

## SYLLABUS

**1. Course title:**

Electrical Measurements

**2. Code:**

ESKE101

**3. Cycle of study:**

1

**4. ECTS credits:**

6

**5. Type of course:** Mandatory  Elective**6. Prerequisites:**

[ESKE001] Fundamentals of Electrical Engineering I, [ESKE002] Fundamentals of Electrical Engineering II

**7. Class restrictions:**

Faculty of electrical engineering students, study program "Electrical Engineering and Computer Science" with fulfilled

**8. Duration / semester:**

1

4

**9. Weekly contact hours:**

9.1. Lectures:

3

9.2. Seminars:

1

9.3. Laboratory/Practice classes:

1

**10. Faculty:**

Faculty of Electrical Engineering

**11. Department/study program:**

Electrical Engineering and Computer Science

**12. Lecturer:**

PhD Mensur Kasumović, assistant professor

**13. Lecturer's e-mail:**

mensur.kasumovic@untz.ba

**14. Web site:**

www.fet.ba

**15. Course aims:**

Course aim is that students learn basic knowledge about electrical measurements.

**16. Learning outcomes:**

After completing the course, the students will be able: to measure and to perform analysis of measuring data for basic electrical quantities. They are also will be trained for non-electrical quantities determination via electrical measurements. The knowledge obtained on course will give to students complete review of terms from standards and regulations in this area.

**17. Course content:**

Voltage measurement  
Current measurement  
Power measurement  
Power factor measurement  
Phase angle measurement  
Energy measurement  
Electrical resistivity and conductivity  
Electrical charge measurement  
Electrical capacity measurement  
Permittivity measurement  
Electrical field measurement  
Magnetic field measurement  
Magnetic hysteresis measurement  
Inductance measurement  
Q-factor measurement  
Distortion measurement  
Noise measurement

**18. Learning methods:**

Lectures, seminars and laboratory classes. One part of teaching process is with classical methods (frontally using board), and the other one is using multimedial content (presentation, video clips and computer animations).

**19. Assessment methods:**

The final grade is based on the continuous assessments, which are performed throughout the semester and the final exam.

Continous assesment throughout the semester consists two tests, which are combination of theoretical questions and tasks. Maximum number of points on every test is 30. Test become organized in 8. and 15. week of semester. During semester students gain points (maximum 10 points) throughout lessons presence and activity on laboratory classes. Maximum number of points on the final exam is 30.

Minimal number of points for succesfully passed exam is 54.

**20. Assessment components:**

Student can achieve maximal 100 points based on this scale:

Test I	30
Test II	30
Lessons presence	2
Laboratory activities	8
Total during semester	70
Final exam	30
Total	100

**21. Required reading list:**

A. Muharemović: Električna mjerenja, ETF Sarajevo 2005.

V. Bego: Mjerenja u elektrotehnici, Tehnička knjiga, Zagreb, 1975.

A. Muharemović, I. Turković: Električna mjerenja - zbirka zadataka, Elpi inženjering, 1997.

**22. Web sources:****23. Applicable starting from the academic year:**

2016/17

**24. Adopted in the Faculty/Academy session:**

04.04.2016