



Subject card

Subject name and code	Critical systems software testing and QA, E:4104W0						
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			2.0		
Learning profile		Assessment form			assessment		
Conducting unit	Department of Intelligent Interactive Systems -> Faculty of Electronics, Telecommunications and Informatics						
Name and surname of lecturer (lecturers)	Subject supervisor	prof. dr hab. inż. Bogdan Wiszniewski					
	Teachers	prof. dr hab. inż. Bogdan Wiszniewski					
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	15.0	0.0	0.0	30
	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	30	0.0		0.0		30
Subject objectives	To familiarise students with methods of critical systems software testing and quality assurance in space applications.						
Learning outcomes	Course outcome	Subject outcome			Method of verification		
	K7_U07	Student is able to perform critical analysis of the requirements and restrictions with respect to the designed software system.			[SU2] Assessment of ability to analyse information [SU1] Assessment of task fulfilment		
	[K7_K03] Can analyse and implement assigned tasks while maintaining high technical standards. Is able to work and interact in a group, taking on different roles. Adheres to the principles of professional ethics and respects the diversity of views and cultures.	Student implements his tasks related to critical software systems testing maintaining high technical standards.			[SK2] Assessment of progress of work		
	K7_W12	Student has knowledge on critical software development with special emphasis on testing and quality assurance.			[SW1] Assessment of factual knowledge		
Subject contents	Environment, program and error models; Functional testing strategies; Structural testing strategies; Parallel and distributed systems software testing; Organization and planning of testing process; Product lifecycle vs. testing cycle; Software validation, verification and testing; Static analysis techniques; Documentation standards (IEEE, ESA); Quality assurance vs. product assurance						
Prerequisites and co-requisites	-						
Assessment methods and criteria	Subject passing criteria	Passing threshold			Percentage of the final grade		
	laboratory	50.0%			50.0%		
	exam	50.0%			50.0%		
Recommended reading	Basic literature	Students will receive a reading list at the beginning of the semester.					
	Supplementary literature	-					
	eResources addresses	Adresy na platformie eNauczanie: Critical systems software testing and QA - Spring'24 - Moodle ID: 1292 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=1292					

Example issues/ example questions/ tasks being completed	-
Work placement	Not applicable