

**Information sheet for the course**  
**Selected Chapters from Polymeric Material Analysis**

<b>University:</b> <i>Alexander Dubček University of Trenčín</i>					
<b>Faculty:</b> <i>Faculty of Industrial Technologies in Púchov</i>					
<b>Course unit code:</b> <i>MI-I-PV-34</i>			<b>Course unit title:</b> <i>Selected Chapters from Polymeric Material Analysis</i>		
<b>Type of course unit:</b> <i>optional</i>					
<b>Number of credits:</b> <i>2</i>					
<b>Recommended semester:</b> <i>4<sup>th</sup> semester in the 2<sup>nd</sup> year full-time</i> <i>6<sup>th</sup> semester in the 3<sup>rd</sup> year part-time</i>					
<b>Degree of study:</b> <i>the 2<sup>nd</sup> degree of study (Engineer's degree)</i>					
<b>Course prerequisites:</b> <i>Passing of all compulsory and optional subjects from the syllabus, including MI-I-PV-5CD Polymeric material analysis</i>					
<b>Assessment methods:</b> <i>Successful graduation of the state exam.</i>					
<b>Learning outcomes of the course unit:</b> <i>Successful graduation of the state exam.</i>					
<b>Course contents:</b> <i>Polymers.</i> <i>Copolymers.</i> <i>The synthetic and natural polymers-analysis.</i> <i>Types of methods for determining the properties of polymers and copolymers.</i> <i>The physical, physico-chemical properties of the polymers.</i> <i>Osmometry, method of determining molar mass.</i> <i>Light scattering and sedimentation method.</i> <i>Gel permeation chromatography.</i> <i>Differential scanning calorimetry.</i> <i>Diffraction methods.</i> <i>Spectral methods.</i> <i>Dilatometry.</i> <i>NMR characterization of polymers.</i> <i>Determination of the composition of polymeric materials using DTA, DTG, DMTA.</i> <i>Methods for determining the composition of polymer systems.</i> <i>Evaluation of toxicity and environmental safety of polymers.</i> <i>Standardized tests of polymers (STN, EN standards).</i>					
<b>Recommended of required reading:</b> <ol style="list-style-type: none"> <li><i>Vajdová J., Štubňa M., Olšovský M.: Laboratórium odboru II – Chemické a fyzikálno-mechanické skúšky. FPT TnUAD Púchov, 2003.</i></li> <li><i>Szulényi F.: Metódy skúmania polymérov (učebný text). FPT Púchov, 2003.</i></li> <li><i>Garaj J., Bustín D., Hladký Z.: Analytická chémia. Alfa Bratislava, 1987.</i></li> <li><i>Čakrt M. a kol.: Praktikum z analytickej chémie. Alfa Bratislava, 1989.</i></li> <li><i>Príslušné STN.</i></li> </ol>					
<b>Language:</b> <i>Slovak</i>					
<b>Remarks:</b> <i>-</i>					
<b>Evaluation history:</b> <i>0</i>					
A	B	C	D	E	FX
0.0	0.0	0.0	0.0	0.0	0.0
<b>Lecturers:</b> <i>prof. RNDr. Ignác Capek, DrSc.</i>					

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