

Information sheet for the course Input Parameters to Computational Modeling

University: <i>Alexander Dubček University of Trenčín</i>					
Faculty: <i>Faculty of Industrial Technologies in Púchov</i>					
Course unit code: <i>MI-I-PV-10F</i>			Course unit title: <i>Input Parameters to Computational Modeling</i>		
Type of course unit: <i>optional</i>					
Planned types, learning activities and teaching methods: <i>Lecture: 2 hours weekly/26 hours per semester of study; face to face</i> <i>Laboratory tutorial: 2 hours weekly/26 hours per semester of study; face to face</i>					
Number of credits: <i>5</i>					
Recommended semester: <i>2nd semester in the 1st year full-time</i> <i>2nd semester in the 1st year part-time</i>					
Degree of study: <i>the 2nd degree of study (Engineer's degree)</i>					
Course prerequisites: <i>none</i>					
Assessment methods: <i>Active participation in the seminars. Creation and presentation of semester task.</i>					
Learning outcomes of the course unit: <i>Students are familiar with the input parameters to computational modeling for needs of practice. Students will get knowledge about proper enter of the parameters and their influence on the results. They learn to set the input parameters from experimental data.</i>					
Course contents: <i>Overview of input parameters for computational simulation. Geometric parameters. Material parameters. Description of materials with a specific behavior. Entering the input parameters in the selected computational software. Influence of the input data sensitivity analysis to the results of calculations. Influence of the convergence of calculations and computation time. Determination of input parameters for the computer simulation from experimental data. Other input parameters according to the chosen form of analysis and computational modeling purpose. Setting the boundary and initial conditions for computational modeling.</i>					
Recommended of required reading: <ol style="list-style-type: none"> <i>1. Ever J. Barbero. Finite Element Analysis of Composite Materials Using ANSYS - Second Edition, CRC Press, 2014. ISBN 978-1-4665-1689-2.</i> <i>2. E. J. Barbero, Finite Element Analysis of Composite Materials, CRC Press, Boca Raton, FL, 2007. ISBN 978- 1-4200-5433-3.</i> <i>3. Aktuálna literatúra zaoberajúca sa výpočtovým modelovaním z pohľadu vstupných údajov.</i> <i>4. Konečný Z., Krys V. CAD III – Pevnostní analýzy. Učebný text. Ostrava, ČR, 2007. ISBN 978-80-248-1513-8.</i> 					
Language: <i>Slovak</i>					
Remarks:					
Evaluation history: <i>0</i>					
A	B	C	D	E	FX
0.0	0.0	0.0	0.0	0.0	0.0
Lecturers: <i>doc. Ing. Jan Krmela, PhD.</i>					

Last modification: <i>31.03.2014</i>
Supervisor: <i>prof. Ing. Darina Ondrušová, PhD.</i>