



LINKS

How to connect the banks of a Danube bay?

**Department of Mechanics, Materials and Structures &
Department of Explorative Architecture**

COURSE DESCRIPTION

To construct a bridge is an interesting and unusual design task for an architect. In this course we use an experimental process, based on physical modeling. We ask design teams to build large-scale models week by week, to make your concept more precise.

The site of the design task is an inspiring place, a Danube bay close to the BME University Campus, the 'Lágymányosi' bay. Here, there is a peninsula with some bars, restaurants and other leisure function next to the bay. On the other side of the water surface, there is a post-industrial development zone. The main goal of the project is to connect these areas over the river branch which has a width of 100 meters. The teams will also do detailed site analysis, develop a masterplan, in addition to the core bridge design task.

INSPIRING EXAMPLES

Bohinjska//Slovenia//DANS Architects



Saint-Omer//France//DVVD



Venice//Italy//Santiago Calatrava



Essing//Germany//Richard Johann Dietrich



London//UK//Thomas Heatherwick



Dublin//Ireland//Santiago Calatrava



PROGRESS THROUGHOUT THE SEMESTER

The course will be held in a workshop style. Students' will be accompanied by consultants of both departments (design&structural). Students will have to complete their tasks in groups of 3 combined with smaller individual tasks. Groups will be international and formed in a way that students in the group are from different years of their studies.

In the beginning of the course students will get familiar with the site and the task in the form of presentations and site visit. Students have to document an analysis of the site, and find inspiring examples related to the task and their structural solutions.

The analysis of structural solutions should be done separately, but in a way that complements the above study of the inspiring examples. It should address the functions and the unique design choices that influenced the constructional solutions of the building. The students must provide a list of the most important choices and solutions that couldn't have been made, were the same design attempted to be built on the Budapest site.

INTERDISCIPLINARY PROJECT BASED DESIGN 1

Apart from the presentation of these analyses the progress of projects has to be presented on two occasions before the final presentation, as indicated in the schedule. All presentations will be immediately evaluated by the consultants who will discuss the work in public.

The classroom K 222 is available for the students all day on Tuesday and Thursday. Note that the door is not locked and other students use the classroom on other days. Please arrive no later than it is indicated in the schedule. You will listen to each other's presentations on almost every Tuesday. Thursday is for consultations, lectures and workshops.



TIMETABLE AND PLANNED SCHEDULE

Tuesdays 9:15 AM – 6:00 PM, Thursdays 9:15 PM – 6:00 PM in room K 222

	Tuesday	Thursday
week no.1 06. and 08. September	15:15 am INTRODUCTION, Students' short introduction Introductory lectures by instructors. Setting up the teams with 3 students and topics of preliminary study.	15:15am SITE VISIT Visit the site with the instructors. Meet at the site (address: 1117 Budapest, Kopaszi-gát 1)
week no.2 13. and 15. September	15:15 am STUDENTPRESENTATION of preliminary study of site analysis consultation with both departments	15:15 am STRUCTURAL DESIGN WORKSHOP #1 Large-scale bridge model consultation with both departments
week no.3 20. and 22. September	15:15 am CONSULTATION with both departments build mock-up no.1	15:15 am STRUCTURAL DESIGN WORKSHOP #2 Small-scale model for form-finding
week no.4 27. and 29. September	15:15 am STUDENTPRESENTATION of masterplan & concept design build mock-up no.2	15:15 am STRUCTURAL DESIGN WORKSHOP#3 Introduction to computational form-finding
week no.5 04. and 06. October	15:15 am CONSULTATION with both departments build mock-up no.4	15:15 am STRUCTURAL DESIGN WORKSHOP#4 Introduction to graphical form-finding
week no.6 11. and 13. October	15:15 am CONSULTATION with both departments build mock-up no.5	15:15 am CONSULTATION with both departments
week no.7 18. and 20. October	15:15 am CONSULTATION with both departments	15:15 am STUDENTPRESENTATION of final completed projects build mock-up no.6

** the schedule is subject to future changes*

PARTICIPANTS

The course Project Design is run by two departments: the Department of Mechanics, Materials and Structures and the Department of Explorative Architecture. Students' work will be accompanied by consultants of both departments.

Lecturers responsible: Dr Péter VÁRKONYI, Dávid SZABÓ DLA

Consultants: Department of Explorative Architecture
– Júlia POKOL, Mohamed RASLAN, Rania MATROUK

in cooperation with: Department of Mechanics, Materials and Structures
– Andrés Guerra Riano

CONDITIONS

HALF SEMESTER COURSE 2	Credits: 8	in cooperation with Department of Mechanics, Materials and Structures and Department of Explorative Architecture
Tutors: Dr Péter VÁRKONYI Dávid SZABÓ DLA	Responsible: Dr Péter VÁRKONYI Dávid SZABÓ DLA	
Way of training:	Practical interdisciplinary design course – Lectures, team consultations, common presentations and evaluation in English – according to the timetable	

CONDITIONS:

- active presence during the semester (70% of classes)
- accepted presentation of **preliminary study** of site analysis and inspiring examples
- presence during all workshops
- accepted presentation of **masterplan & concept design** (architectural program, masterplan, site plan, architectural plans, sections, elevations, perspective view of the structural system with materials and approximate dimensions, middle scale mock-up)
- accepted presentation of **final design** project plans (architectural program, masterplan, site plan, architectural plans, sections, elevations, perspective view of the structural system with materials and approximate dimensions, large scale mock-up)

GRADING:

The final grade will be established as the result of the personal and team work of the student in class and at home. The submissions, presentations and class work will be graded according to the following:

concept design: 20 %

activity during semester workshops: 20 %

final submission and presentation: 60 %

Grades:	0-49 %	failed	(1)
	50-62 %	passed	(2)
	63-75 %	satisfactory	(3)
	76-89 %	good	(4)
	90-100 %	excellent	(5)