SYLLABUS

1. Course title:

Manufacturing system II

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 | 8

9. Weekly contact hours and student workload:

Semester (1)	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:

ourse objective Manufacturing Systems II students mastering modern methods and strategies of production engineering, and planning and implementation of the manufacturing process. Students will be presented to the continuous improvement of all elements of the production process and production processes, and will acquire the necessary

knowledge to determine the structure, process and design of flexible manufacturing systems, and methods of modeling and simulation of production systems, and the advantages and disadvantages of their use.

14. Learning outcomes:

Students will successfully coursework of exams have competence to: perform technical preparation of production, application of the method scheduling and launching production, application of group technology and implement group access in forming of materials, carry out the organization of the workplace and production, application of methods of lean production, carry out reengineering of production, choose the way of modeling and simulation of production for the purpose of its analysis.

15. Course content:

1. Introduction (3)
2. Manufacturing preparation (3)
3. Production management (3)
4. Production management (3)
5. Organization of the work (3)
6. Flexible manufacturing systems (3)
7. Group technology (3)
8. Multiple access in forming of the material (3)
9. Lean manufacturing (3)
10. Lean manufacturing (3)
11. Lean manufacturing (3)
12. Organization of the production system (3)
13. Modern organization models (3)
14. Modeling and simulation of the production system (3)
15. Modeling and simulation of the production system (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 (2002): Fleksibilni transport, Mašinski fakultet, Tuzla
3.R. Šelo, Dž. Tufekčić (2007): Proizvodni sistemi, Mašinski fakultet, Tuzla

20. Additional reading list:

1. F. Kekez (2002): Proizvodni sustavi, Slavonski Brod
2.Dž. Tufekčić, M. Jurković (1999): Fleksibilni proizvodni sistemi, Mašinski fakultet, Tuzla

21. Web sources:

22. Applicable from the academic year:

2025/2026

23. Adopted in the Faculty/Academy session:

25.04.2025