

Information sheet for the course Engineering metrology

University: <i>Alexander Dubček University of Trenčín</i>					
Faculty: <i>Faculty of special technology</i>					
Course unit code: <i>MŠT/B/3-40/d</i>			Course unit title: <i>Engineering metrology</i>		
Type of course unit: <i>compulsory</i>					
Planned types, learning activities and teaching methods: <i>Lectures - 2 hours weekly, laboratory seminars - 2 hours weekly, face to face method</i>					
Number of credits: <i>3</i>					
Recommended semester: <i>6th semester in the 3rd year (full-time)</i> <i>6th semester in the 3rd year (part-time)</i>					
Degree of study: <i>I. (bachelor)</i>					
Course prerequisites: <i>none</i>					
Assessment methods: <i>100% attendance on seminars, 60 % attendance on lectures, successful submission of the seminar paper, proof of acquired knowledge from the subject with using oral and written examination</i>					
Learning outcomes of the course unit: <i>The student has knowledge of cross-department focusing on application usage in the field of engineering metrology, dimensional and geometric inaccuracies machine parts, measuring deviations and become familiar with gauges and measuring instruments.</i>					
Course contents: <i>Basic concepts - accuracy, measurement uncertainty, measurement units, methods of measurement. Measurement errors - gross, systematic, random. Dimensional inaccuracy of machine components - basic concepts. Uniform system of limits and fits. Deviations shape and mutual position. Surface roughness. Gauges and measuring instruments. Basic length measurement. Comparison of length measurement. Measurement of angles and cones. Measuring screw. Measurement of gears. Coordinate measurement in rectangular and polar coordinates. Mechanization and automation control in engineering, fit selection, limit gauges. Measurement of surface roughness. Measurement deviations of shape and mutual position. The measurement of flatness, straightness and squareness of laser devices. Special cases of measurement - box, prismatic, rotational components, parameters threads, gears.</i>					
Recommended of required reading: <i>DOVICA, M. a kol.: Metrológia v strojárstve, Monografia, Edícia vedeckej a odbornej literatúry - Strojnícka fakulta TU v Košiciach, ISBN 80-8073-407-0, 2005, 351 s.</i> <i>BOROVÍČKA, M. - JANÁČ, A. - GÖRÖG, A.: Metrológia, Bratislava, STU v Bratislave, 2005, 120 s., ISBN 80-227-2198-0.</i> <i>MADUDA, J. - OBMAŠČÍK, M.: Strojárska metrológia, ALFA Bratislava, 1989</i> <i>MLČOCH, L. - SLIMÁK, I.: Řízení kvality a strojírenská metrologie, SNTL/ALFA Praha/Bratislava, 1987</i>					
Language: <i>Slovak, English</i>					
Remarks:					
Evaluation history <i>Total number of students being evaluated: 499</i>					
A	B	C	D	E	F
3,13	12,71	25,61	19,58	26,04	12,92
Lecturers: <i>Dr.h.c. prof. Ing. Vojtěch Hrubý, CSc.</i> <i>Ing. Mária Ličková, PhD.</i>					

Last modification: 15.4.2014

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