Study program: Industrial engineering – Mechanical engineering	
Course title: Manufacturing technologies II	
Professor/assistant: Đorđević Milan	
Type of course: Elective	
ECTS credits: 6	
Prerequisites: none	

Aims of the course:

Students gain knowledge about unconventional manufacturing technologies and their use; types of machines and devices and advantages and disadvantages of these technological procedures.

Learning outcomes:

Students calculate physical parameters of the processes, independently select unconventional processing procedures, calculate the most important technological parameters, and estimate the appropriate equipment.

Syllabus:

Theoretical part:

The basics of unconventional processing procedures; Electrochemical machining (ECM); Electrical discharge machining (EDM); Ultrasonic processing EUS; Electron-beam melting (EBM); Laser beam machining (LBM); Plasma jet machining (PJM); Chemical milling (CM); Drilling and blasting; Abrasive blasting; Micro and nano processing; Cryogenic treatment; Electromagnetic processing; Combined methods of processing; NPO comparison and characteristics of treated surfaces.

Practical part:

Auditory exercises – solving practical tasks from the field of unconventional production/manufacturing processes; solving practical problems; writing term papers;

Literature:

1. Lazić, M., Nekonvencionalni postupci obrade; Mašinski fakultet Kragujevac, 1980.

Total number of active classes: 75	Lectures: 45	Practical classes: 30

Teaching methods:

Lectures: interactive approach;

Practical training – solving tasks, writing term papers, solving problems, presentation of outcomes, consultations.

<div align="center">

Grading system (maximum 100 points)

grading scale from 5 to 10: below 51 points grade 5, grade 6 from 51- 60 points, grade 7 from 61-70 points, grade 8 from 71-80 points, grade 9 from 81-90 points, grade 10 from 91- 100 points.

</div>

Pre-exam obligations:	Points:	Final exam:	Points:
Activity during lectures	max 5	Written exam	50
Practical training	max 5		
Written test(s)	max 20		
Term papers	max 20		
Minimum requirement for the final exam	30		