



UNIVERSITY OF NIŠ

Course Unit Descriptor

Faculty

Faculty of Mechanical Engineering

GENERAL INFORMATION

Study Program	Engineering Management		
Study Module (if applicable)	Transport and logistics management		
Course Title	Material flow		
Level of Study	<input type="checkbox"/> Bachelor	<input checked="" type="checkbox"/> Master's	<input type="checkbox"/> Doctoral
Type of Course	<input checked="" type="checkbox"/> Obligatory	<input type="checkbox"/> Elective	
Semester	<input checked="" type="checkbox"/> Autumn	<input type="checkbox"/> Spring	
Year of Study	I		
Number of ECTS Allocated	6		
Name of Lecturer/Lecturers	Goran S. Petrović		
Teaching Mode	<input checked="" type="checkbox"/> Lectures	<input type="checkbox"/> Group tutorials	<input type="checkbox"/> Individual tutorials
	<input checked="" type="checkbox"/> Laboratory work	<input 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)

This course aims to introduce students to the modelling and analysis of material flows within production, warehousing and distribution systems. After completion of the subject the students are able to describe the physical material flows, including storage, material handling, transports and packaging. The course is targeting both the theoretical and practical aspects of the material flows.

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

1) The importance of material flows in the supply of raw materials, production and distribution of goods; 2) The basic elements of material flow systems; 3) Dynamic modelling of material flows; 4) Stochastic processes: probability distributions for describing the uncertain in material flows; 5) Parametric and nonparametric statistics - Chi-squared test; 6) Queuing theory – models M/M/1, M/M/m, finite population models...; 7) Planning of the material flow; 8) Logistics and material flow simulation; 9) Information flow in logistics system.

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	60 (depending on Teaching Colloquia)
Practical Teaching	5	Oral Examination	30
Teaching Colloquia	60	Overall Sum	100
*Final examination mark is formed in accordance with the Institutional documents			