

Information sheet for the course Finite Element Method II (Adina)

University: <i>Alexander Dubček University of Trenčín</i>					
Faculty: <i>Faculty of Industrial Technologies in Púchov</i>					
Course unit code: <i>PP-P-22</i>			Course unit title: <i>Finite Element Method II (Adina)</i>		
Type of course unit: <i>compulsory</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 hours</i>					
<i>Laboratory tutorial: 3 hours weekly/39 hours per semester of study; face to face</i>					
Number of credits: <i>5</i>					
Recommended semester: <i>4th semester in the 2nd year full-time</i> <i>4th semester in the 2nd year part-time</i>					
Degree of study: <i>the 1st degree of study (Bachelor's degree)</i>					
Course prerequisites: <i>PP-P-18 Finite Element Method I. (Adina)</i>					
Assessment methods: <i>individual work</i>					
Learning outcomes of the course unit: <i>The student can handle advanced techniques FEM modeling in ADINA 2.8.6 programming environment with a focus on modeling different materials loaded statically and dynamically temperature respectively.</i>					
Course contents:					
<i>Input data. Postprocessing. Analysis of 2D structures. Special features. Elements of fracture mechanics. Stress concentration. Dynamic analysis of structures. Harmonic and transient analysis. Analysis of structures with damping. Of computer modeling and problem solving in dynamic stress, heat conduction, convection, forced oscillation.</i>					
Recommended of required reading:					
<i>Manual ADINA 2.8.6</i>					
<i>IVANČO, V. - KUBÍN, K. - KOSTOLNÝ, K.: Metóda konečných prvkov I. Košice, Elfa, 1994</i>					
<i>BITNÁR, Z.: Metoda konečných prvků I a II, ČVUT Praha, 1992</i>					
<i>BENČA, Š.: Aplikovaná pružnosť I: Metóda konečných prvkov. STU Bratislava, 1989</i>					
<i>COOK, R. D.: Concepts and Applications of FEM Analysis. John Wiley and Sons, 1989, Third Edition</i>					
Language: <i>Slovak</i>					
Remarks:					
Evaluation history:					
A	B	C	D	E	FX
Lecturers: <i>doc. Ing. Ján Vavro, PhD., doc. Ing. Ján Vavro, PhD. Ing. Petra Kováčiková, PhD.</i>					
Last modification: <i>31.03.2015</i>					
Supervisor: <i>doc. Ing. Ján Vavro, PhD.</i>					