

Study Programme: Mechanization And Construction Engineering			
Course Unit Title: Logistics and Simulations			
Course Unit Code: M308			
Name of Lecturer(s): Bojić Sanja			
Type and Level of Studies: bachelor			
Course Status (compulsory/elective): elective			
Semester (winter/ summer): summer			
Language of instruction: english			
Mode of course unit delivery (face-to-face/distance learning): face-to-face			
Number of ECTS Allocated: 5			
Prerequisites: none			
Course Aims: Acquiring knowledge about: the concept, significance and role of logistics; structure and tasks of the logistics system and selected logistics processes; concept, significance and possibilities of computer simulations in the planning, organization and optimization of logistics systems.			
Learning Outcomes: Students acquire basic knowledge in various fields of logistics: procurement, warehousing, material handling, production, distribution and return logistics. Parallel to this, basic knowledge about simulations of material flows in logistic systems. Acquired knowledge can be used in practice for the design, organization and optimization of logistics systems and processes.			
Syllabus. Logistics, basic aspects, structure and processes. Logistics in procurement, goods transport and distribution. Production logistics. Logistics of warehouses, processes, equipment, information systems. Reverse logistics. Logistics costs. Providers of logistics services. Designing, organizing and optimizing logistic systems and processes using computer simulations.			
Required Reading: Baeune R., Martin H., Schulze L. Handbuch der innenbetrieblichen Logistik Jungheinrich, Hamburg 1998 Lu M., De Bock J. (Eds.) Sustainable Logistics and Supply Chains Springer 1998 Gutenschwager K., Rabe M., Spieckermann S., Wenzel S. Simulation in Produktion und Logistik Springer 2017 Christopher M. Logistics and supply chain management Financial Times Prentice Hall 2005 Yildiz, T. Business Logistics Charleston SC 2014 Bloomberg, D. Logistics Prentice Hall 2002 Simchi-Levi, D. The Logic of Logistics Springer 2013 Reveillac, J.M. Optimization Optimization tools for logistics Iste Press 2015 Myerson, P.A. Lean Supply Chain and Logistics Management McGraw-Hill Education 2012			
Weekly Contact Hours:2	Lectures: 3	Practical work: 1	
Teaching Methods: Lectures and computer exercises. During the whole semester, students have lectures in the theory of logistics and simulation and computational exercises from material flow simulations in logistic systems. Students are required to prepare a simulation model of a logistic system as an independent project, by the end of the semester.			
Knowledge Assessment (maximum of 100 points):			
Pre-exam obligations	points	Final exam	points
Attendance			
Computer exercises			
Tests (4x)			

