

表 GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	, PG_00056310							
Field of study	Ocean Engineering							
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	5		ECTS credits			2.0		
Learning profile	general academic profile		Assessment form			assessment		
Conducting unit	Zakład Mechaniki Kor > Faculty of Mechanic	Zakład Mechaniki Konstrukcji Oceanotechnicznych -> Institute of Ocean Engineering and Ship Technology - > Faculty of Mechanical Engineering and Ship Technology						o Technology -
Name and surname	Subject supervisor		dr inż. Krzysztof Wołoszyk					
of lecturer (lecturers)	Teachers				-			
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project		Seminar	SUM
	Number of study hours	30.0	0.0	0.0	0.0 0.0		0.0	30
	E-learning hours inclu	1						
Learning activity and number of study hours	Learning activity	Participation in classes includ plan		Participation in consultation hours		Self-study		SUM
	Number of study hours	30		3.0		17.0		50
Subject objectives	To give students basic information on ships hull structures and offshore structures; in particular: - requirements of international conventions and classification rules; - arrangement of basic types of ships hulls and offshore structures - loads on ship hulls and offshore structures; - stressess in ship hull structures, offshore structures and criteria of strength; - materials for ship hulls and offshore structures; - welded connections; - design of particular ship hull structure regions (bottom, sides, decks, bulkheads, fore and aft parts) and basic types of offshore structures.							s of ships hulls ructures, welded
Learning outcomes	Course outcome		Subject outcome			Method of verification		
	[K6_W08] has knowledge of the principles of sustainable development		Student understand the impact of international conventions and norm as well as rules of classification societies regarding the stability, strength of ship or marine structures and properties of used materials on safety of ships or marine structures (crew, passengers and cargo) and protection of marine environment.			[SW1] Assessment of factual knowledge [SW3] Assessment of knowledge contained in written work and projects		
	[K6 W06] has an org	nanized	Student knows structures of typical floating objects and understands restrictions indicating from criteria to be fulfilled (stability, strength, technoligical aspects) and knows basic methods of strength analysis.			[SW1] Assessment of factual knowledge		
	knowledge on engine methods and design the conducting of pro- the construction and ocean technology ob systems	eering tools allowing ojects within operation of	typical floating understands r from criteria to (stability, stren aspects) and	g objects and restrictions indi- b be fulfilled ngth, technoligi knows basic	cating cal			of factual
Subject contents	knowledge on engine methods and design the conducting of pro the construction and ocean technology ob systems Problems discussed of international standaro systems; - basic prop ships hulls and offsho structures and offshore structures and offshore stru connections between	beering tools allowing ojects within operation of ijects and during the lectu is for offshore s erties of ship ore systems; - live re structures; - protect structures item	typical floating understands r from criteria to (stability, strer aspects) and methods of str res: - requirem systems; - basi ull structure an bads on ship hi criteria of strer tion of structur ns; - design of p	g objects and estrictions indi- b be fulfilled ngth, technoligi knows basic rength analysis uents of interna c definitions an d offshore stru ulls and offshor ngth (sterss lew res against corri particular ship h	cating cal s. tional cc d terms ctures; - re struct el, buckl rosion al	knowle nventio concer arrang ures; - ing, fat	dge ons, classifica ning ship hul ement of bas stressess in s igue); - mater osion addition	tion rules and land offshore ic types of ship hull ials for ship ns; - welded
Subject contents Prerequisites and co-requisites	knowledge on engine methods and design the conducting of pro the construction and ocean technology ob systems Problems discussed of international standard systems; - basic prop ships hulls and offsho structures and offshore stru- hullsand offshore stru	beering tools allowing ojects within operation of jects and during the lectu ls for offshore s erties of ship h ore systems; - lu tere structures; - lictures; - protect structures item aft parts) and of	typical floating understands r from criteria tt (stability, stree aspects) and methods of st res: - requirem systems; - basis ull structure an bads on ship hu criteria of streer ction of structur ns; - design of p fshore systems	g objects and estrictions indi- b de fulfilled ngth, technoligi knows basic rength analysis rength analysis ents of interna c definitions an d offshore stru ulls and offshor ulls and offshor gth (sterss lev- res against com particular ship h s	cating cal tional cc d terms ctures; - re struct el, buckl rosion an null struc	knowle onventio concer arrang ures; - ing, fat nd corro cture re	dge ons, classifica ning ship hul ement of bas stressess in s igue); - mate osion addition gions (botton	tion rules and land offshore ic types of ship hull rials for ship ns; - welded n, sides, decks,
Prerequisites	knowledge on engine methods and design the conducting of pro the construction and ocean technology ob systems Problems discussed of international standaro systems; - basic prop ships hulls and offsho structures and offshor hullsand offshore stru connections between bulkheads, fore and a Student should have	beering tools allowing operation of operation of during the lectures and the lectures of shore set erties of ship hore systems; - luctures; - ictures; - protect structures item aft parts) and of some knowledg	typical floating understands r from criteria to (stability, strer aspects) and i methods of str res: - requirem systems; - basi ull structure an bads on ship hi criteria of strer tion of structur hs; - design of p fshore systems ge on theory of	g objects and estrictions indi- b de fulfilled ngth, technoligi knows basic rength analysis rength analysis ents of interna c definitions an d offshore stru ulls and offshor ulls and offshor gth (sterss lev- res against com particular ship h s	cating cal tional cc d terms ctures; - re struct el, buckl rosion an null struc	knowle noventic concer arrang ures; - ing, fat nd corr cture re anics, c	dge ons, classifica ning ship hul ement of bas stressess in s igue); - mate osion addition gions (botton	tion rules and land offshore ic types of ship hull ials for ship is; - welded n, sides, decks, als and

Recommended reading	Basic literature	1. M.Bogdaniuk, Lectures on Offshore Structures (in polish language only). 2. Robert Taggart(Editor), Ship Design and Construction, The soc. Of Nav. Arch. And Marine Eng., New York, 1980. 3. Polski Rejestr Stratków, Publication 105/P Marine Units. Fixed Offshore Platforms and Equipment Rules for the Construction and Survey, 2018. 4. Polski Rejestr Statków, Rules for classification and building of seagoing ships, Part II Hull, Gdańsk, 2019. 5. Mohamed A. El-Reedy, Offshore Structures design, Construction and Maintenance, Elsevier, 2012.			
	Supplementary literature	1. IACS, Common Structural Rules for Bulk Carriers and Oil Tankers, 2018.			
	eResources addresses	Adresy na platformie eNauczanie:			
Example issues/ example questions/ tasks being completed	1. What is the influence of international conventions requirements on ship hull structure? 2. What is the scope of classification societies activities? 3. Show arrangement of the hull of a bulker, tanker, container ship or Ro-Ro ship. 4. Show arrangement of a typical self-elevating or semisubmersible platform. 5. Describe loads on ship huli or offshore structures. 6. Describe the methods applied to analyse longitudinal, local or zone strength of ship hull structure/ offshore structure. 7. What methods are used to prevent ship structures/offshore structures from fatigue cracking?				
Work placement	Not applicable				