



Subject card

Subject name and code	, PG_00056272						
Field of study	Design and Construction of Yachts						
Date of commencement of studies	October 2022	Academic year of realisation of subject			2024/2025		
Education level	first-cycle studies	Subject group					
Mode of study	Full-time studies	Mode of delivery			at the university		
Year of study	3	Language of instruction			Polish		
Semester of study	6	ECTS credits			2.0		
Learning profile	practical profile	Assessment form			assessment		
Conducting unit	Faculty of Ocean Engineering and Ship Technology						
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Mohammad Ghaemi				
	Teachers						
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	15.0	0.0	0.0	30
	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	30		3.0		17.0	50
Subject objectives	The aim of the course is learning the knowledge and skills regarding the principles of operation of basic yacht automation and control systems as well as the basics of digitization of their subsystems.						
Learning outcomes	Course outcome	Subject outcome			Method of verification		
	K6_W03	The student has a basic knowledge of the digitalization of basic systems and subsystems of motor yachts.			[SW1] Assessment of factual knowledge		
	K6_W06	The student has a structured knowledge of engineering methods and equipment enabling the implementation of conceptual designs in the field of major power yacht control systems, including the course and trajectory control system, the propulsion control system, and the roll stabilization system.			[SW1] Assessment of factual knowledge		
	K6_W04	The student has basic knowledge in the field of automation and control of onboard subsystems useful for understanding the possibilities of their application in the design and construction of motor yachts			[SW1] Assessment of factual knowledge		
	K6_U05	The student is able to formulate a simple engineering task and its specificity in the field of conceptual design and operation of power yacht control systems.			[SU3] Assessment of ability to use knowledge gained from the subject		
Subject contents	1. Introduction and principle definitions 2. Model of yacht motion, incl. model of disturbances 3. Yacht motion stability 4. Yacht course and trajectory control 5. Yacht roll control 8. Yacht speed control 9. Digitalization of motor yachts subsystems						
Prerequisites and co-requisites	Preceding subjects: - Fundamentals of automatics.						

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	1 colloquium: 50 points	56.0%	48.0%
	Presence and activity: 5 points	0.0%	4.0%
	Lab. tests and assignments: 50 points	56.0%	48.0%
Recommended reading	Basic literature	Basic literature	
		<p>1. 2. Fossen T. I., Handbook of Marine Craft Hydrodynamics and Motion Control, John Wiley & Sons, 2011.</p> <p>2. Thor I. Fosen: Marine Control Systems, Marine Cybernetics AS, 2002.</p>	
	Supplementary literature	1. Thor I. Fossen: Guidance and Control of Ocean Vehicles. John Wiley and Sons, 1994.	
	eResources addresses	Adresy na platformie eNauzanie:	
Example issues/ example questions/ tasks being completed	.		
Work placement	Not applicable		