SYLLABUS

1. Course title:

Materials II

2. Code:

(max. 20 characters)

3. Cycle of study:

1

4. ECTS credits:

5

5. Type of course:

(●) Mandatory ( ) Elective

6. Prerequisites:

(max. 110 characters)

7. Class restrictions:

(max. 150 characters)

8. Duration / semester:

1 2

9. Weekly contact hours:

9.1. Lectures: 2

9.2. Seminars: 1

9.3. Laboratory/Practice classes: 1

10. Faculty:

Faculty of Mechanical Engineering

11. Department/study program:

Production Engineering, Power Engineering, Mechatronic

12. Lecturer:

dr.sc. Elvedin Trakić, doc.

13. Lecturer's e-mail:

elvedin.trakic@untz.ba

14. Web site:

www.mf.untz.ba

15. Course aims:

Acquiring theoretical knowledge and practical skills in the field of Construction Materials II

16. Learning outcomes:

At the end of the semester, successful students, who continued to perform their duties throughout the academic year, will be trained to: master the basic knowledge in the field of Materials II

17. Course content:

• Introductory lectures on the function, importance and load testing methodologies
• Testing of mechanical properties of materials in different types and types of loads
• Tensile Test (Tensile Strength), Hook Diagram
• Firmness, bending and twisting strength
• Material hardness test, Hardness test of material
• Tensile Testing, Material Flutter, Dynamic Strength, Wöhler's Blind, Smith's
• Long-lasting static load testing, Deformation and Voltage Measurement, Tensometry,
Examination without methods, destruction (ultra sound, radiography, penetrants, magnetofluks)
• Criteria for selecting materials, databases and expert material selection systems.

18. Learning methods:

Lectures, auditorial and laboratory exercises.

• Lectures are handled by teaching units that are defined by the content of the course.
• Auditorial exercises are held according to the foreseen curriculum and are followed by subjects studied within teaching units.
• Laboratory exercises are held according to the foreseen curriculum and are accompanied by subjects studied within teaching units.

19. Assessment methods:

Methods of knowledge assessment are: independent assignments, tests, final exam (written).

• Self-contained tasks that students need to solve and submit to the end of the semester. The total number of points a student can win for self-taught assignments is 10 points based on the success of the assignment.
• Theories from the theory represent a form of continuous checking within which students solve tasks in certain areas. During semester, students take 2 tests. For each test, a student can score up to 15 points, which makes a maximum of 30 points for solving tests.
• The final exam is placed verbally after the pre-fulfilled conditions related to regular attendance and teaching activity and self-directed assignments, with a maximum of 50 points. In order to successfully complete the final exam, the student must win at least 25 points.

Rating system: (10) + (30) + (14) + (46) = (100) points

In order for a student to obtain a signature and to enter the final exam, it is necessary to fulfill the following conditions:
- Attend to 70% of lectures and exercises,
- to carry out independent tasks,
- 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.

20. 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:
• Attendance attendance - maximum 10 points
• Tests on theories from theory - maximum 30 points
• Independent tasks (exercises performed, homework assignments isl.) - maximum 10 points
• Final exam - minimum 25 and maximum 50 points

21. Required reading list:

1.Blagojević,Ismailović,Pašić:" Materijali u mašinstvu",Glas Banja Luka 1987g.
2.Manojlović:"Mašinski materijali",Mašinski fak. Beograd 1980
3.Kudumović:Zavarivanje i termička obrade,FEM Tuzla 1998
4.Kudumović:Materijali II,Mašinski fak. Tuzla 2010

22. Web sources:

(max. 687 characters)

23. Applicable starting from the academic year:

2015/16

24. Adopted in the Faculty/Academy session:

01.06.2015