

Information sheet for the course Testing and Certification of Rubber Products

University: <i>Alexander Dubček University of Trenčín</i>	
Faculty: <i>Faculty of Industrial Technologies in Púchov</i>	
Course unit code: <i>MI-I-V-19</i>	Course unit title: <i>Testing and Certification of Rubber Products</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: 0</i> <i>Laboratory tutorial: 0</i>	
Number of credits: <i>2</i>	
Recommended semester: <i>3rd semester in the 2nd year full-time</i> <i>3rd semester in the 2nd 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>It is necessary to elaborate and hand in final project. The topic of project is predetermined and the paper has to have minimally 10 pages. Final valuation (test) – writing part – 8.5 points from all 17 points. It is necessary to obtain minimally 15 points for A valuation, 13 points for B valuation, 11 points for C valuation, 9 points for D valuation and 8.5 points for E valuation.</i>	
Learning outcomes of the course unit: <i>Student has a systematic and complex knowledge about standardization and quality control with an emphasis placed on rubber materials and raw materials. Student has knowledge about specifications of polymeric materials testing and principles of the most widely used tests in the polymer area. Student has knowledge about international conditions of certifications, European legislation and commercial certification systems in Europe.</i>	
Course contents: <ol style="list-style-type: none"> 1. <i>Standardization in the quality control.</i> 2. <i>Slovak technical standard (STN) and international standards.</i> 3. <i>The accreditations of testing laboratories and products in Slovak republic.</i> 4. <i>Testing of physical, mechanical and chemical properties of elastomers.</i> 5. <i>Testing of physical, mechanical and chemical properties of plastics.</i> 6. <i>General principles of the quality control, technical standards.</i> 7. <i>Specifics of standardized testing procedures of polymeric materials.</i> 8. <i>Principles of measurement, validation, calibration and statistical procedures in the quality control.</i> 9. <i>Short-term and long-term mechanical tests of polymers.</i> 10. <i>Dynamic cyclic tests, tests of fatigue and wear of polymeric materials.</i> 11. <i>Testing of electrical and thermal properties.</i> 12. <i>Standardized valuation procedures of polymer flammability and resistance of polymers against the environment.</i> 	
Recommended of required reading: <ol style="list-style-type: none"> 1. <i>Prekop, Š. a kol.: Gumárenská technológia II. GC TECH TnUAD, Trenčín, 2003</i> 2. <i>Jahňátek, L, Grom, J., Náplava A.: Metrológia a skúšanie plastov, STU Bratislava, 2006.</i> 3. <i>Ducháček V., Hrdlička Z.: Gumárenské suroviny a jejich spracování, Praha VŠCHT, 2009. 200 s. ISBN 978-80-7080-713-2.</i> 4. <i>Príslušné STN normy.</i> 	

Language: <i>Slovak</i>					
Remarks: <i>The course is in summer semester.</i>					
Evaluation history					
Number of students: <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. Petra Skalková, PhD.</i>					
Last modification: <i>31.03.2014</i>					
Supervisor: <i>prof. Ing. Darina Ondrušová, PhD.</i>					