



Subject card

Subject name and code	Rocket Science, E:41049W0						
Field of study	Space and Satellite Technologies						
Date of commencement of studies	February 2024		Academic year of realisation of subject		2023/2024		
Education level	second-cycle studies		Subject group				
Mode of study	Full-time studies		Mode of delivery		at the university		
Year of study	1		Language of instruction		English		
Semester of study	1		ECTS credits		3.0		
Learning profile			Assessment form		assessment		
Conducting unit	Department of Geoinformatics -> Faculty of Electronics, Telecommunications and Informatics						
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. inż. Zbigniew Łubniewski				
	Teachers		dr hab. inż. Zbigniew Łubniewski				
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	0.0	30.0	0.0	45
	E-learning hours included: 0.0						
Learning activity and number of study hours	Learning activity	Participation in didactic classes included in study plan		Participation in consultation hours		Self-study	SUM
	Number of study hours	45		10.0		20.0	75
Subject objectives	Knowledge and understanding (extension, consolidation and understanding of knowledge) - The student knows the construction of rockets - The student has knowledge of mechanics, in particular, the knowledge necessary to understand the basic phenomena physical phenomena occurring in external ballistics objects related to rocket technology. - The student has knowledge of how to take measurements on rockets and estimate the obtained results.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[K7_K82] is equipped to participate actively in lectures, seminars and laboratory classes conducted in foreign language		The student communicates in English and prepares all projects and reports in English.		[SK4] Assessment of communication skills, including language correctness		
	[K7_K81] is able to cooperate in international team at her/his own university, during work placement and during study abroad		Student współpracuje z kolegami z zagranicy		[SK1] Assessment of group work skills		
	[K7_K04] Can show resourcefulness and ingenuity in dealing with professional tasks.		The student demonstrates an entrepreneurial spirit		[SK2] Assessment of progress of work		
	K7_U09		The student knows the tools of the field of study and the subject of rocket science		[SU4] Assessment of ability to use methods and tools		
	K7_W04		Student can design rocket functions and plan its mission		[SW1] Assessment of factual knowledge		
Subject contents	Rocket Science Fundamentals; Nozzle; Rocket equation; Propulsive; Rocket engines; Orbits; Rocket dynamic and motions; Payload						
Prerequisites and co-requisites	Basic engineering knowledge						
Assessment methods and criteria	Subject passing criteria		Passing threshold		Percentage of the final grade		
	test		56.0%		100.0%		
Recommended reading	Basic literature		-				

	Supplementary literature	-
	eResources addresses	Adresy na platformie eNauczanie:
Example issues/ example questions/ tasks being completed	-	
Work placement	Not applicable	

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