Information sheet for the course
Electrical and electronic measurements

University: *Alexander Dubček University of Trenčín*

Faculty: *Faculty of special technology*

Course unit code: *MŠT/B/1-83/d* | **Course unit title:** *Electrical and electronic measurements*

Type of course unit: *compulsory*

Planned types, learning activities and teaching methods:
Lecture 2 hours per week, 2 hours per week of exercise, face to face method

Number of credits: *3*

Recommended semester: *6th semester in the 3rd year (full-time)*
8th semester in the 4th year (part-time)

Degree of study: *I. (bachelor)*

Course prerequisites: *none*

Assessment methods:
The conditions for passing the course: 100% participation in exercises and laboratory exercises to meet the stated objectives of the laboratory exercise, properly drawn up protocols of measurement. The final evaluation-accreditation: of a total of 100 points is necessary to obtain the required number of points for the degree classification: (A)-(92-100), (B)-(83-91), C-(74-82), (D)-(65-73), (E)-(56-64) points.

Learning outcomes of the course unit:
Learning outcomes: the student has knowledge of cross-sectional area of electronic and electronic measurements, measuring strings for use at the level of knowledge of the current state of the application, you can handle the job with measured data and the subsequent processing of the results, as a prerequisite habits for the practical application of the electrical and electronic measurements.

Course contents:
A brief outline of the course: basic concepts of electronic and electronic measurements in engineering. Characteristics of the measurement chains. Measurement errors. Basic characteristics of the elements of the measurement chains. Measuring methods and measuring techniques in engineering. A description of the electronics and electronic measurement of mechanical quantities. Mathematical evaluation of the measured variables. Measuring chains with the use of cyber systems. Telemetric measurements in engineering. The use of analog and digital measuring instruments. Ways to measure resistances. Ways of measuring the impedance. Methods of measurement of induction. Methods of measurement of capacity. Measurement of the electrical voltage. The ongoing test. Measurement of electric current. Measurement of the characteristics of the diode. Measurement of the characteristics of the transistor. Filtration of signals. Digitally-analogue converter. The measurement of performance.

Recommended of required reading:
BITTERA, M., KAMENSKÝ, M., KRÁLIKOVÁ, E.: Elektronické meranie. Návody na laboratórne cvičenia. Skriptá STU FEI Bratislava. Vydavateľstvo STU, Bratislava, 2012, 230 s., ISBN 978-80-227-3659-6

Language: *Slovak*

Remarks:

Evaluation history
Total number of students being evaluated: 29

A	B	C	D	E	FX
0,0	3,45	6,9	41,38	48,28	0,0

Lecturers: *Assoc. prof. Peter Lipták, CSc.*

Last modification: *15.4.2014*
Supervisor: *Assoc. prof. Ing. Peter Lipták, CSc., guarantee of the study program „Mechanisms in Special Technology“*