

## Information sheet for the course Rubber Technology

<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-17C</i>	<b>Course unit title:</b> <i>Rubber Technology</i>
<b>Type of course unit:</b> <i>optional</i>	
<b>Planned types, learning activities and teaching methods:</b> <i>Lecture: 2 hours weekly/26 hours per semester of study; face to face</i> <i>Seminar: 1 hours weekly/13 hours per semester of study; face to face</i> <i>Laboratory tutorial: 0</i>	
<b>Number of credits:</b> <i>4</i>	
<b>Recommended semester:</b> <i>3<sup>rd</sup> semester in the 2<sup>nd</sup> year full-time</i> <i>3<sup>rd</sup> semester in the 2<sup>nd</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>none</i>	
<b>Assessment methods:</b> <i>Student writes two screening control tests during semester and obtains minimally 60 % from both tests.</i>	
<b>Learning outcomes of the course unit:</b> <i>Student has the knowledge about technology processes in rubber industry and student orients in this problem.</i>	
<b>Course contents:</b> <ol style="list-style-type: none"> <li><i>1. The composition of rubber blends – characterization, the effect in blend.</i></li> <li><i>2. The preparation of rubber blends – dispersion and homogenization of components.</i></li> <li><i>3. Extrusion of rubber blends.</i></li> <li><i>4. Calendering of rubber blends.</i></li> <li><i>5. Jacketing of conductors and cables – technology, material composition of blends for jacketing.</i></li> <li><i>6. Waterproofing of reinforcing materials.</i></li> <li><i>7. Flooring materials – production technology, material composition of flooring materials.</i></li> <li><i>8. Tires – distribution, structure, basic types, material composition.</i></li> <li><i>9. Production technology of tires.</i></li> <li><i>10. Transport bands – distribution, structure, basic types, material composition, production.</i></li> <li><i>11. Drive belts – types and structure, production technology.</i></li> <li><i>12. Hoses – types and structure, material composition, production technology.</i></li> <li><i>13. Tire-tube and vulcanisation membranes – properties, material composition, production technology.</i></li> <li><i>14. Technical rubber – distribution, examples of utilization, production methods.</i></li> <li><i>15. Methods of rubber waste recycling, utilization of rubber brash and reclaim.</i></li> <li><i>16. Reinforcing materials in rubber products.</i></li> </ol>	
<b>Recommended of required reading:</b> <i>OLŠOVSKÝ, M.: Kaučuky. Výroba-vlastnosti-použitie. Trenčín : TnUAD, 2012.</i> <i>OLŠOVSKÝ, M. a kol.: Gumárenské výrobky a výroby. Trenčín : TnUAD, 2004.</i> <i>PREKOP, Š. a kol.: Gumárska technológia II. Trenčín : GC-tech a TnUAD, 2003.</i> <i>DUCHÁČEK, V. - HRDLIČKA, Z.: Gumárenské suroviny a jejich zpravovávání. Praha : VŠCHT, 2009.</i>	
<b>Language:</b> <i>Slovak</i>	
<b>Remarks:</b>	

**Evaluation history**

Number of students: 7

A	B	C	D	E	FX
14.29	14.29	57.14	0.0	14.29	0.0

**Lecturers:** *doc. Ing. Petra Skalková, PhD.***Last modification:** *31.03.2014***Supervisor:** *prof. Ing. Darina Ondrušová, PhD.*