SYLLABUS

1. Course title:

Manufacturing system I

2. Code:

3. Cycle of study:

1

4. ECTS credits:

5

5. Type of course:

Mandatory

6. Prerequisites:

7. Class restrictions:

8. Duration / semester(s):

1 7

9. Weekly contact hours and student workload:

	Semester (1)	Semester (2)	(for two-semester courses)	Workload: (hours)	
9.1. Lectures	3		Classes:	56,3	
9.2. Seminars	1		Individual work:	87,4	
9.3. Laboratory / Practice classes	1		In total:	143,7	

10. Faculty:

Faculty of Mechanical Engineering Tuzla

11. Department/study program:

Manufacturing Mechanical Engineering

12. Lecturer:

Dr. sc. Edin Cerjaković, van.prof.

13. Course aims:

The main goal of this course is to show students and understanding of all aspects of the realization of the production process with both macro and micro levels in order to gain a realistic picture of integrated production process. To this end, the course is designed to perform processing of matter through the integration of previously acquired knowledge in the

field of technology of production, transport, storage and preparation of technological process so that students acquire competence in the design, analysis and management of production systems.

14. Learning outcomes:

Students will successfully coursework of exams have competence to: determine the parameters of production, projected deployment of production equipment and conceived workplace, projecting the organization of production, depending on the input parameters, ordered and planned production costs, chooses production equipment according to various criteria, managed production, technology, preparation of production, control the flow of materials, energy and information.

15. Course content:

1. Introduction (3)
2. Theory of manufacturing systems (3)
3. Product and manufacturing program (3)
4. Manufacturing System (3)
5. Manufacturing System (3)
6. Manufacturing System (3)
7. Manufacturing parameters (3)
8. The realized production unit (3)
9. The realized production unit (3)
10. Organization of manufacturing (3)
11. The structure of the production system (3)
12. The cost of manufacture (3)
13. Selection of production equipment (3)
14. Investment process (3)
15. Location of production systems (3)

16. Learning methods:

In order to effectively deliver the course and achieve the set course objectives and student competencies, the following methods will be used during the course:
• lectures,
• laboratory exercises,
• individual and team/group work,
• presentation in a real environment

17. Assessment methods:

• Lectures – theoretical lectures, active two-way communication between student and professor, compulsory attendance of students;
• Theory tests - solving tests;
• Tests with tasks - solving tests;
• Seminar/graphic works – independent work of the student to solve the problem;
• Oral final exam - interactive conversation with the student in order to validate the acquired knowledge;
• Consultations – clarification of any ambiguities related to the topic of the studied subject.

The condition for signing is the student's attendance at a minimum of 70% of lectures and exercises.
Grading Scale:

Grade	Descriptive	Letter	Points
5 (five)	Does not meet minimum criteria	F, FX	<54
6 (six)	Meets minimum criteria	E	54÷64
7 (seven)	Generally good, but with significant shortcomings	D	65÷74
8 (eight)	Average, with noticeable errors	C	75÷84
9 (nine)	Above average, with occasional errors	B	85÷94
10 (ten)	Exceptional success with no errors or with minor errors	A	95÷100.

18. Assessment components:

1. Attendance at lectures (45×0.166=7.5)
2. Attendance at exercises (30×0.166=5)
3. Seminar work (1×10=10)
4. Theory test (2 tests - 2×7.5=15)
5. Tests with tasks (2 tests - 2×7.5=15)
6. Graphic work (1×12.5=12.5)
7. Final exam (35)
Through the continuous activities of checking the student's knowledge during the semester (sequential number: 1, 2, 3, 4, 5 and 6), the student can win 65% of the total number of points, and by passing the oral (final) exam another 35% of the total number of points

19. Mandatory reading list:

1. E.Cerjakovic (2024): Predavanja iz predmeta Fleksibilni proizvodni sistemi, Mašinski fakultet, Tuzla
2. R. Šelo, Dž. Tufekčić (2007): Proizvodni sistemi, Mašinski fakultet, Tuzla

20. Additional reading list:

1. D. M. Zelenović (2003): Projektovanje proizvodnih sistema, FTN Novi Sad, Novi Sad

21. Web sources:

22. Applicable from the academic year:

2025/2026

23. Adopted in the Faculty/Academy session:

25.04.2025