

Subject card

Subject name and code	Ship manoeuvring - lecture, PG_00131511						
Field of study	Marine Hydrography						
Date of commencement of studies	October 2024	Academic year of realisation of subject				2026/2027	
Education level	Bachelor's studies	Subject group				Obligatory subject group 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	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	16.0	0.0	0.0	0.0	0.0	16
	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	16		2.0		10.0	28
Subject objectives	<p>Providing knowledge of the basics of maneuvering. Mastering the rules of navigation in shallow waters. Mastering the rules of maneuvering in simple and difficult conditions. Mastering the rules of maneuvering in emergency situations. Mastering the basics of independent maneuvering of a single- and twin-screw vessel during mooring/unmooring and anchoring. Transferring the rules of cooperation with the pilot and tugs. Mastering the principles of lowering and lifting lifesaving equipment in sea wave conditions. Mastering the principles of emergency control.</p>						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[HML3-W09] issues related to route planning, safe route determination and monitoring in accordance with international regulations, including sources of information on navigational hazards and ways of obtaining it	knows: - Basics of maneuvering a floating unit in selected propulsion configurations. - Rules of maneuvering in shallow waters. - Principles of maneuvering in simple and difficult conditions - Principles of maneuvering in emergency situations. - Basics of independent maneuvering of single- and twin-screw units during mooring/ unmooring and anchoring. - Rules of cooperation with the pilot and tugs. - Rules for lowering and lifting lifesaving equipment in sea wave conditions. - Principles of emergency control. - Effects of changes in loading condition, draft, trim and water under the keel on maneuverability and stopping ability; the effects of wind and current on the behavior of the ship; shallow water effects, ship anchoring and mooring procedures.	[SW4] test/exam - oral or written
Subject contents	EFFECTS OF CHANGES IN LOADING CONDITION, DRAFT, TRIM, SPEED AND WATER RESERVE UNDER THE KEEL ON THE CIRCULATION AND STOPPING PARAMETERS OF THE SHIP		
	<p>Forces occurring on the rudder, types of rudders. Propellers, propeller side effect. Maneuvering tests, circulation dimensioning, drift angle. Ship circulation parameters. The influence of the initial speed on the circulation diameter. Stopping a ship in a loaded and ballast condition. The influence of shallow water on the ship's speed. Ship's course stability.</p> <p>THE EFFECT OF WIND AND CURRENT ON THE MANEUVERING PROPERTIES OF THE SHIP</p> <p>The behavior of the ship when moving forward when exposed to wind from different directions. The influence of current on the motion of the ship.</p> <p>RESCUE MANEUVERS MAN OVERBOARD</p> <p>Use of each rescue maneuver depending on the situation. Action after noticing a person falling overboard. List of activities on the bridge after receiving information about a man overboard.</p> <p>SHALL SETTLEMENT AND SHALLOW WATER EFFECTS</p> <p>The impact of reducing the depth of the water body on the maneuvering properties of the ship. Ship settling (squat).</p> <p>ANCHORING, MOORING, SHIPPING OF THE SHIP</p> <p>Preparing anchors to drop. Approach to the anchorage depending on the current, wind and speed above the bottom. Methods and method of throwing anchor. Anchor chain marking and reports transmitted to the bridge. Accepting and returning the pilot. Sailing in ice.</p>		
Prerequisites and co-requisites	This subject is required by the Regulation of the Minister of Infrastructure and Development of 5 February 2014 on framework training programs and examination requirements for deck department seafarers (consolidated text: Journal of Laws of 2023, item 1566): attendance at all classes is mandatory. The Polish Naval Academy allows students to make up up to 20% of their excused absence from these classes in a way that allows them to acquire the missing knowledge and skills. Students who have passed the course but, due to absences exceeding 20% of the classes or who did not make up the classes in a way that allows them to acquire the missing knowledge and skills, will not receive an entry in the supplement confirming completion of studies recognized at the operational level in coastal navigation.		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	test	51.0%	100.0%

Recommended reading	Basic literature	<ol style="list-style-type: none"> 1. CZEKAJ E., DUDA D.: Bezpieczeństwo żeglugi. 1995. 2. NOWICKI A.: Wiedza o manewrowaniu statkami morskimi. Trademar, 1999. 3. WRÓBEL F.: Vademecum nawigatora, Trademar, 2002.
	Supplementary literature	<ol style="list-style-type: none"> 1. WALCZAK A.: Poradnik postępowania na mostku. 1993.
	eResources addresses	
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	

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