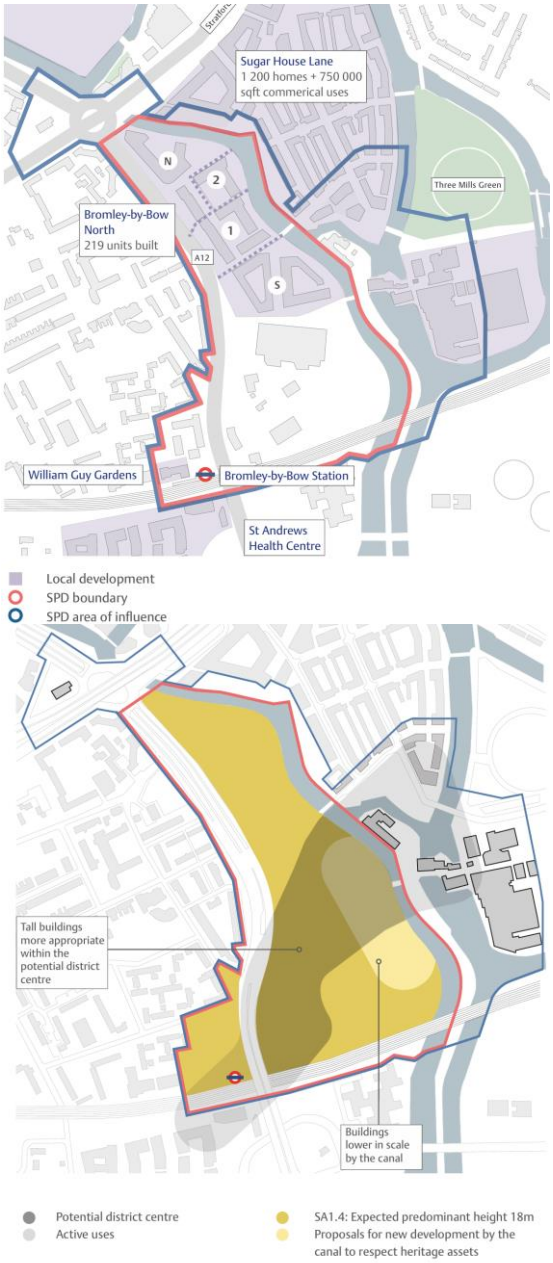
POLITECHNIKA GDAŃSKA
WYDZIAŁ ARCHITEKTURY




| Semester number I | ARCHITECTURAL AND URBAN PROJECT I | ECTS points 10 |
|---|---|---|
| Master's Degree: II | | Rok akad.: 2025/2026 |

**DEPARTMENT OF HOUSING AND ARCHITECTURE OF PUBLIC BUILDINGS – KAM/KTM**

Lecturers:
Assoc. Prof. Dr. Eng. Arch. Justyna Martyniuk-Pęczek
Dr. Eng. Arch. Matusz Gerigk

**A BRIEF DESCRIPTION OF THE COURSE**

**BROMLEY-BY-BOW**
Pathway: Environmental

The Bromley-by-Bow area forms part of the Lower Lea Valley Opportunity Area, as designated by the London Plan. Managed release of appropriate industrial sites has taken place in successive planning policy documents (Lower Lea Valley OAPF 2007, Tower Hamlets Core Strategy 2010, Legacy Corporation Local Plan 2015) which has meant that many sites in the area are being developed for or have planning permission for redevelopment, mainly for a mix of uses. New neighbourhoods are coming forward as the valley changes from a predominantly industrial area to a mixed use area including new medium and high density housing.
As set out in site allocation policy SA4.1, the following land uses are required. A new mixed use area including: • New and reprovided retail floorspace that is capable of functioning alongside a mix of uses, as a new District Centre • A primary school • A new 1.2 hectare park • Riverside walk • Community facility, e.g. a library • New homes with a signifcant element of family housing • New employment-generating business space in a range of sizes and formats. As the development of current location is in progres a thorough preliminary analysis will be necessary. More information: https://www.towerhamlets.gov.uk/Documents/Planning-and-building-control/LLDC/Bromley-By-Bow-SPD/Bromley-by-Bow-SPD-Adopted.pdf

**AIM OF THE COURSE**

General objectives of the course

The aim of the course is to provide students with knowledge and to develop skills in architectural and urban design that take climate conditions into account. Special emphasis is placed on solutions that minimize negative environmental impacts while improving comfort and quality of life in urbanized areas. The project focuses on analyzing the relationships between buildings, urban layout, and climate—particularly the role of orientation and spatial structure—as well as strategies that enhance energy efficiency, maximize the use of daylight, and support climate change adaptation.

Development of architectural and urban project to satisfy the needs of local planning management. Create a multifunctional structure including primary school,c park, riverside walk, community facility, affordable housing, mixed use with commercial and budiness functions. Define new structure in the cultural, historical and communication context of the place. Developing skills in conducting the design process, defining the scope of architectural and urban revitalization problems. Developing analyses of selected city spaces,

making design decisions. Developing a master plan in urban context. Developing a building in terms of its architectural scale. Exercise conceptual thinking and innovative spatial structures.

**COURSE CONTENT**

The course covers issues related to the interaction between the built environment and climate, at both micro and macro scales, and their impact on energy consumption. Topics include:

- the influence of urban form and architecture on the microclimate,
- strategies for shaping space with regard to thermal comfort, air quality, and daylight access,
- passive and active solutions for heating, cooling, and the use of renewable energy sources,
- design approaches that reduce the urban heat island effect,
- methods to increase the resilience of cities to climate change.

The course is delivered through lectures, workshops, case analyses, fieldwork, and design projects. Students develop original architectural and urban concepts demonstrating how design can reduce negative impacts on the climate and support adaptation to climate change.

Introduction to the course through presentations and abstract discussions.
Spatial analysis and synthesis of the site.
Development of ideas.
Techniques such as urban composition, morphology, and space use analysis.
Basics of spatial syntax and spatial integration.
The design includes defining the project title, goals (spatial, functional, social), and developing the concept with a special approach to aspects related to environmental protection and society
The final project includes zoning, typologies, visibility analysis, and urban composition.
Topics include urban revitalization, public spaces, school building, mixed-use buildings.