

Information sheet for the course Treatment and Use of Polymeric Materials

University: <i>Alexander Dubček University of Trenčín</i>	
Faculty: <i>Faculty of Industrial Technologies in Púchov</i>	
Course unit code: <i>MI-I-PV-6C</i>	Course unit title: <i>Treatment and Use of Polymeric Materials</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>Seminar: 2 hours weekly/26 hours per semester of study; face to face</i> <i>Laboratory tutorial: 0</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>Seminar during the semester: 5 control tests (2 points) – acquirement of 5 points from all 10 points. Final valuation (examination): writing part – 36 points from all 60 points, oral part – 25 points from all 40 points. Summary of both parts of examination must be 61 points. It is necessary to obtain minimally 90 points for A valuation, 80 points for B valuation, 75 points for C valuation, 68 points for D valuation and 61 points for E valuation.</i>	
Learning outcomes of the course unit: <i>Student has a systematic and complex knowledge of theory and technology of processes which are associated with processing and application of plastics and rubber.</i>	
Course contents: <ol style="list-style-type: none"> <i>1. The influence of structure, molecular weight and chemical compositions on properties and degree of workability of polymers.</i> <i>2. Polyolefins – structure, production, properties, processing.</i> <i>3. Styrene a styrene plastics, acrylic polymers – structure, production, properties, processing</i> <i>4. Halocarbon plastics – structure, production, properties, processing</i> <i>5. Polyvinyl esters – structure, production, properties, processing</i> <i>6. Phenol plastics and amino plastics – structure, production, properties, processing</i> <i>7. Epoxy resins – structure, production, properties, processing</i> <i>8. Polyesters – structure, production, properties, processing</i> <i>9. Polyurethanes – structure, production, properties, processing</i> <i>10. Silicones – structure, production, properties, processing</i> <i>11. Natural polymers – structure, production, properties, processing</i> <i>12. Rubbers for general utilization, oil resistant rubbers, heat resistant rubbers – structure, production, properties, processing</i> <i>13. Special types of rubbers and construction plastics – structure, production, properties, processing</i> 	
Recommended of required reading: <ol style="list-style-type: none"> <i>1. Alexy, P.: Procesy spracovania polymérov, STU Bratislava 2011</i> <i>2. Kuta, A.: Technologie a zařízení pro spracování kaučuků a plastů, VŠCHT PRAHA, 2011,</i> <i>3. Ducháček, V.: Polymery, výroba, zpracování, použití. VŠCHT Praha, 2011.</i> <i>4. Zeman, L.: Vstřikování plastů, BEN Praha, 2009.</i> <i>5. Ducháček, V., Hrdlička, Z.: Gumárenské suroviny a jejich zpracování, VŠCHT Praha, 2009.</i> 	

Language: <i>Slovak</i>					
Remarks:					
Evaluation history					
Number of students: <i>18</i>					
A	B	C	D	E	FX
55.56	27.78	5.56	5.56	0.0	5.56
Lecturers: <i>doc. Ing. Petra Skalková, PhD., prof. RNDr. Mariana Pajtášová, PhD.</i>					
Last modification: <i>31.03.2014</i>					
Supervisor: <i>prof. Ing. Darina Ondrušová, PhD.</i>					