

Course code																																	
Type and description	EC – elective subjects from the discipline of Material Engineering																																
ECTS credit	1																																
Course name	Multicomponent Polymeric Systems																																
Course name in Polish	Wielkoskładnikowe układy polimerowe																																
Language of instruction	English																																
Course level	8 PRK																																
Course coordinator	dr hab. inż. Dawid Stawski																																
Course instructors	dr hab. inż. Dawid Stawski																																
Delivery methods and course duration	<table border="1"> <thead> <tr> <th></th> <th>Lecture</th> <th>Tutorials</th> <th>Laboratory</th> <th>Project</th> <th>Seminar</th> <th>Other</th> <th>Total of teaching hours during semester</th> </tr> </thead> <tbody> <tr> <td>Contact hours</td> <td>0</td> <td>0</td> <td>0</td> <td>5</td> <td>0</td> <td>0</td> <td>5</td> </tr> <tr> <td>E-learning</td> <td>no</td> <td>no</td> <td>no</td> <td>no</td> <td>no</td> <td>no</td> <td>no</td> </tr> <tr> <td>Assessment criteria (weightage)</td> <td>0</td> <td>0</td> <td>0</td> <td>100%</td> <td>0</td> <td>0</td> <td>100%</td> </tr> </tbody> </table>		Lecture	Tutorials	Laboratory	Project	Seminar	Other	Total of teaching hours during semester	Contact hours	0	0	0	5	0	0	5	E-learning	no	no	no	no	no	no	no	Assessment criteria (weightage)	0	0	0	100%	0	0	100%
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Course objective	<p>The goal of the subject</p> <p>The aim of the course is to familiarize the student with advanced knowledge in the field of obtaining and properties of multi-component polymeric materials.</p>																																
Learning outcomes	<p>A PhD student after completing the course can:</p> <ol style="list-style-type: none"> 1. Classify multi-component polymer materials (W1 P8S_EG) 2. Choose polymers for multicomponent systems due to their chemical structure and functional properties (U1 P8S_UW) 																																
Assessment methods	<p>Effects 1-2 – Project report.</p> <p>The final mark consists of a Project report (100%).</p>																																
Prerequisites																																	
Course content with delivery methods	<p>The content of education divided into forms</p> <p>PROJECT</p> <p>Theoretical foundations for the formation of polymer mixtures. Thermodynamics of mixing, mutual interactions of components. Miscibility of ingredients and methods of its improvement. Methods for making polymer mixtures. Composing of two and multi-element mixtures. Rheology of mixtures. Viscosity of multi-component systems. Mixtures of liquid crystal polymers with thermoplastics. Polymer blends containing a biodegradable polymer. Applications of mixtures. Examination of physicochemical parameters of polymer mixtures. Analytical techniques for multicomponent testing.</p>																																
Basic reference materials	<p>- Miles, S. Rostami: Multicomponent Polymer Systems, Longman Scientific and Technical, Essex 1992</p> <p>- Multicomponent Polymer Systems, NORBERT PLATZER, Applied Polymer Science, Second Edition Edition, Chapter 10, pp 219–237, ACS Symposium Series, Vol. 285</p>																																

Other reference materials	
Average student workload outside classroom	15h
Comments	
Last update	July 2020