University of Gdańsk

Subject card

Subject name and code	Ship Manoeuvring - lecture, PG_00201132		
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
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	1.0	8.0	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-W09] knows and understands, at an advanced level, 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

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

Subject required by the Regulation of the Minister of Infrastructure and Development of February 5, 2014, on framework training programs and examination requirements for deck department seafarers (i.e., Journal of Laws 2023, item 1566): attendance at all classes is mandatory. AMW allows students to make up for up to 20% of excused absences from these classes in a form that enables them to acquire the missing knowledge and skills. Students who have passed the course but, due to absences exceeding 20% of classes or failure to make up for classes in a form that allows them to obtain the missing knowledge and skills, do not receive an entry in the supplement confirming completion of studies recognized at the operational level in coastal shipping.

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
test	51.0%	100.0%

Recommended reading	Basic literature	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	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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