principals and to solve various problems in the field of energy and process engineering.

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

1) Transient processes in thermal energy plants; 2) Mathematical models of flow processes with focus on distributed parameters; 3) Mathematical models of thermodynamic-flow processes with focus on distributed parameters; 4) Dynamics of heat exchangers; 5) Dynamics of machines and engines; 6) Transient processes in boiler facilities; 7) Transient processes in steam turbines; 8) Transient processes in nuclear-energy plants; 9) Transient processes during regulation of steam block with constant pressure; 10) Transient processes during regulation of steam block with sliding pressure; 11) Transient processes in gas-turbine plants; 12) Dynamics of cooling facilities; 13) Dynamics of heating and ventilation facilities.

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	50
Practical Teaching	10	Oral Examination	Max. 35 (depending on Teaching Colloquia)
Teaching Colloquia	35	Overall Sum	100
*Final examination mark is formed in accordance with the Institutional documents			