University of Gdańsk

Subject card

Subject name and code	Ship manoeuvring - laboratory exercises, PG_00131510						
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 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	10.0	0.0	0.0	10
	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	10		2.0		13.0	25
Subject objectives	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.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[HML3-U11] 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: - Plan and independently perform basic maneuvers of the vessel in selected propulsion configurations. - Apply in practice the principles of maneuvering in shallow waters. - Apply in practice the principles of maneuvering in simple and difficult conditions. - Apply in practice the principles of maneuvering in emergency situations. - Use the basics of independent maneuvering of a single and twin screw vessel during mooring/ unmooring and anchoring - Apply in practice the principles of cooperation with the pilot and tugs. - Apply in practice the principles of lowering and raising lifesaving equipment in sea wave conditions. - Apply the principles of emergency control in practice. - Take action to prevent the ship's propulsion system, rudder and electrical power from exceeding safe operating limits during normal maneuvers. Ensure safe navigation by appropriate changes in ship's course and speed.	[SU6] demonstration of practical skills
	[HML3-U09] critically analyse the functioning of existing technical solutions and evaluate these solutions	is able to: - Plan and independently perform basic maneuvers of the vessel in selected propulsion configurations. - Apply in practice the principles of maneuvering in shallow waters. - Apply in practice the principles of maneuvering in simple and difficult conditions. - Apply in practice the principles of maneuvering in emergency situations. - Use the basics of independent maneuvering of a single and twin screw vessel during mooring/ unmooring and anchoring - Apply in practice the principles of cooperation with the pilot and tugs. - Apply in practice the principles of lowering and raising lifesaving equipment in sea wave conditions. - Apply the principles of emergency control in practice. - Take action to prevent the ship's propulsion system, rudder and electrical power from exceeding safe operating limits during normal maneuvers. Ensure safe navigation by appropriate changes in ship's course and speed.	[SU6] demonstration of practical skills

	Course outcome	Subject outcome	Method of verification
	[HML3-U18] work individually and in team, manage the work of the team, in particular comply with health and safety regulations and ergonomics	is able to: - Plan and independently perform basic maneuvers of the vessel in selected propulsion configurations. - Apply in practice the principles of maneuvering in shallow waters. - Apply in practice the principles of maneuvering in simple and difficult conditions. - Apply in practice the principles of maneuvering in emergency situations. - Use the basics of independent maneuvering of a single and twin screw vessel during mooring/ unmooring and anchoring - Apply in practice the principles of cooperation with the pilot and tugs. - Apply in practice the principles of lowering and raising lifesaving equipment in sea wave conditions. - Apply the principles of emergency control in practice. - Take action to prevent the ship's propulsion system, rudder and electrical power from exceeding safe operating limits during normal maneuvers. Ensure safe navigation by appropriate changes in ship's course and speed.	[SU6] demonstration of practical skills

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 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. THE EFFECT OF WIND AND CURRENT ON THE MANEUVERING PROPERTIES OF THE SHIP 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. RESCUE MANEUVERS MAN OVERBOARD 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. SHALL SETTLEMENT AND SHALLOW WATER EFFECTS The impact of reducing the depth of the water body on the maneuvering properties of the ship.Ship settling (squat). ANCHORING, MOORING, SHIPPING OF THE SHIP 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.
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.

<table>
<tr><td rowspan="2">Assessment methods and criteria</td><td colspan="3"><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>Recommended reading</td><td>Basic literature</td><td>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.</td></tr>
<tr><td></td><td>Supplementary literature</td><td>1. WALCZAK A.: Poradnik postępowania na mostku. 1993.</td></tr>
<tr><td></td><td>eResources addresses</td><td></td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td colspan="2"></td></tr>
<tr><td>Work placement</td><td colspan="2">Not applicable</td></tr>
</table>

Document generated electronically. Does not require a seal or signature.