UNIVERSITY OF NIŠ

Course Unit Descriptor	Faculty	Faculty of Mechanical Engineering

GENERAL INFORMATION	
Study Program	Mechanical Engineering
Study Module (if applicable)	-
Course Title	MEASURING AND MONITORING OF TRANSPORTATION AND LOGISTIC SYSTEM
Level of Study	☐Bachelor ☐ Master's ☒ Doctoral
Type of Course	☐ Obligatory ☒ Elective
Semester	☒ Autumn ☐ Spring
Year of Study	II
Number of ECTS Allocated	10
Name of Lecturer/Lecturers	Miomir Lj. Jovanović, Goran S. Petrović
Teaching Mode	☐ Lectures ☐ Group tutorials ☒ Individual tutorials ☒ Laboratory work ☒ Project work ☒ Seminar ☐ Distance learning ☐ Blended learning ☐ Other

Purpose and Overview (max. 5 sentences)

Introduction of PhD students with experimental methods for measuring of transport machines and logistics systems. Building a conceptual knowledge of students about the objectives and categories of measurement. Student education up to the level own measurements with applications in practice.

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

1. The theory of measurement and measurement systems; The accuracy of the measurements and standards.
2. Classes and categories of measurement in materials handling equipment.
3. Monitoring of some logistics systems in transportation engineering.
4. Equipment for Measuring and monitoring. DAS systems .
5. The physical basis of some basic types of measurements in transportation technology.
6. IT background of experimental research and monitoring.
7. Analysis of more typical classes of measurements performed in the industry.
8. Plant Monitoring storage crane of Laboratory for Transporting machines.
9. Experiment on the example of stress, strain, displacements, forces, velocity and vibrations.
10. Model of the capacity monitoring of the transmission equipment.
11. Making your own measurement applications and technical studies on the measurement.
12. An experiment in research and study work.
13. Systems for monitoring and control of the vehicles. GPS / GPRS technology, smart cards and RFID technology.,

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**	**40**
Practical Teaching	**5**	**Oral Examination**	**50 (project presentation)**
Teaching Colloquia	**0**	**Overall Sum**	**100**