

Information sheet for the course Experimental Modal Analysis

University: <i>Alexander Dubček University of Trenčín</i>					
Faculty: <i>Faculty of Industrial Technologies in Púchov</i>					
Course unit code: <i>MI-I-PV-23F</i>			Course unit title: <i>Experimental Modal Analysis</i>		
Type of course unit: - <i>the given subject is <u>optional</u></i>					
Planned types, learning activities and teaching methods: <i>Lecture: 1 hours weekly/13 hours per semester of study, face to face</i> <i>Seminar: 0</i> <i>Laboratory tutorial: 2 hours weekly/26 hours per semester of study, face to face</i>					
Number of credits: 3					
Recommended semester: <i>the 3rd semester in the 2nd year of the full-time form of study,</i> <i>the 5th semester in the 3rd year of the part-time form of study.</i>					
Degree of study: <i>the 2nd degree of study (Engineering degree)</i>					
Course prerequisites: <i>none</i>					
Assessment methods: <i>To accomplish the given subject, student is obliged to be present at the lessons with the reference to specifications introduced in the study rules for the given study programme. He/she is also obliged to solve one task which is focused on numerical solution relating to the natural vibrations of the selected solid body system.</i>					
Learning outcomes of the course unit: <i>Student is able to solve the specific tasks using basic or fundamental principles relating to knowledge on the natural or forced vibration of solid body systems and moreover, student can measure or determine the vibrations by help of Pulse 11 equipment.</i>					
Course contents: <ul style="list-style-type: none"> - <i>analytical mechanics</i> - <i>natural and forced vibrations of solid body with 1 degree of freedom</i> - <i>natural and forced vibrations of solid body with “n” degrees of freedom</i> - <i>natural and forced vibrations of 1-D continuum – longitudinal, torsional and bend vibrations of the beam system</i> - <i>natural and forced vibrations of 2-D continuum – flat plate</i> - <i>basic principles relating to theory of vibrations for non-linear system with one degree of freedom</i> - <i>Pulse 11 – measurement system</i> - <i>Pulse – control system</i> 					
Recommended or required literature: <i>Trebuňa F., Šimčák F.: Príručka experimentálnej mechaniky, TU Košice, 2007, ISBN 970-80-8073-816-7.</i> <i>Starek L.: Vyššia dynamika, SVŠT Bratislava, 1985.</i> <i>Harrison, H.R. – Nettleton, T.: Advanced Engineering Dynamics, John Wiley, London, 1997.</i> <i>Brdička, M. – Hladík, A: Teoretická mechanika, Academia, Praha, 1987.</i>					
Language: <i>Slovak language (the initial language of the educational process)</i>					
Remarks: —					
Evaluation history:					
A	B	C	D	E	FX
0	0	0	0	0	0
Lecturers: <i>prof. Ing. Ján Vavro, PhD., doc. Ing. Ján Vavro, PhD.</i>					
Last modification: <i>31.03.2014</i>					
Supervisor: <i>prof. Ing. Darina Ondrušová, PhD.</i>					

