GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Spatial planning of coastal and sea areas, PG_00065654		
Field of study	Spatial Development		
Date of commencement of studies	February 2025	Academic year of realisation of subject	2025/2026
Education level	second-cycle studies	Subject group	Optional subject group Specialty 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	1	Language of instruction	Polish
Semester of study	2	ECTS credits	3.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Department Of Urban Design And Regional Planning -> Faculty Of Architecture -> Wydziały Politechniki Gdańskiej		
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. inż. arch. Karolina Krośnicka	
	Teachers	dr hab. inż. arch. Karolina Krośnicka	

Lesson types and methods of instruction

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	15.0	30.0	0.0	0.0	0.0	45

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	45	6.0	24.0	75

Subject objectives

MK_8 / 3-1 Spatial planning of sea areas

familiarizing students with the planning process and the principles of maritime planning

MK_8 / 3-2 Port - port city interactions

visualization of the complexity of dependency processes port-city in the social, economic, environmental and aesthetic context

MK_8 / 3-3 Spatial planning of port areas

familiarizing students with the principles of planning port areas and educating students of the ability to design port territories and aquatories

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K7_W04] has in-depth knowledge of issues and technical systems related to the planning, design and implementation of infrastructure projects and urban planning, as well as the life cycle of facilities and systems related to the operation of settlement units	Student has in-depth knowledge of spatial planning; knows the spatial planning system of Poland in relation to sea ports. He/she knows the types of relations between the functions of the port and the functions of cities and describes the relationships between the functions performed by the port and the size, demographics and employment structure of the city.	[SW3] Assessment of knowledge contained in written work and projects [SW1] Assessment of factual knowledge
[K7_W01] has in-depth and expanded knowledge of spatial development, urban planning and spatial planning, including activities used in the process of revitalization of degraded areas and ecological design	has in-depth knowledge of spatial planning in the field of ecological design in the seashore zone and in river estuaries understands the environmental and functional planning conditions in the coastal zone	[SW3] Assessment of knowledge contained in written work and projects [SW1] Assessment of factual knowledge
[K7_U06] is able to formulate a design specification for a complex planning task, including legal and other non-technical aspects, including such things as social impact and economic efficiency	is able to carry out a detailed analysis of the conditions of spatial development plans for areas, including maritime and coastal areas interprets the functional and spatial relations between the port and the city; performs a critical analysis of selected development projects for port and port areas as well as other areas in the coastal zone is able - in accordance with a given specification, taking into account non-technical aspects - to design a complex object, system or process related to urban planning using appropriate methods, techniques and tools, including adapting existing or developing new tools for this purpose	[SU4] Assessment of ability to use methods and tools [SU2] Assessment of ability to analyse information [SU1] Assessment of task fulfilment

Subject contents	Module MK_8 / 3 - Spatial planning of maritime and coastal areas consists of three subjects: 1. Spatial planning of sea areas 15 hours of exercises by Prof. Jacek Zaucha 1.1. Differences and similarities in spatial planning of sea and land areas. 1.2. Spatial planning of maritime areas in the world. 1.3. Spatial planning of the Baltic sea areas. 1.4. Legal framework of maritime spatial planning in Poland. 1.5. Assumptions of Poland's Integrated Maritime Policy until 2020 1.6. Spatial planning of maritime areas and the National Spatial Development Concept 2030. 1.7. Road Map for Maritime Spatial Planning in the Baltic Sea Region 2013-2020. 1.8. Planning procedures "tested" in European (PlanCoast) and Baltic projects - BaltCoast, BaltSeaPlan (Zatoka Gdańska, Ławica Środkowa, Zatoka Pomorska). 1.9. Agreement of the Directors of Maritime Offices - Study study for Polish sea areas and the spatial development plan of Polish sea areas. 2. Port - port city interaction 15 hours of exercises by Prof. Karolina Krośnicka along with the representative of the practice 2.1. Theoretical foundations of port-city interaction. 2.2. Types of port cities. 2.3. Development of a seaport in the agglomeration structure. 2.4. Linking the land transport network (roads, railways, pipelines) with the port. 2.5. Connections of the port industry with the hinterland. 2.6. The impact of port functions on shaping urban functions. 2.7. Shaping the waterfront spaces of cities (water fronts). 3. Spatial planning of port areas 30 hours of the project dr hab. Eng. arch. Karolina Krośnicka, prof. of the university and MSc. arch. Justyna Breś 3.1. Scope and schedule of the subject, Introduction to the issue and getting acquainted with the terms of the competition for the Beirut port project (INSPIRELI competition - https://www.inspireli.com/en/awards/beirut-documents). Maritime spatial information system 3.2. Types of seaports. What kind of port is Beirut? Economic and transport conditions of ports - analysis of the situational context as well as socio-economic and transport conditions of the port of Beirut (against the background of global supply chains and national conditions) 3.3. Natural and urban conditions for the development and construction of ports - analysis of natural and urban conditions for the port and city of Beirut 3.4. Scenarios of development opportunities for the port of Beirut - scenario building and discussion. Individual work of the design team on the selected spatial scenario 3.5. Designing the spatial layout of port territories under the selected scenario - selection of hydrotechnical structures, selection of the cargo profile and port terminals, port areas and their mutual location, calculation of the mooring line length, concept of transport services for the port of Beirut 3.6. Preliminary concept of the spatial layout of port territories 3.7. Designing the spatial layout of the port aquatories - dimensioning of external and internal waters for the port of Beirut 3.8. Preliminary concept of the spatial layout of the port including aquatoria and port territories

