Information sheet for the course: Computational Modeling in Materials Engineering II

University: Alexander Dubček University of Trenčín	
Faculty: Faculty of Industrial Technologies in Púchov	

Course unit code: MI-I-P-9	**Course unit title: Computational Modeling in Materials Engineering II**

Form, scope and method of educational activity:

Form of study: Lecture / Seminar / Laboratory tutorial

Recommended number of lessons (hours):

Weekly: 1 / 0 / 3   **During the semester:** 12 / 0 / 36   **Method of study:** attendance method

Number of credits: 5

Recommended semester: 2.

Degree of study: The 2nd degree of study

Course prerequisites: MI-I-P-2 - **Computational modeling in materials engineering I**

Assessment methods:

Assessment during the semester:

Summary assessment of work results during the semester = 40 points

Semester work - project and independent work during the semester.

Final assessment:

Assessment of exam results = 60 points

Grading scale:

Grade A: 91 – 100 points

Grade B: 81 – 90 points

Grade C: 71 – 80 points

Grade D: 61 – 70 points

Grade E: 55 – 60 points

Grade FX: less than 55 points

Learning outcomes of the course unit:

The student can independently solve tasks in the field of computational modeling using FEM in the field of nonlinear statics and dynamics of constructions and structures of materials, heat conduction, modal analysis, etc.

Course contents:

Creation of calculation models and solving tasks in the field of dynamic stress, heat conduction, flow, forced oscillation.

Recommended of required reading:

Manuals of ADINA, MSC MARC.

COOK, R.D.: Concepts and Applications of FEM Analysis. John Wiley and Sons, 3rd ed., 1989.

E-learning TnUAD.

Language:

English

Remarks: Compulsory course / Profile course

Evaluation history: 0

Total number of graded students:

A	B	C	D	E	FX
0.0	0.0	0.0	0.0	0.0	0.0

Lecturers: Associate professor Ing. Ján Vavro, PhD.

Last modification: 31.08.2022

Supervisor: prof. RNDr. Mariana Pajtášová, PhD.