GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	, PG_00056292		
Field of study	Ocean Engineering		
Date of commencement of studies	October 2021	Academic year of realisation of subject	2023/2024
Education level	first-cycle studies	Subject group	Optional subject group Subject group related to scientific research 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	6.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Department of Ship Manufacturing Technology, Quality Systems and Materials Science -> Faculty of Mechanical Engineering and Ship Technology		
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Ryszard Pyszko	
	Teachers	dr inż. Ryszard Pyszko mgr inż. Alicja Bera	

Lesson types and methods of instruction

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	30.0	0.0	15.0	30.0	0.0	75

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	75	15.0	60.0	150

Subject objectives

The purpose of the course is to remind students of the issues related to the production of a ship's hull and to explain the basics of the principles of implementing characteristic manufacturing processes.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K6_W06] has an organized knowledge on engineering methods and design tools allowing the conducting of projects within the construction and operation of ocean technology objects and systems	The student has a structured knowledge of the methods and organization of ship hull production and selected outfitting work	[SW1] Assessment of factual knowledge [SW3] Assessment of knowledge contained in written work and projects
[K6_U06] in compliance with a formulated specification and with the aid of appropriate tools and methods, is able to complete a simple engineering task within the range of design, construction and operation of ocean technology objects and systems	The student is able to develop technologies for manufacturing objects for shipbuilding and offshore purposes	[SU3] Assessment of ability to use knowledge gained from the subject
[K6_U05] can formulate a simple engineering task and its specification within the range of design, construction and operation of ocean technology objects and systems	The student is able to develop a framework technology for the construction of large-scale structures	[SU1] Assessment of task fulfilment [SU2] Assessment of ability to analyse information [SU3] Assessment of ability to use knowledge gained from the subject
[K6_W05] has an organized knowledge on design, construction and operation of ocean technology objects and systems	The student has a structured knowledge of the implementation of ship hull construction, lobe sections, space sections and blocks.	[SW1] Assessment of factual knowledge [SW3] Assessment of knowledge contained in written work and projects

Subject contents	Technology Lectures II. First there will be a reminder in terms of the previous lectures, as well as some of the news from other subjects. Then the production processes will be discussed according to the block diagram of ship hull production. The processes will be described and explained in terms of physical phenomena occurring during production. This will allow you to understand the physical laws implemented during the application of the described processes, as well as to make corrective decisions in case of obtaining a discrepancy between the planned intention and the production result. Making decisions on the basis of a correct understanding of the phenomena will give confidence that a corrective effect will be achieved. Is it 100%? This is not always possible or expedient (e.g., cost-effective).
Prerequisites and co-requisites	Subject knowledge: Fundamentals of Ship Construction, Ship Drawing, Ship Materials Science, Ship Welding, Ship Design, Ship Construction and Repair Technology I

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
Written examination	60.0%	34.0%
Essay	100.0%	33.0%
Semester/diploma dissertation	100.0%	33.0%

Recommended reading

Basic literature

Basic literature

1.Doerffer J.: Technologia wyposażania statków. WM Gdynia 1975.
2.Doerffer J.: Technologia budowy kadłubów okrętowych. WM Gdynia 1971.
3.Doerffer J.: Technologia remontu statków. WM Gdynia 1973
4.Wiebeck E.: Technologie des Schiffskorperbaus. Technik Berlin 1980.
5.Rosochowicz K.: Problemy pękania zmęczeniowego kadłubów statków. Okręt.i Żegluga, Gdańsk 2006
6.Przepisy towarzystw klasyfikacyjnych: PRS; DNV; LR; ABS; GL .
7.Poradnik inżyniera - Spawalnictwo.
8. Rosochowicz K. i inni, Transport na poduszkach powietrznych TRAPO; PG, WOiO, Gdańsk 1993;
9. Gourd L. Podstawy Technologi Spawalniczych, WNT, W-wa 1997;
10. Okerbłom, N.O: Projektowanie technologii wykonania konstrukcji spawanych,1963;
11. Borzęcki,T.,Rosochowicz K.: Usuwanie odkształceń spawalniczych cienkich poszyć stalowych metodą nagrzewania palnikiem tlenowo-acetylenowym z jednoczesnym chłodzeniem wodnym, PG WOiO,Gdańsk 1983;
12.Kolenda T. ,Moszyński M.: Elasto-optyczne modelowanie ... na pole naprężeń w próbce płaskiej, PG WOiO, Gdańsk 1983;
13. Augustyniak, B.: i inni: Badania za pomocą efektu Barkhausena rozkładu naprężeń ...., Krajowa Konferencja Badań Nieniszczących , Szczyrk, 1997, s.255-262,

Supplementary literature

Supplementary literature

1.Cudny K. (redakcja): Metaloznawstwo okrętowe. Wydawnictwo Politechniki Gdańskiej 2001
2.Myśliwiec M.: Spawalnictwo okrętowe. WM Gdańsk .
3.Kowarsch A., Żaczek Z.: Spawanie konstrukcji okrętowych w osłonie gazów. WM Gdańsk 1984
4.Żurowski A.: Pomiary geodezyjne w budownictwie morskim. WM Gdańsk 1980
5.Karlic S.: Zarys górnictwa morskiego. Wydawnictwo Śląsk 19883
6.Mather A.: Offshore Engineering - an Introduction. Wyd.: Whitherby, 1995
7.czasopisma fachowe: Journal of Ship Production; Naval Architect; Offshore Magazine;

eResources addresses

Adresy na platformie eNauczanie:

Technologia budowy okrętu II,W,P,L, zima 23/24,(PG_00056292) - Moodle ID: 32737
https://enauczanie.pg.edu.pl/moodle/course/view.php?id=32737

Example issues/ example questions/ tasks being completed

Explain what is included in the framework technology for the construction of a shipbuilding facility, e.g., lobe section, ship block?Explain what basic manufacturing processes are used in shipbuilding?What does hot straightening of ship structures consist of?

Work placement

Not applicable