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<tr><td></td><td>3.9. Principles of designing selected terminals - dimensioning of elements of selected terminals

3.10. Improving the concept of developing the new port of Beirut, supplementing the description of the project, preparing competition boards.</td></tr>
<tr><td>Prerequisites and co-requisites</td><td>MK_8 / 2 - Management of coastal areas and infrastructure</td></tr>
<tr><td>Assessment methods and criteria</td><td>
<table>
<tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr>
<tr><td>strategy for shaping the selected port-city area M</td><td>100.0%</td><td>20.0%</td></tr>
<tr><td>concept of a Beyrouth seaport configuration</td><td>100.0%</td><td>60.0%</td></tr>
<tr><td>presentation of the natural aspects of MSP</td><td>100.0%</td><td>20.0%</td></tr>
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Recommended reading	Basic literature	**MK_8/3-1 Planowanie przestrzenne obszarów morskich** **Dyrektywa Parlamentu Europejskiego i Rady 2014/89/UE z dnia 23 lipca 2014 r. ustanawiająca ramy planowania przestrzennego obszarów morskich.** **Dyrektywa Parlamentu Europejskiego i Rady** ustanawiająca ramy planowania przestrzennego obszarów morskich oraz zintegrowanego zarządzania strefą przybrzeżną (COM(2013) 133 final). Ehler Ch., Douvere F., *Marine Spatial Planning: a step-by-step approach toward ecosystem-based management*. Intergovernmental Oceanographic Commission and Man and the Biosphere Programme. IOC Manual and Guides No. 53, ICAM Dossier No. 6. Paris: UNESCO. 2009. PartiSEApate - *Overview of the Maritime Spatial Planning Situation in the Countries of the Baltic Sea Region*, 2013 (http://www.sustainable-projects.eu/downloads/Booklet_Country_Fichessmall.pdf). Pilot Maritime Spatial Plans: http://www.baltseaplan.eu/index.php/Pilot-Maritime-Spatial-Plans;831/1 Schultz-Zehden A., Gee K., Scibior K., *Handbook on Integrated Maritime Spatial Planning*. S.PRO., Berlin, 2008 (http:// www.plancoast.eu/files/handbook_web.pdf). Zaucha J., *Gospodarowanie przestrzenią morską*. Wydawnictwo Akademickie Sedno, 2018. Zaucha J. (red.), Planowanie przestrzenne obszarów morskich. Polskie uwarunkowania i plan pilotażowy. Instytut Morski w Gdańsku, Gdańsk, 2009 (pdf). **MK_8/3-2 Interakcje port miasto portowe** Chmielewski J., *Teoria urbanistyki w projektowaniu i planowaniu miast*. Oficyna Wydawnicza Politechniki Warszawskiej, Warszawa 2010. Hoyle B., Pinder D., Husain M., *Revitalising the Waterfront. International Dimension of Dockland Redevelopment*. Belhaven Press, London 1988. Lorens P., *Obszary poportowe problemy rewitalizacji*. Fundacja Instytut Studiów regionalnych, 2013. Opinia Europejskiego Komitetu Regionów *Rewitalizacja miast portowych oraz terenów portowych.* Dziennik Urzędowy Unii Europejskiej 2017/C 207/06 (pdf). Rodrigue J-P., *The geography of transport systems*, 4th edition, New York: Routledge, 2017 (https://transportgeography.org/). Zaremba P., *Urbanistyka miast portowych*. Państwowe Wydawnictwo Naukowe Oddział w Poznaniu, Szczecin 1962.

MK_8/3-3 Planowanie przestrzenne obszarów portowych

Agerschou H., Dand I., Ernst T., *Planning and design of ports and marine terminals*, wyd. drugie., Thomas Telford Ltd, 2004.

Böse J. W., *Handbook of Terminal Planning*. Springer-Verlag New York, 2011.

Gaythwaite J.W., *Design of Marine Facilities for the Berthing, Mooring, and Repair of Vessels*. Amer Society of Civil Engineers, 2004.

Krośnicka K., *Przestrzenne aspekty kształtowania i rozwoju morskich terminali kontenerowych*. Wydawnictwo Politechniki Gdańskiej, 2016.

Mazurkiewicz B. (red.), *Morskie budowle hydrotechniczne. Zalecenia do projektowania i wykonywania Z 1 - Z 45*. wydanie V, Fundacja Promocji POiGM, Gdańsk 2008.

Mazurkiewicz B., *Porty jachtowe i mariny. Projektowanie*. wyd. II, Fundacja Promocji POiGM, Gdańsk 2010.

