POLITECHNIKA GDAŃSKA
WYDZIAŁ ARCHITEKTURY

Follow up! H2020-MSCA- PROMETHEUS
PROtocols for information Models librariEs Tested on HEritage of Upper Kama Sites

Term: **2 sem.**	Title of the course / Elective design I: **Cultural Heritage Routes – Gdańsk Fortification System**	ECTS: **2**
Type of studies: **MSc in Arch.**		Acad Year: **2022/2023**

Department of History, Theory of Architecture and Monument Conservation;
Department of Housing and Architecture of Public Buildings;
Department of Urban Architecture and Waterscapes;

Seminars & assignments: 30 h

Tutors: Prof. Jakub Szczepański, Ph.D., Justyna Borucka, PhD Eng. Architect, D.Sc., Robert Hirsch Ph.D., Piotr Samól, PhD Eng. Architect, Joanna Badach, PhD Eng. Architect, Szymon Kowalski, Ms.C. Eng. Architect

Brief description of the subject:

Cultural Heritage Routes – Gdańsk Fortification System This course explores challenges, conflicts and concepts of cultural heritage preservation and protection in urban level, their connection to architectural and urban design in the time of digitalisation and their importance for a future of the cities. The aim of this course, based on the case study city of Gdańsk, is to understand the problem of cultural heritage and develop innovative solutions of architectural and urban design responding to a significant variation of rapidly changing digital era and digital tools and conditions regarding Cultural Heritage

This elective design course will be carried out in the form of a block course as a part of the international research workshops taking place between October and November 2022. It is linked to two other obligatory courses (see the attached description):

- **CAD. Integrated architectural design (Techniki komputerowe - integracja procesów projektowania)** (tutor: mgr inż. arch. Szymon Kowlaski)
- **Methodology of scientific work (Metodyka pracy naukowej)** (tutors: prof. dr hab. inż. arch. Lucyna Nyka, prof. dr hab. inż. arch. Jakub Szczepański, dr inż. arch. Justyna Borucka)

Students who choose to participate in this elective design course will be automatically enrolled in these two courses. They serve as a preparatory stage for the workshops and the technical support throughout the event and after its termination, carried out on a weekly basis, starting from 3 October.

Objectives:

The goal is to understand the most important issues and challenges in architecture and city planning in the context of Cultural heritage in Urban level in digital era.
This includes:
(1) Understanding the main problems related to Cultural Heritage in Gdańsk such as:
to promote a conscious and develop effective strategy for the conservation and preservation of Cultural Heritage,
by offering a didactic opportunity of knowledge and sharing of research contents supported by the immersive experience of visit into VR visualizations of international Cultural Heritage Sites
(2) Understanding the how technology can preserve and promote Cultural Heritage, and to experience a virtual tour, discovering information and opportunities for architectural sites within digital environments and multimedia contents.
(3) Responding to the question: How old are monuments? Which is their history and experience? What can it be their future? based on an example of the city of Gdańsk?

A multidisciplinary approach, team work, critical thinking and understanding of the approaches to the issue of Cultural heritage Routes.

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The course is strictly linked with the series of international research workshops within the research project "*PROtocols for information Models librariEs Tested on HEritage of Upper Kama Sites*" / H2020 MSCA - PROMETHEUS 2019-2023 (for details see: https://prometheush2020.eu/ ; https://www.facebook.com/PromtheusH2020).

PROMETHEUS objective is to implement an interdisciplinary action for the documentation and structuring of information about architectural heritage, boosting the training of researchers on the constructive and historical value of Cultural Heritage Routes. The research will develop innovative methodologies of digitisation of architecture with the integration of multidisciplinary data and Information Models, leading to specialised figures able to operate on built heritage assets.

Project aims to explore survey and analysis for evaluation enanchement and management of European Cultural Heritage Routes and involve academic and non-academic institutions from such cities as: Pavia (Italy), Valencia (SP), Gdańsk (PL).

As a part of this project, international workshops with the members of all the above-mentioned institution will be carried out in Gdańsk with the participation of the Gdańsk Tech Master & PhD students. **The workshops will take place in Gdańsk between October and November 2022.**

Within the international activities of the European project PROMETHEUS, the Elective design course "The Gdańsk Fortification Route. Survey and analysis for evaluation enanchement and management of European Cultural Heritage Routes" is organized within the research and experimentation activities where DAda-LAB is a partner. The course, promoted by the Gdańsk Tech, University of Pavia, and other academic and professional partners, will be held between October - December 2022 in Gdańsk, Poland. The course aims to establish an international dialogue on the practices of digital documentation of historical territorial heritage for the development of technological recovery, restoration and administrative management programmes, through the optimisation of 3D databases and information models. The activities of the course will be developed on a travelling route along the route of Gdańsk Fortification System as a case study of Cultural Heritage Route in urban level.

Content

The course contents include the following teaching elements:

Block1 (week workshop in October)
- general lecture and presentation of the topic and location, site trips , onsite survey workshop

Block 2 (?)
- to be completed

Block 3 (?)
- to be completed

Block 4 (?)
- to be completed

Dissemination stage (within the CAD. Integrated architectural design and Methodology of scientific work courses) – until December 2022.

Methods: The multidisciplinary course will be held as a design workshop including an introductory lecture, discussion, site visits and filed studies and group project work. The course will include: **Field trips:** this includes open-air lectures and laboratories (practical activities) on methods of surveys and analysis, promoting a direct contact with sites to increase the acknowledgement of their value; **Laboratory activities**: to increase team work and problem-solving skills on post production and design of tools and methods of work, into laboratories and institutions of each partner; **Workshops:** to show methodologies and results of research activities. Workshops have also the aim to develop common approaches, in particular regarding Cultural Heritage sensitization; **Seminars/lectures** to illustrate research state or a particular topic; **Remote collaborative exchange platform**: trough the implementation of collaborative platform for knowledge exchange between researchers and students, during the project and after its conclusion; students are necessary also to learn relative methods and practices for their sequent use.

Learning Outcomes: The attending students can significantly extend their analytical, logical and critical thinking and creative problem in the field of contemporary design adapted to preservation and promotion of cultural heritage.
Students learn to:
- detect citations and references in modern design in the context of urban heritage;
- practices digital documentation of historical territorial heritage for the development of technological recovery, restoration and administrative management programmes, through the optimisation of 3D databases and information models.
- understand and solve design problems in the cultural heritage context.

The course enables students to understand and recognise challenges, conflicts and concepts of architectural and urban design in the context of the preservation and promotion of cultural heritage.

Prerequisites: Great willingness for multidisciplinary approaches, openness for research based, innovative structural design, advanced skills in using digital tools and ability of working in a digital environment

Assessment Methods and Criteria: Evaluation of the final study and task

Study Material: Reading List, excerpts of lectures, definitions etc. will be provided to students in digital format with respect to the topic of the seminars.