University of Gdańsk

Subject card

Subject name and code	Fundamentals of Radiolocation - laboratory classes , PG_00201135		
Field of study	Marine Hydrography		
Date of commencement of studies	October 2026	Academic year of realisation of subject	2028/2029
Education level	Bachelor's studies	Subject group	Obligatory subject group in the field of study Subject group related to practical vocational preparation
Mode of study	full-time studies	Mode of delivery	at the university
Year of study	3	Language of instruction	Polish
Semester of study	5	ECTS credits	1.0
Learning profile	practical	Assessment form	credit
Conducting unit			
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Piotr Bekier	
	Teachers		

Lesson types

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	0.0	0.0	12.0	0.0	0.0	12

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	12	2.0	11.0	25

Subject objectives

To introduce students to operator work on navigation radars - occupational health and safety regulations, optimization of imaging, various methods of measuring linear and angular quantities, interpretation of radar imaging.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[HML3-U11] is able to use navigation devices, means of technical observation and communication as well as measuring instruments, as well as apply in practice various techniques of measurement and observation in the field of professional activity related to the field of study	is able to: - optimize radar imaging; - initialize various methods for measuring linear and angular quantities; - interpret radar imagery, - use (perform operator maintenance) the navigation radar on a basic level and comply with occupational health and safety regulations when operating radar devices	[SU6] demonstration of practical skills
[HML3-U18] is able to work individually and in team, manage the work of the team, in particular comply with health and safety regulations and ergonomics	is able to use (perform operator maintenance) the navigation radar on a basic level and comply with occupational health and safety regulations when operating radar devices	[SU6] demonstration of practical skills

Subject contents

Occupational health and safety regulations when operating radar devices. Introduction to operator operation of navigation radars: principles of band selection, optimization of radar display, selection of range, pulse length, displayand motion presentation mode. Operator support of navigation radars: use of basic navigation radar functions (except ARPA), interpretation of radar images.

Prerequisites and co-requisites

Completed lecture part of the course

<table>
<tr><td>Assessment methods and criteria</td><td colspan="2"><table><tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr><tr><td>Practical exam</td><td>51.0%</td><td>100.0%</td></tr></table></td></tr>
<tr><td rowspan="3">Recommended reading</td><td>Basic literature</td><td>1. MARSZAŁKOWSKI J., SOBCZYK J.: Użytkowanie morskich radarów nawigacyjnych. AMW, Gdynia 2000.</td></tr>
<tr><td>Supplementary literature</td><td>1. SHARMA K. K.: Introduction to Radar Systems. S.K. Kataria & Sons, New Delhi 2015.
2. SKOLNIK M.: Radar Handbook. McGraw Hill, 2008.</td></tr>
<tr><td>eResources addresses</td><td></td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td colspan="2">Optimize radar display.Determine the bearing and distance to .....Determine the CPA and TCPA for the given two objectsCreate automatic acquisition zones at a given angle and distance</td></tr>
<tr><td>Work placement</td><td colspan="2">Not applicable</td></tr>
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