UNIVERSITY OF NIŠ

Course Unit Descriptor	Faculty	Faculty of Mechanical Engineering

GENERAL INFORMATION	
Study program	Mechanical Engineering
Study Module (if applicable)	-
Course title	Design of Mechanisms
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	Nenad D. Pavlović, Miloš Milošević
Teaching mode	☒Lectures ☒Group tutorials ☐Individual tutorials ☐Laboratory work ☒Project work ☐Seminar ☐Distance learning ☐Blended learning ☐Other

PURPOSE AND OVERVIEW (max. 5 sentences)

The purpose of this course is to gain some advanced knowledge in the field of modeling, analysis of the accuracy of the functioning of mechanisms and design of linkages. Students should gain the ability to

- Computer aided modeling of mechanisms.
- Analyzing effects of manufacturing tolerances on the mechanism accuracy at measuring systems and instruments and precision devices in which the priority is to meet the requirements of high accuracy and reliability.
- Designing of Linkages.

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

- Computer aided modeling of kinematics and dynamics of mechanisms (Working Model 2D)
- Sensitivity analysis of mechanisms: methodology of determination of mechanical error and analysis of effects of manufacturing link-length and link-angle deviations on the mechanism accuracy, determination of sensitivity coefficients of parameters, analysis of effects of link-lengths tolerancing, synthesis of tolerances, exploitation analysis of the mechanism accuracy; compensation of link-length and link-angle deviations (adjustment).
- Design of Linkages (constructive design and dimensioning of links and joints of linkages).

LANGUAGE OF INSTRUCTION			
☒Serbian (complete course) ☐English (complete course) ☐ Other _____ (complete course) ☒Serbian with English mentoring ☒Serbian with German mentoring			
ASSESSMENT METHODS AND CRITERIA			
Pre exam duties	**Points**	**Final exam**	**points**
Activity during lectures	**10**	**Written examination**	
Homework	**40**	**Oral examination**	**Max. 30**
Teaching Colloquia (Working Model 2D)	**Max. 20**	**OVERALL SUM**	**100**
***Final examination mark is formed in accordance with the Institutional documents**			