Course code	
Type and description	EC – Elective Course
ECTS credit	1
Course name	Quality and Useful Technological Yarns
Course name in Polish	Jakość i przydatność technologiczna przędz
Language of instruction	English
Course level	8 PRK
Course coordinator	Rutkowski Jacek, Ph.D. Eng.
Course instructors	

Delivery methods and course duration

	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)				100			100

Course objective	1. The aim of the course is to enable doctoral students to acquire knowledge and skills in the field of the issues of quality and technological suitability of yarns in relation to their production technology.
Learning outcomes	1. The student is able define the basic notions connected with technologies the production of yarns their quality and technological usefulness 2. The student is able plan the technological process of production of yarns 3. The student is able to compare the quality of semi-finished products and yarns and interpret the results of testing the quality of semi-finished products and yarns Effects: W4, U4, K1
Assessment methods	Learning outcomes 1,2,3 - Written examination/Exam The final evaluation consists of: The result of the examination -100%
Prerequisites	General Spinning Technology - 120001, Building Technology and Structure of Yarns - 120009.
Course content with delivery methods	Project Controlling the production process using sensors on line. Quality control of semi-finished and yarn using the sensors installed directly on machines: card, drowing frame, spinningmachine and winding machine. The quality control system of line. Yarn linear density, twist, yarn strength indicators and the elongation at break. Elasticity of the yarn. Clean and faults of yarn. Evenness of the yarn mass according to Uster apparatus. Methods of assessment of yarn hairiness. Qualitative assessment of yarns based on Uster Statistics. ASTM patterns. Comprehensive quality management in a spinning mill. Technological usefulness of classic, compact, rotor yarns, wrapped for flat products: fabrics and knitted fabrics as well as fancy yarns and threads.
Basic reference materials	1. Jabłoński W., Jackowski T.: Technologia przędzalnictwa bawełny. WNT, W-wa 1986 r. 2. Jabłoński W., Jackowski T.: Nowoczesne systemy przędzenia. Bielsko-Biała 2001 r.
Other reference materials	1. Grosberg P., Iype C.: Yarn Production. Theoretical Aspects. The Textile Institute, 1999. 2. Klein W.: The Technology Of Short-staple Spinning. The Textile Institute, 1991. 3. Lawrence C.A.: Fundamentals of Spun Yarn Technology. CRS Press, Boca Raton, London, N-Y, Washington D.C., 2003.
Average student workload outside classroom	15h
Comments	
Last update	March 2023