UNIVERSITY OF NIŠ

Course Unit Descriptor	Faculty	Faculty of Mechanical Engineering

GENERAL INFORMATION	
Study Program	Mechanical Engineering
Study Module (if applicable)	-
Course Title	Non-conventional methods
Level of Study	☒Bachelor ☐ Master's ☐ Doctoral
Type of Course	☐ Obligatory ☒ Elective
Semester	☐ Autumn ☒ Spring
Year of Study	IV
Number of ECTS Allocated	5
Name of Lecturer/Lecturers	Dragoljub B. Lazarevic
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 non-conventional machining processes, designing tools for non-conventional processes and determination of the process parameters for particular parts construction.

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

Non-conventional methods of metal forming: explosive forming, forming with gas mixture, forming with magnetic field, hydraulic shocks etc. Non-conventional methods with material removal: Discharge Machining (EDM), Electrochemical Machining (ECM), Laser Beam Machining (LBM), Abrasive Jet Machining (AJM), Plasma Arc Cutting (PAC), Electron Beam Machining (EBM) and combined processes. Processing principles, theoretical basis, characteristics of the processes, technological parameters, tools and machines related to the all processes to be considered during this course. Writing programs for the numerical control machine tools for non-conventional processes for concrete parts.

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	0

Practical Teaching	**0**	**Oral Examination**	**20**
Teaching Colloquia	**70**	**Overall Sum**	**100**
***Final examination mark is formed in accordance with the Institutional documents**			