SYLLABUS

1. Course title:

WELDING

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 | 5

9. Weekly contact hours and student workload:

Semester (1)	1	Semester (2)		(for two-semester courses)	Workload: (hours)
9.1. Lectures	3			Classes:	45
9.2. Seminars	0			Individual work:	86,67
9.3. Laboratory/Practice classes	1			In total:	131,67

10. Faculty:

Faculty of Mechanical Engineering Tuzla

11. Department/study program:

Production Mechanical Engineering

12. Lecturer:

Dr.sc. Samir Butković,professor

13. Course aims:

Acquiring fundamental theoretical and practical knowledge in the field of welding, material weldability and available welding processes.

14. Learning outcomes:

After completing this course students are able to estimate weldibility of some materials, select welding process and parameters, select welding filler materials, perform stress and thermal analyzes, etc.

15. Course content:

1. Introduction and welding processes classification,
2. Welding symbols and Weld Calculations,
3. Heat Flow in Fusion Welding,
4. Heat sources for welding,
5. Welding metallurgy,
6. Weldability of steel,
7. Test I, Preheating,
8. Resistance welding, Oxyfuel Gas Welding,
9. Shielded Metal Arc Welding (SMAW),
10. Gas-Tungsten Arc Welding, Gas-Metal Arc Welding,
11. Submerged Arc Welding
12. Plasma Welding, Laser-Beam Welding, Electron-Beam Welding,
13. Weldability of carbon steels, Weldability of low-alloy and high-alloy steels, Weldability of cast iron,
14. Testing and inspection of weld joints,
15 Test II

16. Learning methods:

Lectures with active participation of students,
Laboratory work,
Consultations,
Preparation and presentation of seminar papers.

17. Assessment methods:

Activity during lectures,
2 tests (solving of tasks),
2 test (understanding of theory)
Seminar/homework papers,
Final exam,

Knowledge tests results are recognized as cumulative result if achieved results are positive after each individual exam and gives at least 50% of the planned and/or the necessary knowledge and skills. In order to pass the subject the student must achieve a minimum of 54 cumulative points.

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:

Attendance and activity during lectures, 6 points
2 tests (solving of tasks), 2 tests x 10 points=20 points
2 test (understanding of theory), 2 tests x 12 points=24 points
Seminar/homework papers, 10 points
Final exam, 40 points

19. Mandatory reading list:

1. O. Pašić, Zavarivanje, Sarajevo 1998.godina,
2. John C. Lippold, Damian J. Kotecki, Welding Metallurgy and Weldability of Stainless steels, New Jersey, 2005.

20. Additional reading list:

1. Sindo Kou, Welding metallurgy, New Jersey, 2003.

21. Web sources:

22. Applicable from the academic year:

23. Adopted in the Faculty/Academy session: