

# Letter from the Dean

on the requirements regarding the content and the form of the diploma project at the submission of its A/preliminary phase, B/ course finishing phase at the end of the semester, and C/ final presenting phase for Integrated MSc Program and MSc Program.

Valid from February 2023

## I) Compulsory elements of content and form of the preliminary documentation

The preliminary phase of the diploma project is a complex design documentation including design drawings and written descriptions, intended to present the architectural concept.

### Requirements for the content of the preliminary documentation

#### A) Architectural parts

- site plan (close and wider perspective) by images, drawings, aerial photos etc. in an appropriate scale, and sufficient detail to make it understandable
- floor plan(s) at a scale of 1:200 in sufficient detail fit to scale
- section(s) at a scale of 1:200 in sufficient detail fit to scale, (at least 1)
- elevation(s) at a scale of 1:200 in sufficient detail fit to scale
- the written part is expected to describe the architectural design concept in text including the scope, and final design programme

#### B) Engineering design discipline parts

- structural engineering part: presentation of the structural system of the building on sketches providing a dimensional rendering of the structural systems (1 size A4 page)
- building construction part: analysis of the environmental effects (hydrology, orientation, noise exposure) examination and evaluation of the requirements and the way of fulfilment fit to the architectural concept
- construction technology and construction management part: brief presentation of construction project (description and stakeholder map)
- building energetics and building services part: determination of requirements (comfort levels, building operation) and analysis of the design site (analysis of solar exposure, shading options, public utilities networks, analysis of renewable energy sources)

Declaration of prioritized engineering discipline chosen by the student.

The preliminary phase documentation must be prepared in appropriate scale and graphics help easy understanding and overview. The architectural parts of the preliminary phase documentation must be submitted in one copy, printed and displayed at its presentation on paper up to size A2. The architectural components of the preliminary phase documentation must be submitted in digital form as well (vector graphic PDF/A or SVG format, size A3) in the closed digital management system.

The engineering discipline parts of the preliminary phase documentation must be submitted to the discipline consultants, in uniform size and orientation booklets (A4 portrait or landscape) in a screen readable manner attached in the closed digital management system.

All digital materials must have a resolution of 300 dpi.

## II) Requirements for the content and the form of the diploma project at its submission at the end of the semester and for final presentation

Of the parts listed below has to be submitted the detailed part of the prioritized discipline and the 3D renderings - which are not necessary for the understanding of the building - until the deadline for the submission of final presentation while the physical model can be presented on the day of the final diploma presentation. All the other parts have to be submitted as part of the diploma course finishing documentation. Submission deadlines are included in the assessment plan of the relevant semester and the work schedule of the relevant year.

### Architectural part

#### Architectural study

The architectural study as the theoretical basis of the diploma project presents the development of the diploma project from the first sketches to the final drawings. Based on the author's individual ideas, this study introduces the literature researched, and describes the conceptual components of the design and their relations to the topic, the site, the professional background and any potential research results.

The diploma project must also introduce the site and the programme (functional analysis and/or room list) including their scope, analysis, evaluation, and based on their key characteristics, the description of the architectural concept primarily by drawings and images as well as brief supporting, explanatory and elaborative text.

#### Site / Master plan

Site plan at a scale of 1:1000 or 1:500, fit to the size of the design area. The site plan must show the parameters of the proposed covered area.

#### Architectural design

- Detailed site plan at a scale of 1:500 or 1:200 showing top view of the planned arrangement of the immediate environment (plot, roads, parking facilities, landscaping, main garden elements, integration into environment, connections with public areas etc.). In case the programme or design involves public areas, plans for those must also be included.
- Floor plans at a scale of 1:100, for all the different levels, in appropriate scale and graphic fit to the scale used.
- Sections at a scale of 1:100, as many as required to provide a complete presentation of spatial arrangement of the building, in appropriate detail and graphic fit to the scale used.
- Elevations at a scale of 1:100, from all different views, in appropriate detail and graphic fit to the scale used.

- Typical section (1 pc.) at a scale of 1:50, in appropriate detail and graphic fit to the scale of shop drawings.
- Detail section at a scale of 1:20 from the building's most typical elevation (wall section) and elevation detail of the same part and scale, with technical and graphic detailing used in detail drawings.
- One physical model, to illustrate the spatial layout of building blocks, made of any solid material and using any technique preferred, scale necessary for effective visualization.
- At least one visualisation to illustrate the external design and one the interior of the building, using any technique preferred.

## Engineering design discipline parts

### Construction technology and construction management

#### Basic content:

- description of the conditions of the investment (construction needs, project participants, expected completion of the construction process, financing and legal background)
- presentation of the building process, description of building technologies used
- identification of the financial needs for the planned project implementation
- construction site organisation plan (1 organisation phase plans)

#### Special content:

- construction project time schedule from the preparatory phase to handover
- cost estimation based on standard costs
- construction site organisation plan (+1 organisation phase plans)

### Building energetics and building services

#### Basic content:

- determination of requirements of comfort levels, and building operation
- analysis of the design area: analysis of solar exposure, shading options, public utilities networks, analysis of renewable energy sources
- building physics and energetics calculations: analysis of the hygrothermal characteristics of the building envelope, analysis of the combined energetics characteristics
- conceptual draft plan of the building's power supply and building services system

#### Special content:

- development of simplified shop drawing for one component (heating and cooling, water supply and sewage system, lighting) for a part of the building
- simulation analysis of the comfort level or energy consumption of the building

### Building constructions

#### Basic content:

- analysis of environmental impacts: hydrology, orientation, noise exposure
- examination and evaluation of the requirements and the way of fulfilment fit to the architectural concept
- specification of constructions

- analysis of layer arrangements
- presentation of relevant building constructional detail drawings (6 pc)

Special content:

- detailed definition of a selected building constructional sub-systems, presentation of 12 detail drawings of the selected sub-system
- description of a typical specific problem of the building, for example fire protection, acoustics, structures of eco-friendly construction

### Loadbearing structures

Basic content:

- presentation of the building's structures from load transfer on the ground to finishing structures. Presentation of materials and load-bearing systems of the designed building.
- presentation of the structural system of the building on sketches providing a dimensional rendering of the structural systems
- structural analysis of a selected structural element including the identification of loads, the presentation of the structural model and verification of compliance with structural requirements

Special content:

- detailed analysis of a structural problem
- development of a comprehensive structural model (VEM analysis) or of a partial structural shop drawing

### Formal requirements

The architectural parts of the diploma project documentation must be submitted in a single copy, printed on paper up to size A1. The Architectural study must be approximately 15 to 30 pages in length and submitted as a size A4 bound booklet. Documents from previous design stages (programme, study, conceptual design, working drawing) may be attached to the architectural component of the thesis project. A size A3 portfolio of the complete design, in vector graphic format (PDF/A or SVG) must also be submitted in a manner defined at the beginning of the semester, in the closed digital management system.

The length of the engineering design discipline parts must be approximately 15 pages for each discipline in size A4 (font size of 12 and single line spacing), which may contain larger paper sizes as well, as required. Pages of different sizes and orientation (portrait/landscape image) must be submitted by rotating them in a digitally readable way into the same direction and attached.

Drawing sheets and the cover page of studies/design discipline parts must include the student's name, TR code, the title of the diploma project, the name of the supervisor and the consultant as well as the date of their development.

All digital materials must have a resolution of 300 dpi.

Budapest, 9 December 2022

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