GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Navigation Devices, PG_00046537		
Field of study	Ocean Engineering, Ocean Engineering		
Date of commencement of studies	October 2020	Academic year of realisation of subject	2023/2024
Education level	first-cycle studies	Subject group	
Mode of study	Part-time studies	Mode of delivery	at the university
Year of study	4	Language of instruction	Polish
Semester of study	7	ECTS credits	2.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Institute of Ocean Engineering and Ship Technology -> Faculty of Mechanical Engineering and Ship Technology		
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Jacek Nakielski	
	Teachers		

Lesson types and methods of instruction

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	20.0	0.0	0.0	0.0	0.0	20

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	20	3.0	27.0	50

Subject objectives

The aim of the course is to familiarize students with the basics of navigation using various types of navigation devices that are part of the equipment of a watercraft.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K6_W06] has an organized knowledge on engineering methods and design tools allowing the conducting of projects within the construction and operation of ocean technology objects and systems		[SW3] Assessment of knowledge contained in written work and projects [SW1] Assessment of factual knowledge
[K6_W05] has an organized knowledge on design, construction and operation of ocean technology objects and systems		[SW2] Assessment of knowledge contained in presentation [SW1] Assessment of factual knowledge
[K6_U05] can formulate a simple engineering task and its specification within the range of design, construction and operation of ocean technology objects and systems		[SU1] Assessment of task fulfilment
[K6_W08] has knowledge of the principles of sustainable development		[SW2] Assessment of knowledge contained in presentation [SW1] Assessment of factual knowledge

Subject contents

1. Historical outline from antiquity to the present day. 2. Basic concepts related to navigation. 3. Sea charts, locations, lists of lights and radio signals. 4. Marking of the watercraft. 5. Devices and navigational aids: magnetic compasses, optical finders, logs, probes, timers, sextants, navigational aids. 6. Elements of terrestrial navigation. 7. Elements of astronavigation. 8. Elements of radio navigation. 9. Elements of inertial navigation. 10. Elements of electronic navigation. 11. Modern navigation equipment based on an exemplary watercraft.

Prerequisites and co-requisites

Podstawowa znajomość związane z nautyką i budową jednostek pływających.

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
	50.0%	100.0%

Recommended reading	Basic literature	Gorazdowski Stefan, Morskie pomoce nawigacyjne, Wyd. Morskie, Gdynia 1968 Wróbel Franciszek, Vademecum nawigatora, Wyd. Morskie, Gdańsk 1978 Gawłowicz Józef, Nawigacja wczoraj i dziś: leksykon, Wyd. Pegaz, Warszawa 1994 Urbańczyk Andrzej, Nawigacja prosta, łatwa, zabawna, Oficyna Wydawnicza Alma-Press, Warszawa 2017 Piątek Zbigniew, Nawigacja morska w pytaniach i odpowiedziach, Oficyna Wydawnicza Alma-Press, Warszawa 2011
	Supplementary literature	Czajewski Jacek, Nawigacja żeglarska, Wyd. Komunikacji i Łączności, Warszawa 1985
	eResources addresses	Adresy na platformie eNauczanie:
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	