



# UNIVERSITY OF NIŠ

**Course Unit Descriptor**

**Faculty**

Faculty of Mechanical Engineering

## GENERAL INFORMATION

Study Program	<b>Mechanical Engineering</b>		
Study Module (if applicable)	-		
Course Title	Compressors and Fans		
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	III		
Number of ECTS Allocated	6		
Name of Lecturer/Lecturers	Saša Milanović, Jasmina B. Bogdanović-Jovanović		
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)

The aim of the course is introducing students to compressors and fans, their constructive performances, operating characteristics and regulation of their work in the system. Students are trained to make a proper selection of the compressor or the fan, according to the needs of the power systems, to calculate their operating parameters and to define the required method of regulation.

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

1) General introduction to compressors and fans, classification and operating parameters. 2) Thermodynamics of gas compression, thermodynamic properties of gases and changes of gas conditions in the compressor. 3) Pressure rise and specific work of compressors, 4) Efficiency of compressors. 5) Piston compressors, construction, performance and regulation. 6) Centrifugal compressors, flow characteristics of the compressor elements and basics of calculation. 7) Axial-flow compressors, flow characteristics and basics of calculation. 8) Operating characteristics. 9) Centrifugal and axial-flow fans. 10) Fan designing, operating parameters and regulation.

## 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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<b>Activity During Lectures</b>	<b>5</b>	<b>Written Examination</b>	<b>Max 40, depending on Teaching Colloquia</b>
<b>Practical Teaching</b>	<b>5</b>	<b>Oral Examination</b>	<b>50</b>
<b>Teaching Colloquia</b>	<b>40</b>	<b>Overall Sum</b>	<b>100</b>
<b>*Final examination mark is formed in accordance with the Institutional documents</b>			