GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Theory of design - problems of contemporary architecture and urbanism, PG_00057108		
Field of study	Architecture		
Date of commencement of studies	October 2022	Academic year of realisation of subject	2022/2023
Education level	second-cycle studies	Subject group	Obligatory subject group in the field of study 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	1.0
Learning profile	general academic profile	Assessment form	exam
Conducting unit	Department of Urban Architecture and Waterscapes -> Faculty of Architecture		
Name and surname of lecturer (lecturers)	Subject supervisor	prof. dr hab. inż. arch. Lucyna Nyka	
	Teachers		

Lesson types and methods of instruction

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	15.0	0.0	0.0	0.0	0.0	15

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	15	1.0	9.0	25

Subject objectives

The aim of the subject is to introduce students to the issues of contemporary architecture and urbanism

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K7_W03] knows and understands the history and theory of architecture as well as art, technology and humanities to the extent necessary for the proper performance of architectural designs; advanced issues related to architecture and urban planning useful for designing architectural objects and urban complexes in the social, cultural, natural, historical, economic, legal context and other non-technical conditions of engineering activities, integrating knowledge acquired during studies		[SW1] Assessment of factual knowledge
[K7_W04] knows and understands the relationships between man and architecture and between architecture and the surrounding environment, and the need to adapt architecture to human needs and scale; problems of physics, technology and functions of buildings to the extent that ensures comfort of use and protection against the atmospheric factors; methods and means of implementing environmentally responsible sustainable design as well as protection and conservation of the surrounding environment	knows and understands the relationships between man and architecture and between architecture and the surrounding environment, and the need to adapt architecture to human needs and scale; problems of physics, technology and functions of buildings to the extent that ensures comfort of use and protection against the atmospheric factors; methods and means of implementing environmentally responsible sustainable design as well as protection and conservation of the surrounding environment	[SW1] Assessment of factual knowledge

Subject contents	The course is offered in a form of 15 lectures and has been developed as a series of OPEN ARCH / ARCHITECTURE TALKS focused on selected topics. The lectures are given by GUT academic staff as well as by invited visiting professors from universities abroad. The participant of the course is expected to develop understanding of the contemporary architecture, its cultural, technological and environmental context, as well as responsibilities and challenges staying ahead of architects.
Prerequisites and co-requisites	The course has no specific prerequisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
knowledge	50.0%	100.0%

Recommended reading

Basic literature	• Shannon K., De Meulder B., d'Auria V., Gosseye J. (eds.): *Water urbanisms*. Amsterdam: SUN 2008, • Dreiseitl H., Grau D. (eds.): New Waterscapes. Planning, Building and Designing with Water. Basel−Berlin−Boston: Birkhäuser 2005. • Fang Ch.: Waterfront Landscapes. Hong Kong: Design Media Publishing 2011. • Januchta-Szostak A. (Ed.): Water in the Townscape. Poznań: Wydawnictwo Politechniki Poznańskiej 2009. • Landry Ch.: The Art of City Making. Abingdon: Routledge 2006. • Nyka L.: Architecture and Water – New Concepts on Blurring Borders. W: Nyka L. (ed.): Water for urban strategies. Weimar: Verlag der Bauhaus-Universität Weimar 2007, s. 20–27. • Pallasmaa J.: Hapticity and Time, notes on fragile architecture, Architectural Review 5/2000, s. 76–80.
Supplementary literature	• Urbanowicz K., Nyka L.: Interactive and media architecture – from social encounters to city planning strategies. Procedia Engineering (2016), pp. 1330-1337. Elsevier Limited, Oxford, UK. DOI information: 10.1016/j.proeng.2016.08.597 • Cudzik J., Nyka L.: Reasons for Implementing Movement in Kinetic Architecture. IOP Conference Series: Materials Science and Engineering, Volume 245. (cytuj: IOP Conf. Ser.: Mater. Sci. Eng. 245 042073. 2017 IOP Conference Series: Materials Science and Engineering 245 (4), 042073
eResources addresses	Adresy na platformie eNauczanie:

Example issues/ example questions/ tasks being completed

1. Transformations of post-industrial areas and objects – please describe interior and exterior conditions of adaptive re-use explaining urban and architectural issues.
2. Introducing new functions in post-industrial objects – please describe the principles for creating three different functions and give examples.
3. Models of transformations of post-industrial objects – please present the systematics and give examples.
4. What is light pollution of the Earth's atmosphere and what can an architect / urban planner do to make his/her projects not to contribute to the increase of this litter?
5. What characteristics of light affect the perception of the designed space (mention a few and describe their impact)?
6. What is the material reflection factor in per cent and why is it so important in architecture? Give few examples of different materials and their degrees of reflection?
7. List the advantages of algorithmic design.
8. Name and describe types of digital fabrication.
9. Name three objects designed with the usage of computational design techniques
10. What is kinetic architecture? Name types of movement used in architecture.
11. Name and describe three build and conceptual kinetic objects.
12. What is the difference between build kinematic buildings before and after 1990? Describe the difference in design technique and implemented types of movement.
13. Discuss innovative/creative relations between architecture and water using two examples
14. Discuss, basing on two examples, how modifying existing relations between architecture and water may influence process of urban renewal.
15. „Buildings are designed not as static volumes but rather as arrangements of connections" – basing on two examples, explain how this kind of approach influences spatial organisation of public buildings.
16. Basing on the example of the chosen city, explain the strategy of introducing public connecting paths that tie together separate urban areas. Illustrate your answer with sketches.
17. „The urge to obtain the official LEED or BREEM environmental assessment is restricting the freedom of architects and results with the lower aesthetic qualities of office interiors" – discuss with this opinion giving examples.
18. What does it mean that the building has received the LEED certificate?
19. How do you understand the term "Integrated design"?
20. Name and describe one exemplary urban intervention/ development in Europe that well illustrates the notion of responsible architecture
21. How do you understand the concept of "green urbanism"? Analyse the basic features of such concept basing on one example
22. How do you understand the concept of "water urbanism"? Analyse the basic features of such concept basing on one example

Work placement	Not applicable