UNIVERSITY OF TUZLA UNIVERZITET U TUZLI

SYLLABUS

1. Course title:

Technical documentation and CAD

2. Code:

3. Cycle of study:

1

4. ECTS credits:

6

5. Type of course:

Mandatory

6. Prerequisites:

No

7. Class restrictions:

Students of the first year of study at the Faculty of Mechanical Engineering (Ist cycle of studies)

8. Duration / semester(s):

1 **2**

9. Weekly contact hours and student workload:

	Semester (1)	Semester (2)	(for two-semester courses)	Workload: (hours)
9.1. Lectures	3		Classes:	56,2
9.2. Seminars	0		Individual work:	99
9.3. Laboratory / Practice classes	2		In total:	155,2

10. Faculty:

Faculty of Mechanical Engineering

11. Department/study program:

Production engineering, Energy and thermo-fluid engineering, Mechatronics

12. Lecturer:

Dr.sc. Denijal Sprečić, Full Professor

13. Course aims:

Introducing students with basic standards, regulations and rules in technical drawing and preparation of technical documentation.

14. Learning outcomes:

At the end of the semester, successful students, who have continued to perform their duties throughout the teaching process, will be trained to:
- draft technical drawings
- prepare technical documentation and apply basic rules, regulations and standards in technical drawings
- perform measurements necessary for preparation of technical documentation

15. Course content:

1. Introduction to technical documentation, basic geometric concepts and construction
2. Lines, line types and application, formats, headers, constituents, scales
3. Basic geometrical structures, circular crossings, contours, curved lines
4. Colloquium 1
5. Orthogonal projection, octants, projection planes
6. Orthogonal projections of the body, determining and adjusting body projections
7. Colloquium 2
8. Axonometry and orthogonal projection, simplified drawing procedure of isometric views,
9. Isometric view drawing
10. Colloquium 3
11. Sections and spatial presentation of a body, partial views
12. Measuring and annotations, drawing symbols, tolerances
13. Colloquium 4
14. Advantages and possibilities of using software tools in the preparation and creation of technical documentation
15. Colloquium 5

16. Learning methods:

• Lectures (dealing with teaching units that are defined by the content of the course),
• Laboratory exercises (held in accordance with the intended curriculum and monitoring the works within teaching units),
• Colloqiums (continuous knowledge examination),
• Graphic assignments
• Consultations

17. Assessment methods:

The methods of knowledge checking are: graphic assignments, colloquiums, final exam (written).

• Regular attendance and teaching activities (lectures and exercises) carry a maximum of 10 points,

• Graphic assignments contain tasks that the student needs to solve and submit before the final exam. The total number of points a student can obtain for graphic assignments is a maximum of 15 points.

• Colloquiums represent the form of continuous checks that are defined during the semester and within which students are solving tasks from certain areas. The sum of the points from each colloquium that a student can obtain is a maximum of 30 points.

• Final exams are submitted in writing, and student can obtain a maximum of 45 points.

Rating system: (10) + (15) + (30) + (45) = (100) points

Grading scale is as follows:

Grade	Description	Letter/Points
5 (five)	Does not meet minimum criteria	F <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 some errors	B 85-94
10 (ten)	Exceptional with no or minor errors	A 95-100

In order for a student to obtain professor's signature and to take the final exam, it is necessary to fulfill the following conditions:
- regularly attend to lectures and exercises,
- to fulfill all the other conditions that the subject teacher places during the semester.

Summarized points are collected from all student activities during the semester to the final exam. If the student has obtained the required score for the pass grade, the grade can be entered in the index. If the student has not achieved the required number of points, additional points can be obtained on the final written exam.

18. Assessment components:

The assessment of the exam is based on the total number of points the student has obtained by fulfilling the pre-requisites and passing the exam according to the quality of the acquired knowledge and skills, and it contains a maximum of 100 points and is determined according to the following scale:
Before the final exam: 55 points
Final exam: 45 points

Before the final exam:
- **attendance and activity on lectures (lectures and exercises) - maximum 10 points,**
- **graphic assignments - maximum 15 points,**
- **colloquiums - maximum 30 points (six points maximum for each colloquium),**

19. Mandatory reading list:

1. Koludrović Ć.: Tehničko crtanje u slici s kompjutorskim aplikacijama, Rijeka, 2006.

20. Additional reading list:

1. M. Žunar.: Tehničko crtanje, Zagreb, 2001.
2. J. Theodore.: Interpreting engineering drawings, IS University, 2014.
3. S. Tickoo.: SolidWorks za mašinske inženjere, SAD, 2015 i 2020.

21. Web sources:

22. Applicable from the academic year:

2025/2026.

23. Adopted in the Faculty/Academy session: