UNIVERSITY OF NIŠ

Course Unit Descriptor	Faculty	

GENERAL INFORMATION	
Study program	Manufacturing & Information Technologies
Study Module (if applicable)	
Course title	APPLIED TECHNOLOGY OF PLASTICTY
Level of study	☐ Bachelor ☒ Master's ☐ Doctoral
Type of course	☐ Obligatory ☒ Elective
Semester	☒ Autumn ☐ Spring
Year of study	First
Number of ECTS allocated	6
Name of lecturer / lecturers	Saša Ranđelović
Teaching mode	☒Lectures ☐Group tutorials ☐ Individual tutorials ☐ Laboratory work ☒ Project work ☐ Seminar ☐ Distance learning ☐ Blended learning ☐ Other

PURPOSE AND OVERVIEW (max. 5 sentences)

Education of students for the design technology of plastic deformation at the request of the finished product and the parameters (degree of deformation, stress state, deformation forces and work, measuring tools) for volume deformation and shaping sheet metal. Analysis technolgy on the FEM simulation model. Qualifying students for the analysis and design process of deformation and generation of simulation models for the identification of the critical parameters.

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

Theory: 1. Technology of plasticity today 2. Cold and hot forging technology. FEM analysis 3. Extrusion technology. FEM analysis 4. Forward extrusion technology of solid and hollow elements. FEM analysis. 5. Backward extrusion technology FEM analysis. 6. Combined extrusion technology. FEM Analysis 7. Deep drawing technology. FEM analysis. 8. Deep drawing technology in next operations, FEM analysis 9. Technologies are narrowing and widening draw elements. FEM analysis 10. Deep drawing by fluid. FEM analysis. 11 Bending technology. FEM analysis. 12 Technology of combined balk and sheet metal forming 12. Analysis of the technology placticity on examples of final products of modern industrial

production

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	**10**	**Written examination**	
Practical teaching	**60**	**Oral examination**	**30**
Teaching colloquia		**OVERALL SUM**	**100**

***Final examination mark is formed in accordance with the Institutional documents**