COURSE DESCRIPTION CARD - SYLLABUS

Course name
WATER-RESPONSIBLE URBANISM

Course

Proposed by Discipline
Architecture and Urban Planning

Year/Semester
II/3

Type of studies
Doctoral School

Course offered in
English

Form of study
full-time

Requirements
elective

Number of hours

Lecture
4

Tutorials

Projects/seminars

Number of credit points

1

Lecturers

Responsible for the course/lecturer:
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Responsible for the course/lecturer:

Prerequisites

Knowledge: student knows the basic issues of architecture and urban planning as well as landscape architecture; has knowledge required for the understanding of social, economic, legal and other determinants outside the engineering field of architectural designing and urban planning.

Skills: student can acquire information from field specific literature, data bases and other properly selected sources in English, can integrate the acquired information, interpret the said information, as well as draw conclusions and come up with opinions supported with satisfactory reason.

Social competencies: student understands the need for lifelong learning, is aware of the social role of the architect and urban planner and their liability for affecting decisions.

Course objective

Gaining the increased knowledge in the scope of principles of sustainable and interdisciplinary spatial planning in the face of the climate crisis, including the role of integrated space and water management in urban design in environmental, social and economic, as well as administrative and legal aspects. Learning the latest tendencies in urban planning, especially water-sensitive planning & design, stormwater management, SUDS - sustainable urban drainage systems etc. Learning methods and ways of implementation of the latest scientific achievements in the scope of urban planning and urban water management.

Course-related learning outcomes

Knowledge

A PhD student who graduated from doctoral school knows and understands:
1) global achievements, covering theoretical foundations as well as general and selected specific issues that are relevant to scientific disciplines studied at the doctoral school, to the extent that enables revision of existing paradigms, [P8S_WG/SzD_W01]
2) fundamental dilemmas of the contemporary civilization, [P8S_WK/SzD_W05]
3) economic, legal, ethical and other vital conditions related to scientific activity. [P8S_WK/SzD_W06]

Skills

A PhD student who graduated from doctoral school can:
1) use the knowledge from different branches of science to creatively identify, formulate and to innovatively solve complex problems or to execute research tasks, [P8S_UW/SzD_U01]
2) ransfer the results of scientific activity to the economic and social sphere. [P8S_UW/SzD_U03]

Social competences

A PhD student who graduated from doctoral school is ready to:
1) critically assess the achievements within a given scientific discipline, [P8S_KK/SzD_K01]
2) fulfilling the social obligations of researchers and creators. [P8S_KO/SzD_K04]

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

PQF code	Methods for verification of learning outcomes	Assessment criteria
W01, W05, W06	Discussion related to the topic of the lecture. Written research study related to the topic of the lecture	Completeness and relevance of knowledge
U01, U03	Written research study related to the topic of the lecture	Substantive, structural and editorial correctness of the reseach study
K01, K04	Written research study related to the topic of the lecture	Critical approach to the topic and awareness of social responsibility

Programme content

1. Water in the history of urban development (Changes in water-city relations in the history of European civilization, Hydraulic and ecohydrological consequences of urbanization).
2. Climate challenges (Climate changes, Water threats – economic, social and environmental aspects, Water hazards & flood risk).
3. Resilient waterfronts (Urban waterfronts renewal, Coastal resilience - natural & built flood infrastructure, Flood risk reduction strategies).
4. Responsible and resilient urban water and space management (Watershed approach - rainwater management in urban areas, Source – pathway – recipient, Integrated water and spatial management).

Teaching methods

Lecture: multimedia presentation including illustrations and examples.

Bibliography

Basic

1. Bergier T., Kronenberg J., Wagner I., (red.), Water in the City. Sustainable Development Applications Series 5/2015. Publisher: Fundacja Sendzimira, Kraków 2014, Download PDF: http://www.sendzimir.org.pl/en/series5.

2. France R.L. (red.), 2002, Handbook of Water Sensitive Planning and Design (Integrated Studies in Water Management and Land Development), Lewis Publishers, CRC Press, Boca Raton.

3. Januchta-Szostak, River-friendly cities, Peter Lang, Berlin 2020.

Additional

1. Bahri A., Integrated urban water management. Global Water Partnership, Stockholm 2015, DOI: 10.13140/RG.2.1.4187.0160.

2. EEA, European waters Assessment of status and pressures 2018 EEA Report No 7/2018, Publication Office of the European Union, Luxembourg 2018.

3. Hooimeijer F., Meyer H., Nienhuis A., Atlas of Dutch water cities, Uitgeverij SUN, Amsterdam 2005.

4. Januchta-Szostak A., Woda w miejskiej przestrzeni publicznej. Modelowe formy zagospodarowania wód opadowych i powierzchniowych, seria: Rozprawy nr 454, Wyd. Politechniki Poznańskiej, Poznań 2011.

5. Kundzewicz, Z.W., Hegger, D.L.T., Matczak, P., Driessen P.P.J., Flood-risk reduction: Structural measures and diverse strategies. PNAS (Proceedings of the Nation-al Academy of Sciences of the United States of America) 115(49): 12321-12325 Pub-lished: DEC 4 2018.

6. Pötz H., Bleuzé P., Urban green-blue grids for sustainable and dynamic cities. Coop For Life, Delft 2012.

7. Nyka L., 2013, Architektura i woda – przekraczanie granic. Wydawnictwo Politechniki Gdańskiej, Gdańsk.

8. Shannon K, Meulder B., Gosseye J., D'Auria V.(eds.), 2008, UFO1 Water Urbanisms. SUN, Amsterdam, s. 5-9.

9. The Baltimore Charter for Sustainable Water Systems, Baltimore 2007, <http://sustainablewaterforum.org/baltimore.html> [dostęp: 17.06.2010].

10. Wylson A., Aquatecture: Architecture and Water, Architectural Press, 2013.

Breakdown of average student's workload

	Hours	ECTS
Total workload	24	1.0
Classes requiring direct contact with the teacher	8	0.5
Student's own work (literature studies, project preparation) [1]	16	0.5

[1] delete or add other activities as appropriate