Subject card

Subject name and code	BSc Diploma Project I, PG_00047943
Field of study	Automatic Control, Cybernetics and Robotics

Date of commencement of studies	October 2021	Academic year of realisation of subject	2023/2024
Education level	first-cycle studies	Subject group	Optional subject group Subject group related to scientific research in the field of study
Mode of study	Full-time studies	Mode of delivery	at the university
Year of study	3	Language of instruction	Polish
Semester of study	6	ECTS credits	2.0
Learning profile	general academic profile	Assessment form	assessment

Conducting unit	Department of Decision Systems and Robotics -> Faculty of Electronics, Telecommunications and Informatics

Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Paweł Raczyński
	Teachers	prof. dr hab. inż. Maciej Niedźwiecki
		prof. dr hab. inż. Zdzisław Kowalczuk
		dr inż. Marcin Pazio
		dr inż. Marek Tatara
		dr inż. Michał Czubenko
		dr inż. Piotr Fiertek
		dr inż. Piotr Kaczmarek
		dr inż. Tomasz Białaszewski
		dr Tomasz Neumann
		dr hab. inż. Tomasz Stefański
		dr inż. Krzysztof Cisowski
		mgr inż. Krzysztof Pastuszak
		dr hab. inż. Tomasz Talaśka
		dr inż. Jakub Wszołek
		dr inż. Kamil Stawiarski
		dr inż. Paweł Raczyński

Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	0.0	30.0	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	2.0	18.0	50

Subject objectives	Implementation of the diploma

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[K6_K01] is ready to cultivate and disseminate models of proper behaviour in and outside the work environment; make independent decisions; critically evaluate actions of their own, teams they lead and organisations they are part of; take responsibility for results of these actions; responsibly perform professional roles, including:n - observing rules of professional ethics and require it from others,n - care for the achievements and traditions of the professionn	The student is ready to disseminate patterns of proper behavior in the environment, make decisions, critically evaluate (teams he manages or participates in), accept responsibility, perform professional roles, adhere to the principles of professional ethics and care for the achievements and traditions of the profession	[SK3] Assessment of ability to organize work [SK4] Assessment of communication skills, including language correctness [SK5] Assessment of ability to solve problems that arise in practice [SK1] Assessment of group work skills
	[K6_U03] can design, according to required specifications, and make a simple device, facility, system or carry out a process, specific to the field of study, using suitable methods, techniques, tools and materials, following engineering standards and norms, applying technologies specific to the field of study and experience gained in the professional engineering environment	The student is ready to fulfill social obligations, co-organize environmental activities, initiate actions for the benefit of society, as well as entrepreneurial thinking and action.	[SU2] Assessment of ability to analyse information [SU3] Assessment of ability to use knowledge gained from the subject [SU4] Assessment of ability to use methods and tools
	[K6_U08] while identifying and formulating specifications of engineering tasks related to the field of study and solving these tasks, can:n- apply analytical, simulation and experimental methods,n- notice their systemic and non-technical aspects,n- make a preliminary economic assessment of suggested solutions and engineering work n	The student is able to use analytical, simulation and experimental methods, see their system and non-technical aspects, and make a preliminary economic assessment of the proposed solutions and undertaken engineering activities	[SU2] Assessment of ability to analyse information [SU3] Assessment of ability to use knowledge gained from the subject [SU4] Assessment of ability to use methods and tools [SU5] Assessment of ability to present the results of task
	[K6_U10] can individually plan their own lifelong education, also by means of advanced information and communication technologies (ICT), and communicate with people from their environment, firmly justify their point of view, participate in debates, present, assess and discuss different opinions and points of view, as well as use specialist terminology related to the field of study in communication	The student is able to plan learning, based on advanced information techniques and communicate with the environment, justify his position, present and evaluate opinions and positions, and communicate using professional terminology.	[SU2] Assessment of ability to analyse information [SU3] Assessment of ability to use knowledge gained from the subject [SU4] Assessment of ability to use methods and tools [SU5] Assessment of ability to present the results of task
	[K6_U11] can plan and organise individual and team work	The student is able to plan and organize individual work and team work	[SU1] Assessment of task fulfilment [SU3] Assessment of ability to use knowledge gained from the subject [SU4] Assessment of ability to use methods and tools

Subject contents	Implementation of the diploma
Prerequisites and co-requisites	Completing the subjects of the previous semester

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	completed diploma	50.0%	100.0%

Recommended reading	Basic literature	W.L. Brogan: Modern control theory, Prentice Hall, Englewood Cliffs, 1974. K.J. Astrom, B Wittenmark: Computer-controlled systems. Prentice Hall, Upper Saddle River, 1997 B.C. Kuo: Automatic Control Systems. Prentice-Hall, Englewood Cliffs 1987

	Supplementary literature	J. Korbicz, J.M. Kościelny, Z. Kowalczuk, W. Cholewa, Fault Diagnosis. Models, Artificial Intelligence, Applications, Springer Verlag [ISBN 3-540-40767-7], Berlin, Heidelberg, New York, Hong Kong, London, Milan, Paris, Tokyo 2004 B.D.O. Andersson, J.B. Moore: Optimal Filtrering, Prentice Hall, Englewood Cliffs 1979
	eResources addresses	Adresy na platformie eNauczanie:
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	