



Subject card

Subject name and code	Coastal zone - diploma project II, PG_00071106						
Field of study	Spatial Development						
Date of commencement of studies	February 2026		Academic year of realisation of subject		2026/2027		
Education level	second-cycle studies		Subject group				
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		15.0		
Learning profile	general academic profile		Assessment form		assessment		
Conducting unit	Department of Urban Design and Regional Planning -> Faculty of Architecture -> Faculties of Gdańsk University of Technology						
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. inż. arch. Karolina Krośnicka				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	15.0	0.0	30.0	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		0.0		0.0	45
Subject objectives	The aim of the course is twofold. The first aim of the course is to familiarize students with the specifics of the organization and operation of port terminals and the complex transport node, which is a seaport, by preparing a preliminary design for the development of selected port terminals in the port area of Gdańsk or Gdynia. The second goal is the work on the the diploma thesis in individual cooperation with the promoter, in the context of the need for integrated management in coastal areas in accordance with the principle of sustainable development.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[K7_U71] is able to apply knowledge from humanistic, social, economic or legal sciences in order to solve problems	is able to apply knowledge in the field of humanities or social or economic or legal sciences to solve problems	[SU1] Assessment of task fulfilment
	[K7_W06] knows and understands the concepts and principles of copyright protection and the need to manage intellectual property resources	...	[SW3] Assessment of knowledge contained in written work and projects
	[K7_U02] analyzes and critically evaluates the existing spatial phenomena and solutions occurring in urbanized structures of different scales (in the district, city, region); indicates solutions to problem situations and determines the appropriate directions of spatial development, taking into account multiple conditions; prepares up elements of planning studies on spatial policy and development strategies of the city and the region	...	[SU5] Assessment of ability to present the results of task
	[K7_U03] uses the learned methods for the development of non-standard analyses and studies in the field of spatial development; integrates knowledge from different scientific disciplines, applies a system approach taking into account non-technical aspects	...	[SU2] Assessment of ability to analyse information
	[K7_U04] plans and carries out computer simulations; uses information and communication technologies in an advanced way; interprets the obtained results and draws conclusions on phenomena related to spatial development	...	[SU1] Assessment of task fulfilment
	[K7_U05] according to a given specification, taking into account also non-technical aspects, is able to design a complex spatial system of different scales (district, city, region), using appropriate methods, techniques and tools, including the ability to draw up an urban planning concept for the transformation of midtown development with the development of public spaces	...	[SU4] Assessment of ability to use methods and tools [SU1] Assessment of task fulfilment

Subject contents	Course content – exercises 1. Designing selected port terminals 30 hours design 1.1. Design of a container terminal for assumed turnover. Designing a reloading stand. Adoption of the storage system. Selection of reloading devices. Calculation of the number of component blocks. Specifying the configuration of container blocks. Defining the organization of the transport service of the terminal (internal and external). Design of terminal facilities and auxiliary areas. 1.2. Design of a conventional mass terminal for assumed turnover. Adoption of basic assumptions and data (turnover, size structure, call structure). Adoption of the mooring line layout and vessel service model. Calculation of the necessary number of mooring positions and the length of the mooring line. Calculation of the necessary number and area of storage yards with the assumed yard service system. The spatial layout of the terminal, taking into account the road communication system. 1.3. Design of general cargo terminal. Organization of storage yards. Development trends in designing general cargo terminals (ro-ro). Calculation of the necessary number and area of storage yards with the assumed yard service system. The spatial layout of the terminal, taking into account the road and rail communication system. 2. Continuation of the diploma and project thesis, the first two stages of which were completed in the sem II. Developing the project, indicating development directions and recommendations for the project area and developing a concept for its spatial development: 30 exercises, promoters 2.1. Defining design guidelines for the implementation of the investment in the selected project area, 2.2. A comprehensive vision of spatial development, 2.3. Creation of a transformation program (spatial, social, economic activities and the links between them). Defining activities and strategies for implementing the transformation program. Assessment of the potential effects of the proposed activities and economic, social, environmental, spatial and other benefits, 2.4. Determining the target functional and spatial structure of the selected area, 2.5. The concept of the functioning of systems and subsystems in the design area (residential areas, natural, transport and logistics, energy, tourist services, ...), 2.6. Development plan for the entire area, 2.7. Detailing design for the selected fragment.		
Prerequisites and co-requisites	Completed courses from MK_3, MK_8 and MK_9 modules at the ICZM specialization; can work in the GIS environment.		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	work on diploma thesis	100.0%	33.0%
	design of terminals	100.0%	67.0%

Recommended reading	Basic literature	Zauchka J. (red.), <i>Studium uwarunkowań zagospodarowania przestrzennego polskich obszarów morskich wraz z analizami przestrzennymi</i>. Instytut Morski, Gdańsk, 2015 (http://www.umgdy.gov.pl/?cat=96) Dyrektywy UE, konwencje, ustawy i rozporządzenia, KPZK 2030, strategie rozwojowe portów morskich Agerschou H., Dand I., Ernst T., <i>Planning and design of ports and marine terminals</i>, wyd. drugie., Thomas Telford Ltd, 2004. Böse J. W., <i>Handbook of Terminal Planning</i>. Springer-Verlag New York, 2011. Gaythwaite J.W., <i>Design of Marine Facilities for the Berthing, Mooring, and Repair of Vessels</i>. Amer Society of Civil Engineers, 2004. Mazurkiewicz B. (red.), <i>Morskie budowle hydrotechniczne. Zalecenia do projektowania i wykonywania Z 1 - Z 45</i>. wydanie V, Fundacja Promocji POiGM, Gdańsk 2008. Mazurkiewicz B. Wiśniewski F., <i>Morskie budowle hydrotechniczne. Zalecenia do projektowania, wykonywania i utrzymania</i>. Fundacja Promocji POiGM, Gdańsk 2015. PIANC (Permanent International Association of Navigational Conferences) Thoresen C., <i>Port designers handbook. Recommendations and guidelines</i>. Thomas Telford, London, 2003. Tsinker P. (ed.), <i>Port engineering. Planning. Construction. Maintenance and security</i>. Wiley & Sons, 2004. UNCTAD, <i>Port development. A handbook for planners in developing countries</i>.
	Supplementary literature	Schultz-Zehden A., Gee K., Scibior K., <i>Handbook on Integrated Maritime Spatial Planning</i>. S.PRO., Berlin, 2008 (http://www.plancoast.eu/files/handbook_web.pdf). http://ec.europa.eu/ourcoast/index.cfm?menuID=19
	eResources addresses	
Example issues/ example questions/ tasks being completed	1. Zoning of the port terminal (e.g. container, specialized mass). 2. Impact of the port terminal on the area of the port agglomeration and the region. 3.Characteristics of threats to the coastline and the coastal zone's environment.	
Practical activities within the subject	Not applicable	

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