

**Subject card**

<b>Subject name and code</b>	Water in the city, PG_00140225						
<b>Field of study</b>	Archaeology						
<b>Date of commencement of studies</b>	October 2024	<b>Academic year of realisation of subject</b>				2024/2025	
<b>Education level</b>	undergraduate studies	<b>Subject group</b>					
<b>Mode of study</b>	full-time studies	<b>Mode of delivery</b>				at the university	
<b>Year of study</b>	1	<b>Language of instruction</b>				Polish	
<b>Semester of study</b>	2	<b>ECTS credits</b>				2.0	
<b>Learning profile</b>	academic	<b>Assessment form</b>					
<b>Conducting unit</b>	Pracownia Hydrologii -> Katedra Hydrologii -> Faculty of Oceanography and Geography -> Rektor						
<b>Name and surname of lecturer (lecturers)</b>	<b>Subject supervisor</b>		dr Katarzyna Jereczek-Korzeniewska				
	<b>Teachers</b>						
<b>Lesson types</b>	<b>Lesson type</b>	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	<b>Number of study hours</b>	30.0	0.0	0.0	0.0	0.0	30
	E-learning hours included: 0.0						
<b>Learning activity and number of study hours</b>	<b>Learning activity</b>	Participation in didactic classes included in study plan		Participation in consultation hours		Self-study	SUM
	<b>Number of study hours</b>	30		2.0		18.0	50
<b>Subject objectives</b>	To get acquainted with problems connected with the course of urbanization processes in the world, in Poland.; Recognise and identify the risks and constraints arising from these processes.; Discuss the role of water in the city and the difficulties associated with urban water supply.; Bringing urban water conflicts closer together.; Learning about ways to protect water resources in urban areas.; Learning about basic urban water management problems and sources of hydrological information						

Learning outcomes	Course outcome	Subject outcome	Method of verification
		<ul style="list-style-type: none"> <li>- The student knows and lists problems, theories and trends in the spatial economy of individual countries and continents taking into account aspects of the natural environment; understands their theoretical and practical significance.</li> <li>- The student names and describes to an advanced degree the concepts of sustainable development and spatial governance and understands their relevance to the economy.</li> <li>- The student lists and explains the most important determinants and processes of spatial management with particular emphasis on the specificity of Polish maritime areas and Poland.</li> <li>- The student makes use of scientific literature and uses geographic terminology in Polish in hydrology and other disciplines. The student is able to formulate and solve untypical and complex spatial management problems in accordance with the principles of sustainable development and spatial order.</li> <li>- The student correctly identifies and explains the conditions of spatial management of a specific area and predicts the impact of basic social processes on the structure of the broadly understood spatial development.</li> <li>- Students will analyse and evaluate the causes and course of change in the aquatic environment at different spatial and temporal scales.</li> <li>- The student has the ability to make decisions independently and to take responsibility for the consequences of his/her own actions and those of his/her team. He/she understands the need for continuous personal and professional development.</li> <li>- Student wykazuje podejście do krytycznej oceny posiadanej wiedzy i odbieranych treści z zakresu sposobów i form zagospodarowania przestrzennego, zrównoważonego rozwoju i ładu przestrzennego. Wykazuje odpowiedzialność za własne przygotowanie do pracy.</li> </ul>	<p>[SW1] oral statement/ conversation/discussion [SW2] presentation/project/paper/ report [SW3] text preparation/written work [SU1] oral statement/conversation/ discussion [SU2] presentation/project/paper/ report [SU3] text preparation/written work [SK1] oral statement/conversation/ discussion [SK2] presentation/project/paper/ report [SK3] text preparation/written work</p>
Subject contents	Introduction - urbanisation (history of urbanisation and characteristics of urbanisation processes) 2. Characteristics of urbanised areas (urban environment, climate of urbanised areas) 3. Pollution in the urban environment 4. Water relations and urbanisation processes (surface water, groundwater) 5. Impact of urbanisation on water quality, on groundwater and on adjacent areas 6. Extreme hydrological phenomena - natural disasters (droughts, floods, tsunamis) 7. Extreme hydrological phenomena - technological disasters 8. Urban hazards and global change 9. Urban water availability 10. The role of water in urban areas (population supply, industrial water supply, sports, recreation, transport) 11. Urban sanitation 12. Slums (e.g. Millennium Programme) 13. Urban water-borne diseases and epidemics 14. Urban water conflicts 15. Urban water supply in the future		
Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	completion of a credit work - essay or presentation	51.0%	100.0%

Recommended reading	Basic literature	<ul style="list-style-type: none"> <li>• .Bednarek A., 1984, Z badań nad mikroklimatem miasta, [in:] Wpływ zieleni na kształtowanie środowiska miejskiego, PWN, Warszawa</li> <li>• Ciupa T., Suligowski R., 2014, Water in the city, Kom. Hydrograf. PTG, Institute of Geography Jan Kochanowski University, Kielce</li> <li>• Holdys A., 2009, City under the city, Wiedza i Życie (July 2009)</li> <li>• Jałowiecki B., 2009, Czy metropolia jest miasto, Scholar, Warsaw, PDF</li> <li>• Kaniecki A., 2004, Dzieje miasta wodą pisane, Wyd. Poznańskie Towarzystwa Przyjaciół Nauk, Poznań</li> <li>• Kapuściński R., 2007, Rwać nurt historii - zapiski o XX i XXI wieku, Znak Publishing House, Kraków</li> <li>• Kosmala M., Łukaszewicz J., 2006, Influence of trees on water circulation in urban environment, IX Forum of Landscape Architecture, Szczecin</li> <li>• Kowalczak P., 2007, Konflikty o wodę, Przeźmierowo: Wydawnictwo Kurpisz S.A., Poznań</li> <li>• Kowalczak P., 2011, Wodne dylematy urbanizacji, Wyd. Poznańskie Towarzystwa Przyjaciół Nauk, Poznań</li> <li>• Kundzewicz Z., Kowalczak P., 2008, Zmiany klimatu i ich skutki, Wydawnictwo Kurpisz S.A., Poznań</li> <li>• Łupienko A., Zabłocha-Kos A., 2019, Architecture in the city, architecture for the city, vol. 2, Institute of History of the Polish Academy of Sciences, Warsaw</li> <li>• Macias A., Bródka S., 2014, Przyrodnicze podstawy gospodarowania przestrzenią, Wyd. PWN, Warsaw</li> <li>• Schumm S. A., 1997, The Fluvial System, Wiley, New York</li> <li>• Urban water footprint - better urban water management</li> </ul>
	Supplementary literature	lack of
	eResources addresses	Adresy na platformie eNauczanie:
Example issues/ example questions/ tasks being completed	<p>1.Can floods be avoided? Water hazards.2.Is a river in a city a curse or a resource/gift?3.What is a water footprint? In search of new solutions.4. urban water footprint - a city's water needs5. How to better manage urban water?</p>	
Work placement	Not applicable	

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