

Course code																																	
Type and description	EC Elective Course																																
ECTS credit	1																																
Course name	Selected Issues from Knitting																																
Course name in Polish	Wybrane zagadnienia z dziewiarstwa																																
Language of instruction	English																																
Course level	8 PRK																																
Course coordinator	dr hab. inż. Zbigniew Mikołajczyk, prof. PŁ																																
Course instructors	dr hab. inż. Zbigniew Mikołajczyk, prof. PŁ, dr inż. Magdalena Kłonowska, dr inż. Katarzyna Piekłak, dr inż. Iwona Nowak																																
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>15</td> <td>0</td> <td>0</td> <td>15</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></td> </tr> <tr> <td>Assessment criteria (weightage)</td> <td>0,00</td> <td></td> <td></td> <td>100</td> <td></td> <td>0,00</td> <td>100</td> </tr> </tbody> </table>		Lecture	Tutorials	Laboratory	Project	Seminar	Other	Total of teaching hours during semester	Contact hours	0	0	0	15	0	0	15	E-learning	No	No	No	No	No	No		Assessment criteria (weightage)	0,00			100		0,00	100
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Course objective	The aim of the course is to enable gain knowledge in the field of technology as well as principles and techniques of design and modeling structure and properties of knitted fabrics and knitted products.																																
Learning outcomes	<p>After completing the course the PhD student is able to:</p> <ol style="list-style-type: none"> 1. characterize the assortment areas of unique, innovative knitted fabrics and knitted products - outcome 2. characterize unconventional raw materials, their properties and the influence of thread structure parameters on physical properties of knitted fabrics - outcome 3. describe the latest achievements in the construction of knitting machines, their technical and technological possibilities - outcome 4. formulate principles and techniques of designing innovative knitted fabrics and knitted products – outcome <p>Effects: W4, U4, K1</p>																																
Assessment methods	<p>Assessment methods: Learning outcomes - written exam Learning outcomes written final work (case study)</p> <p>The final grade consists of: The result of the written exam – 50% The result of the written final work (case study) – 50%</p>																																
Prerequisites																																	
Course content with delivery methods	<p>Project</p> <ol style="list-style-type: none"> 1. An assortment of unique, innovative knitted fabrics and knitted products: catalytic nets, satellite dishes, mattresses and car seats made of 3D distance knitted fabrics, high-strength composites based on DOS type knitted fabrics, and compression knitted fabrics supporting the process of external treatment and others. 2. Raw materials used for the production of knitted fabrics and knitted products with unique properties (metal threads, core threads, stream of fiber, glass threads, aramid threads, elastomer threads and others). 3. Innovative technologies of knitted fabrics on weft circular knitting machines, flat knitting machines and warp knitting machines, including machines for spatial structures, numerically controlled machines and computer systems for designing knitted fabrics and knitted products. 4. Principles and techniques of designing the structure and properties of knitted fabrics as well as knitted products: knitwear and underwear products with increased end-use properties and technical knitted products like composite, medical, geotextiles and others. 																																
Basic reference materials	<ol style="list-style-type: none"> 1. K. Kopias, Technologia dzianin kolumienkowych, WPL, 2010 2. K. Kopias, Technologia dzianin rządkowych, WPL, 2013 																																
Other reference materials	<ol style="list-style-type: none"> 1. W. Korliński, Podstawy dziewiarstwa, WNT, 1978 2. W. Korliński, Technologia dzianin rządkowych, WNT, 1988 3. K. Kopias, Technologia dzianin kolumienkowych, WNT, 1989 4. Journals: Kettenwirk Praxis, Melliand 																																
Average student workload outside classroom	15h																																
Comments																																	
Last update	March 2023																																

