GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	, PG_00056250		
Field of study	Design and Construction of Yachts		
Date of commencement of studies	October 2021	Academic year of realisation of subject	2022/2023
Education level	first-cycle 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	2	Language of instruction	Polish
Semester of study	3	ECTS credits	2.0
Learning profile	practical profile	Assessment form	assessment
Conducting unit	Zakład Projektowania Okrętów i Robotyki Podwodnej -> Institute of Ocean Engineering and Ship Technology -> Faculty of Mechanical Engineering and Ship Technology		
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. inż. Lech Rowiński	
	Teachers	dr inż. Artur Karczewski	

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	30

E-learning hours included: 0.0

Konstrukcja jachtu laminatowego 22/23 - Moodle ID: 26132
https://enauczanie.pg.edu.pl/moodle/course/view.php?id=26132

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	4.0	16.0	50

Subject objectives

Provide student with knowledge regarding design principles of yacht hull structures made of composites referenced to procurement of structures and calculations based on rules of classification societies

Learning outcomes

Course outcome	Subject outcome	Method of verification
K6_W05	Student knows principles of design of reinforced plastic structures and relationships between design and processes of manufacturing of the structures	[SW1] Assessment of factual knowledge
K6_U05	Student is able to define a task regarding definition of requirements to composite hull structure based on indicated standards	[SU3] Assessment of ability to use knowledge gained from the subject
K6_U06	Student is able to design (define geometry) of an element of ship structure following requirements of Polish Register of Ships	[SU1] Assessment of task fulfilment

Subject contents

Review and the selection of non-metal materials applied in shipping constructions. The relationship of the construction with the technology in composite constructions. Review of constructional joints and the principles in designing process. Basic constructional calculations. The technological process of composite constructions. Technologies of forming the elements of the construction from reinforced resins. Technological gear and tools. Technological materials. The organization of the technological process. Investigation of the effectiveness of the technological process. The completation of constructional elements and finishing works. Technological requirements resulting from the recipes of classifying companies and norms. Seminary: The composite ingeredients and technologial requirements Technological Preparation of the technological gear Contac forming Vacuum forming and infusion Vacuums forming with the injection

Prerequisites and co-requisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
Short test during every lesson	60.0%	100.0%

Recommended reading	Basic literature	1. Berger M. i inni: Poliestry wzmocnione w budownictwie okrętowym, Wydawnictwo Morskie, Gdynia, 1961. 2. Kozłowski J., Wilczopolski M., Wituszyński K.: Konstrukcje okrętowe z kompozytów polimerowych; Wydawnictwo Morskie, Gdańsk, 1982. 3. Przepisy klasyfikacji i budowy jachtów morskich (JAC), Część II, Kadłub 1996/1998 4. Przepisy klasyfikacji i budowy łodzi motorowych (MOT), Część II, Kadłub 1996/1998
	Supplementary literature	1. Pielichowski J., "Technologia tworzyw sztucznych", Wydawnictwo Naukowo-Techniczne , wyd VI, 2003. 2. Rabek J., "Współczesna wiedza o polimerach", wyd PWN, Warszawa 2009
	eResources addresses	Podstawowe https://www.r-g.de/ - https://gardner.dragonforms.com-CompositesWorldmagazine - Uzupełniające https://www.r-g.de - Material and equipment provider https://gardner.dragonforms.com-CompositesWorld - Internet composite magazine
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	