UNIVERSITY OF NIŠ

Course Unit Descriptor	Faculty	Faculty of Mechanical Engineering

GENERAL INFORMATION	
Study Program	Mechanical Engineering
Study Module (if applicable)	-
Course Title	Selected topics in production information technologies and industrial management
Level of Study	☐Bachelor ☐ Master's ☒ Doctoral
Type of Course	☐ Obligatory ☒ Elective
Semester	☐ Autumn ☒ Spring
Year of Study	I
Number of ECTS Allocated	10
Name of Lecturer/Lecturers	Dragoljub B. Lazarević, Miroslav D. Trajanović, Miodrag T. Manić, Dragan I. Temeljkovski, Miroslav R. Radovanović, Peđa M. Milosavljević, Saša S. Ranđelović, Vladislav A. Blagojević
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 theoretical and practical knowledge referring to the information and production technologies and industrial management and acquire the basics of continuum mechanics in the field of metal forming.
The develop the ability to deal with the information and production technologies and industrial management and develop the students' competence in the theoretical analysis and design metal forming processes and generation of FEM simulation models for the identification of the critical parameters.

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

Modelling and simulation of machining. Modelling of the cutting tool geometry. Influence of the cutting tool wear on the effects of the cutting process. Super-hard cutting tool materials. Cutting resistance and methods of determining the cutting resistance. Thermodynamics of the cutting and methods of determining the cutting temperature. Non-conventional methods of metal forming and with material removal. Integrated computer systems for product and technology designing. Modern CNC machining and multiplication systems. Material plasticity. Complex tools for deformation processes. Technologies of production management in real time. Identification, modelling and simulation of the systems. Adaptive production management systems. Hybrid production managements systems. Basics of management. Management principals. Management fields. Levels of management. Functions of management. Crises Managements. Future management development. Advanced additive technologies. Modelling and simulation of the machining equipment.

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**			