Mazurkiewicz B. Wiśniewski F., *Morskie budowle hydrotechniczne. Zalecenia do projektowania, wykonywania i utrzymania*. Fundacja Promocji POiGM, Gdańsk 2015.

PIANC (Permanent International Association of Navigational Conferences)

Pieńkowska B., Rakowski M., Kuzebski E., *Analiza stanu infrastruktury w portach rybackich i przystaniach pod kątem dalszych potrzeb inwestycyjnych*. MIR, Gdynia, 2012 (pdf).

Thoresen C., *Port designers handbook. Recommendations and guidelines*. Thomas Telford, London, 2003.

Tsinker P. (ed.), *Port engineering. Planning. Construction. Maintenance and security*. Wiley & Sons, 2004.

UNCTAD, *Port development. A handbook for planners in developing countries*.

http://ec.europa.eu/maritimeaffairs/policy/maritime_spatial_planning/index_en.htm

	Supplementary literature	**MK_8/3-1 Planowanie przestrzenne obszarów morskich** BaltSeaPlan Reports and Publications: http://www.baltseaplan.eu/index.php/Reports-and-Publications;809/1 Kitsiou D., Karydis M, *Marine spatial planning: Methodologies, environmental issues and current trends*. Nova Science Publisher, 2017. Schultz-Zehden A. i Matczak M., *Compendium An Assessment of Innovative and Sustainable Uses of Baltic Marine Resources*. Instytut Morski Gdańsk 2012 (pdf). Zaucha J. (red.), Pilot Draft Plan for the West Part of the Gulf of Gdansk. First Maritime Spatial Plan in Poland. Instytut Morski, Gdańsk, 2009 (pdf). Zaucha J., *Sea basin maritime spatial planning: A case study of the Baltic Sea region and Poland*. Marine Policy 50: 34-45; 2014. *Zimna J., Przedrzymirska J., Matczak M., Zaucha J.,* Mapa Drogowa rozwoju polskich obszarów nadmorskich opartego na czerpaniu pożytków z innowacyjnych form wykorzystania zasobów Bałtyku*. Instytut Morski Gdańsk, 2013 (pdf).* **MK_8/3-2 Interakcje port miasto portowe** Januchta-Szostak A., *Miasta przyjazne rzekom*. Wydawnictwo Politechniki Poznańskiej, 2019. Klimek H., *Porty morskie w perspektywie przestrzennej, ekonomicznej, transportowej, logistycznej i społecznej*. Wydawnictwo Uniwersytetu Gdańskiego, 2016. Krośnicka K., *Ewolucja zależności przestrzennych między portem a miastem Gdańsk w związku z rozwojem technologii żeglugi*. Wydawnictwo Akademii Morskiej w Gdyni, Gdynia, 2005 Meyer H., *City and Port: The Transformation of Port Cities: London, Barcelona, New York and Rotterdam*. International Books, 2003. **MK_8/3-3 Planowanie przestrzenne obszarów portowych** Bird J., *Seaports and Seaport Terminals*. Hutchinson and Co. Ltd, London 1971 Gucma S. (red.), *Morskie terminale promowe projektowanie i eksploatacja w ujęciu inżynierii ruchu*. Wyd. Fundacja Promocji POiGM, 2015. Mazurkiewicz B., *Encyklopedia inżynierii morskiej*. Wyd. Fundacja Promocji POiGM, Gdańsk 2009. Rozporządzenie Ministra Gospodarki Morskiej z dnia 23 października 2006 r. w sprawie warunków technicznych użytkowania oraz szczegółowego zakresu kontroli morskich budowli hydrotechnicznych. Rozporządzenie Ministra Transportu i Gospodarki Morskiej z dnia 1 czerwca 1998 r. w sprawie warunków technicznych, jakim powinny odpowiadać morskie budowle hydrotechniczne i ich usytuowanie. Szwankowski St., *Funkcjonowanie i rozwój portów morskich*. Wydawnictwo Uniwersytetu Gdańskiego, Gdańsk 2000.
	eResources addresses	Adresy na platformie eNauczanie:

Example issues/ example questions/ tasks being completed	Examples of issues: 1. Basic factors shaping the structure of a port city. 2. Basic measures of the port-city relationship. 3. Prerogatives of the maritime administration. 4. Ecosystem approach in spatial planning of marine areas. 5. Spatial elements of the aquarium and port territory. 6. Reasons for releasing port areas and taking them over by urban functions. 7. Principles of functional organization and spatial planning of aquarium areas and port territory 8. Principles of transport services in sea ports. 9. Spatial layout of selected port terminals. The EIA as a tool in the decision-making process of spatial planning and design. 11. Limits to the development of the coastal area due to environmental features Projects and exercises: Environmental impact assessment of the selected port terminal (facility). The concept of shaping a fragment of the water front of a selected port city. The concept of the development of the port transport and logistics zone. Development plan for the selected sea area. Designing selected port waters. The concept of spatial development of the sea port.
Work placement	Not applicable

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