Course code								
Type and description	Background Course							
ECTS credit	2							
Course name	Mathematical modelling - project							
Course name in Polish	Matematyczne modelowanie - projekt							
Language of instruction	English							
Course level	8 PRK							
Course coordinator	Przemysław Perlikowski							
Course instructors	Przemysław Perlikowski, Radosław Mania, Grzegorz Kudra, Piotr Brzeski, Tomasz Kubiak, Paweł Oleinik, Damian Obidowski, Krzvsztof Sobczak							
Delivery methods and								
course duration		Lecture	Tutorials	Laboratory	Project	Seminar	Other	Total of teaching hours during semester
	Contact hours	0	0 No	0 No	15 No	0 No	0 No	15
	Assessment	NO	No	No	110	No	110	
	criteria (weightage)	0,00			100,00		0,00	
Course objective	 To enable students to acquire knowledge in the field of mathematical methods of mechanical systems Providing a good foundation for developing solutions to a selected class of problems in mechanical engineering. 							methods of mechanical
Learning outcomes	After the course, a PhD student will be able to:							
	1. select and justify the choice concept to solve the problem of research W1, W4, U3, K2.							
	 develop the assumption for a mathematical model or numerical simulation and implement them in conducting research W1, W4, U3, K1. interpret the results and then formulate and justify flowing from them conclusions W4, U3, K1 							
	4. prepare a written report or draft of a scientific paper and a presentation of the conducted research W4, U3, K1, K2.							
Assessment methods	Preparation of presentation, solution of scientific problem and proposition of scientific paper describing performed research. The assessment is given to the student by supervisors							
	Effects W1, W4 – proposition of scientific paper							
	effects U3, K1	, K2 – pre	paration of	f presentatior	n, solution	of scientifi	c problen	n
	The final evaluation is based on:							
	solution of scientific problem related to the PhD student's doctoral dissertation (60%)							
	preparation of presentation (20%)							

	proposion of scienftic paper (20%)					
Prerequisites	The contents of the master degree course on the differential and integral calculus, dynamics of					
	machines, strength of materials and fluid mechanics.					
Course content with	Project in mathematical modelling of mechanical systems related to the PhD student's doctoral					
delivery methods	dissertation.					
	During the course, PhD students solve the problem given by the teacher, which has a character of					
	scientific research related to the PhD student's doctoral dissertation. During this course, PhD students					
	create mathematical models, perform numerical simulations or analytical computations, describe their					
	results, and formulate conclusions.					
Basic reference materials	Literature connected with the research problem under consideration.					
Other reference materials	Literature connected with the research problem under consideration.					
Average student workload	35 h					
outside classroom						
Comments						
Last update						