UNIVERSITY OF NIŠ

Course Unit Descriptor	Faculty	Faculty of Mechanical Engineering

GENERAL INFORMATION			
Study Program	Mechanical Engineering		
Study Module (if applicable)	-		
Course Title	Warehouse material handling equipment		
Level of Study	☒Bachelor	☐ Master's	☐ Doctoral
Type of Course	☐ Obligatory	☒ Elective	
Semester	☒ Autumn	☐ Spring	
Year of Study	IV		
Number of ECTS Allocated	6		
Name of Lecturer/Lecturers	Miomir Lj. Jovanović		
Teaching Mode	☒ Lectures	☐ Group tutorials	☐ Individual tutorials
	☒ Laboratory work	☒ Project work	☒ Seminar
	☐ Distance learning	☐ Blended learning	☐ Other

Purpose and Overview (max. 5 sentences)

Introduction to theoretical and practical knowledge of warehouse systems and warehouse material handling equipment. After completion of the subject the students are able to apply the acquired knowledge in field of design, management and maintenance of warehouses.

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

1) Logistic approach to procurement, production and distribution processes. Storage as a term. 2) The logistics system and warehousing. Techno-economic characteristics of the warehouses: warehouses capacity and goods turnover ratio. 3) Storage system. General of the processes and elements of the storage system. Elements of the warehouse: goods, storage objects, transport equipment, racks, auxiliary equipment and information systems. 4) Goods, packaging, pallets, pallet packages. The formation of logistics units. Techniques for identification and information systems in warehouses. 5) Storage objects. The types of storage facilities. The basic characteristics of storage facilities for bulk, parcel, liquid and gaseous goods. 6) Warehouse equipment. Equipment for reception of the goods in the warehouse. Racks - purpose, classification and description. Transport machines in warehouses. 7) Storage technologies. Overview of typical storage technologies for parcel, bulk, liquid and gaseous materials. 8) Commissioning technology. Definition. Material flow, information flow and organization of commissioning in warehouses. 9) High bay warehouses and high bay cranes. 10) Warehouse processes management and security in the warehouse. 11) Examples of existing warehouse calculation.

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**	**0**
Practical Teaching	**5**	**Oral Examination**	**30**
Teaching Colloquia	**60**	**Overall Sum**	**100**
***Final examination mark is formed in accordance with the Institutional documents**			