Course code	CC – Core Curriculum for the Materials Engineering Discipline
Type and description	Background Course
ECTS credit	2
Course name	Construction materials
Course name in Polish	Materiały konstrukcyjne
Language of instruction	English
Course level	8 PRK
Course coordinator	dr hab. inż. Marcin Barburski, dr hab. inż. Bożena Pietrzyk, dr hab. inż. Hieronim Szymanowski
Course instructors	
Delivery methods and course duration	

	Lecture	Tutorials	Laboratory	Project	Seminar	Other	Total of teaching hours during semester
Contact hours	15					0	15
E-learning	No	No	No	No	No	No	
Assessment criteria (weightage)	100%						

Course objective	The aim of the course is to provide students with knowledge of modern engineering materials that have found wide application in technology. Additionally, the lectures will provide knowledge on the selection of modern engineering materials for structural and functional elements
Learning outcomes	A PhD student after completing the course can: 1. Adapt the structure and structure of the material for special constructional W4 2. describe the construction materials,W4 3. discuss and describe the impact of the raw material, the structure of the starting materials and the technology used on the properties of the construction materials K1, U2
Assessment methods	effects 1-3 - written exam from the lecture
Prerequisites	Second level studies
Course content with delivery methods	LECTURE Application and classification of construction materials. Polymer and textile composites Construction materials for machines. Constant. Titanium and its alloys. Super alloys. Shape memory materials. Construction and classification of ceramics. Manufacture of ceramic materials. Properties (mechanical and thermal) of ceramic materials. Glass and glass ceramics. Composites with a ceramic matrix. Selected applications of ceramic materials. Ceramic coatings.
Basic reference materials	- Blicharski Marek „Inżynieria materiałowa" Wydawnictwo Naukowe PWN W-wa 2019 ISBN: 9788301193300 Michae Ashby, Hugh Shercliff, David Cebon "Inżynieria materiałowa" Galaktyka 2011 - Wacław Królikowski Polimerowe kompozyty konstrukcyjne Wydawnictwo Naukowe PWN 2012 - Żuchowska D.: Polimery konstrukcyjne, Wydawnictwa Naukowo-Techniczne, W-wa 2000
Other reference materials	- Królikowski W.: Tworzywa wzmocnione i włókna wzmacniające. WNT W-wa 1988 - Nowacki J.: Materiały kompozytowe, Wydawnictwo Politechniki Łódzkiej, Łódź 1993 Dobrzański L.A.: Podstawy nauki o materiałach, Wydawnictwo Politechniki Śląskiej, Gliwice 2012
Average student workload outside classroom	10 h

Comments	
Last update	