GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Remote Detection and Location of Objects, PG_00049433		
Field of study	Electronics and Telecommunications		
Date of commencement of studies	October 2025	Academic year of realisation of subject	2027/2028
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	1.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Department Of Signals And Systems -> Faculty Of Electronics Telecommunications And Informatics -> Wydziały Politechniki Gdańskiej		
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. inż. Jacek Marszal	
	Teachers	dr hab. inż. Jacek Marszal	

Lesson types and methods of instruction

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	0.0	0.0	0.0	0.0	15.0	15

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	15	1.0	9.0	25

Subject objectives

The aim of the course is to familiarize students with the foundations of navigation theory as well as construction and use of maritime navigation devices.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K6_U09] can carry out a critical analysis of the functioning of existing technical solutions and assess these solutions, as well as apply experience related to the maintenance of technical systems, devices and facilities typical for the field of studies, gained in the professional engineering environment	The student is able to make a critical analysis of the functioning of existing technical solutions of remote detection systems.	[SU5] Assessment of ability to present the results of task
[K6_K02] is ready to critically assess possessed knowledge and acknowledge the importance of knowledge in solving cognitive and practical problems	Students iare ready to critically assess their knowledge in the field of remote object detection.	[SK5] Assessment of ability to solve problems that arise in practice

Subject contents

1. Organizational matters: credit rules, preparation of speeches, consultations, literature
2. Discussion of the seminar topics:
   - Systems for remote detection and location of meteorological objects,
   - Systems for remote detection and location of flying objects,
   - Systems for remote detection and location of circular objects,
   - Systems for remote detection and location of floating and underwater objects
3. Development of seminar topics
4. Presentations, discussions
5. Summary

Prerequisites and co-requisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
Evaluation of the presentation	60.0%	100.0%

Recommended reading	Basic literature	1. Z. Czekała, Parada radarów, *Dom Wydawniczy Belona,* Warszawa 1999. 2. R. Salamon, Systemy hydrolokacyjne, Wydawnictwo Gdańskie 2006. 3. M. Skolnik, Radar Handbook Second Edition *McGrawHill 1990.* 4. M. Skolnik, Introduction to Radar Systems. 5. N. Levanon, Radar Signals, *Wiley 2004.* 6. R. Wawruch, ARPA – zasada działania i wykorzystania *WSM 2001.* 7. Pub.1310, Radar Navigation and Maneuvering Board Manual, National Imagery and Mapping Agency, Maryland, 2001.
	Supplementary literature	Current websites of remote object detection systems.
	eResources addresses	Adresy na platformie eNauczanie:
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	

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