UNIVERSITY OF NIŠ

Course Unit Descriptor	Faculty	Faculty of Mechanical Engineering

GENERAL INFORMATION	
Study Program	Engineering Management
Study Module (if applicable)	-
Course Title	Modern Technical Systems
Level of Study	☒Bachelor ☐ Master's ☐ Doctoral
Type of Course	☒ Obligatory ☐ Elective
Semester	☒ Autumn ☐ Spring
Year of Study	II
Number of ECTS Allocated	8
Name of Lecturer/Lecturers	Dragoljub B. Lazarević, Nenad T. Pavlović, Mića V. Vukić, Dragoslav B. Janošević
Teaching Mode	☒ Lectures ☐ Group tutorials ☐ Individual tutorials ☐ Laboratory work ☒ Project work ☒ Seminar ☐ Distance learning ☐ Blended learning ☐ Other

Purpose and Overview (max. 5 sentences)

To gain the knowledge referring to modern technical systems in the field of production engineering, mechatronics, energetics and transport and logistics.
The ability to perform the analysis and basic calculation of the elements of the technical systems in the field of production engineering, mechatronics, energetics and transport and logistics.

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

Characteristics of modern production technical systems. Technical systems' components. Technical systems for cutting machining, deep drawing and non-conventional machining. Controlling and executive parts of technical systems. Numerically controlled machine tools.
Introduction in mechatronics. Components of mechatronic systems. Measuring technique in mechatronics. Kinematics of mechanisms: position and velocity analysis of four-bar linkages.
Introduction to thermal and hydro power plants. Internal combustion engines. District heating plants. Pump stations.
Introduction to kinds of transportation. Non-continuous and continuous transportation machines, mobile machines, pneumatic and hydraulic transportation machines. Inter-factory transportation and public transportation. Logistic chains and transportation technical system management.

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	0	Written Examination	0
Practical Teaching	0	Oral Examination	40
Teaching Colloquia	60	Overall Sum	100
*Final examination mark is formed in accordance with the Institutional documents			