SYLLABUS

1. Course title:

ENERGY PROCESS MEASUREMENT

2. Code:

(max. 20 characters)

3. Cycle of study:

1

4. ECTS credits:

5

5. Type of course:

(●) Mandatory ( ) Elective

6. Prerequisites:

None

7. Class restrictions:

None

8. Duration / semester:

1 7

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:

Energy Engineering

12. Lecturer:

Indira Buljubašić, Associate Professor

13. Lecturer's e-mail:

indira.buljubasic@untz.ba

14. Web site:

www.mf.untz.ba

15. Course aims:

Acquisition of theoretical knowledge and practical skills in the field of energy-process measurements.

16. Learning outcomes:

At the end of the semester / course successful students, who during the entire period of teaching continuously perform their duties, will be able to:
-define measurement quantities and units of measure,
-identify the object of measurement,
-make a decision on which measuring method and measuring device is used,
-make measurements,
-process measurement results and
-display the measurement results in an appropriate form.

17. Course content:

-Theory of Measurements.
-Metrological information and measurement procedure.
- Measurement units, standards. International System of Units.
-Measurement errors - incorrectness, inaccuracy, inreliability and uncertainty of measurement.
-Direct and indirect measurement.
- Temperature measurement. Temperature scale. Temperature measuring devices.
- Pressure measurement. Types of pressure. Instruments for pressure measurements.
-Measurement of volume and mass flow rate.
-Measurement of humidity.
-Measurement of the composition of the flue gas.
-Measurement of levels.
-Processing of measurement results.
-Presentation of measurement results.

18. Learning methods:

Teaching units of this course will be presented to students through classical lectures with video presentations. Problems from different fields of flow-technical measurements will be presented and shown during auditory exercises, while in the course of laboratory exercises students will be taught how to use of certain measurement methods and instruments.

19. Assessment methods:

Assessment methods include:

- Theoretical and problem solving tests;
- Written/oral Report on performed laboratory exercises.
- Written/oral exam.

20. Assessment components:

• Presence in classes (lectures 2.5 + practice 2.5) -5 points,
• Tests with issues of theory and assignments (2 x 20 points) - 40 points
• Report on the laboratory exercises (2 x 5 points) -10 points,
• Final exam- 45 points

21. Required reading list:

1. Buljubašić I. etc.: Energetsko-procesna mjerenja, Tuzla, 2013.
2. Đonlagić D.: Mjerenje temperature i pritiska, Maribor, 1995.
3. Žanetić R., Stipišić R.: Mjerni pretvornici u procesnoj industriji, skripta, Split, 2005.

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