



UNIVERSITY OF NIŠ

Course Unit Descriptor

Faculty

Faculty of Mechanical Engineering

GENERAL INFORMATION

Study Program	Mechanical Engineering		
Study Module (if applicable)	-		
Course Title	Urban transportation and logistics		
Level of Study	<input checked="" type="checkbox"/> Bachelor	<input type="checkbox"/> Master's	<input type="checkbox"/> Doctoral
Type of Course	<input checked="" type="checkbox"/> Obligatory	<input type="checkbox"/> Elective	
Semester	<input type="checkbox"/> Autumn	<input checked="" type="checkbox"/> Spring	
Year of Study	IV		
Number of ECTS Allocated	5		
Name of Lecturer/Lecturers	Dragoslav B. Janošević		
Teaching Mode	<input checked="" type="checkbox"/> Lectures	<input type="checkbox"/> Group tutorials	<input type="checkbox"/> Individual tutorials
	<input checked="" 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)

Analysis of the functions, structure and methods of planning of transport and logistics in urban areas. After completion of the subject the students are able to solve real problem of optimal planning and optimisation of transport and logistics problems in urban areas.

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

1) Basics of urban planning of the city. The structure functions of urban areas. Examples of functions and solutions of urban metropolises; 2) CITY transport and logistics: Definition of the functions of transport and logistics, materials, goods and information in urban areas. Strategies and concepts of urban transport and logistics; 3) Transport and logistics flows: Generators transport and Logistic flows in urban areas. Structure of transport and logistics flows. Logistics centres and terminals. Urban supply chains; 4) The urban location problems: Elements of urban transport networks. These method algorithms for solving location problems. Optimization of urban transport flows. Examples CITY transport and logistics world cities; 5) Urban environmentally (EKO) transport and logistics: Principles of Sustainable Development - Agenda 21 Definition and classification of waste and recyclables. Municipal waste - morphological composition and physical characteristics; 6) Waste management: principles, functions and management systems of waste. Waste collection. Transportation equipment and vehicles - functional parametric analysis and exploitation properties. Transfer stations. Tratman waste. Waste disposal; 7) Designing optimal route: Analysis of influencing factors and constraints in the optimization of routes. Methods and algorithms of designing optimal routes. Multicriteria optimization methods routes. Ecological criteria for evaluation of routes based on: characteristic numbers, the eco balance and consumption of energy and materials. Examples EKO transport and logistics world's great cities.

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	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