



# 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	Selected Topics in Mechanical and Hydromechanical Operations		
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 checked="" type="checkbox"/> Autumn	<input type="checkbox"/> Spring	
Year of Study	II		
Number of ECTS Allocated	10		
Name of Lecturer/Lecturers	Velimir P. Stefanović, Predrag M. Živković		
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 type="checkbox"/> Seminar
	<input type="checkbox"/> Distance learning	<input type="checkbox"/> Blended learning	<input type="checkbox"/> Other

**Purpose and Overview (max. 5 sentences)**

Course program concept is to broaden the students knowledge of the mechanical and hydromechanical operations in chemical and other industries and to further study the commonly used principles in this area. Students are given the broader insight of all techniques and new trends in this area.

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

1) Introduction, definition and classification of the mechanical and hydromechanical operations; 2) Modern methods of grinding; 3) Classification and sorting; 4) Mixing and fluidization; 5) Hydromechanical Operations; 6) Hydromechanics of precipitation; 7) Fluid flow through porous media and filtration; 8) Selected chapters of centrifugation and centrifugal purifiers; 9) Hydrodynamical classification; 10) Separation of heterogenous gaseous systems; 11) Creation of heterogenous liquid systems – Mixing; 12) Wet dedusting gases procedures. General properties of aerosol sustems and wet dust collector systems; 13) Physical background of aerosol particles separation from the gas flow; 14) Physical background of aerosol particles separation in wet dust collector systems; 15) New trends in mechanical and hydromechanical operations.

**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>Written Examination</b>	-
<b>Practical Work</b>	50	<b>Oral Examination</b>	Max. 50
<b>Teaching Colloquia or Seminar</b>	-	<b>Overall Sum</b>	100
<b>*Final examination mark is formed in accordance with the Institutional documents</b>			