

Diploma work

Assignment for the **Construction Technology and Management** part of the diploma works at the Faculty of Architecture of the Budapest University of Technology and Economics

1. Compulsory General Technical Description

Importance and aim of the exercise

The goal of this exercise is to demonstrate in the frame of the selected diploma work project the attained knowledge areas and abilities in the field of construction technologies, construction project, time and cost management and real estate development, which are declared by the relevant national educational regulations in Hungary (KKK).

Required content

1. **Investment plan** of the selected construction project: demonstration of the feasibility, the architectural program, the financial background, the relation network of the relevant stakeholders (participants) and the main activities and processes of the project. The study has to involve information on the social, economic or political goals of the investment, analyses of the optional financial sources, examination of the architectural program with respect to the social, economic, political and legal environment, and the introduction of the project stakeholders with their roles and responsibilities in the project.
2. **Brief technical description** of the construction activities (2-3 sentences per activity) considering the way of construction and the economic or technical causes of selection of construction technologies.
3. **Time schedule of the construction project** (in accord with the investment plan). Time schedule from the preparation period to the hand-over of the building on the basis of estimated activity durations, involving the processes of the preparation studies, the financial source acquisition, the processes of the building consent, the cost planning, the preparation of the construction site, and the main activities or group of activities of the construction.
4. **Simple cost estimation** for the entire construction project with all the relating cost items based on market price benchmarking (analytic method).

Formal requirements

Stapled A4 booklet with a maximum of 15 pages. All larger pages have to be folded to A4 and attached to the booklet.

Assessment criteria

- The reality, the feasibility and the financial viability of the demonstrated investment, considering the social, economic, political environment of the selected location.

- The introduction of the construction project with the proper exploration of the tasks of the project stakeholders and the professional, comprehensible demonstration of the processes in the project. The demonstration of the adequate knowledge about the social, economic, political and technical rules and regulations which have relevant impacts on the construction project.
- The reality of the time schedule and cost estimation depending on the geographical, economic, political background of the selected location.
- Feasibility and economic reality of the selected technologies, the adequate professional demonstration of the up-to-date technical methods. Demonstration of an essential professional knowledge about the construction technologies.
- Use of the technical literature with professional critical approach.

2. Elective specialized tasks in the field of construction technology and management

Importance and aim of the exercise

The goal of the elective specialized exercise, beyond the facts which were stated at the general part, is to demonstrate a special professional knowledge in the fields of construction technology and construction management in the frame of the diploma project.

Required content

Beyond the compulsory tasks:

1. **Establishing detailed time schedule**, on the basis of time norms, with about 70-100 activities for the construction works of the designed building
2. **Preparing a synthetic way established cost estimation** based on cost norms. Depending of the scale, either with surface-based model method or with merged cost items, in accordance with the time schedule.
3. **Preparation of a general organizational site plan** (scale 1:500), **and organizational phase plans** (1-3 plan; scale 1:200 or 1:250) depending on the scale and characteristics of the building.
4. **Actualization of the compulsory general technical description** with the data coming from the specialized exercise.

Formal requirements

Stapled A4 booklet and annexes. All larger pages have to be folded to A4 and attached to the booklet. Organizational plans might be printed on sheets identical with the other sheets of the diploma work.

Assessment criteria

Beyond the criteria mentioned at the compulsory exercise:

- The proper and complete assembly of the construction activities and cost items, and the methodical correctness of the calculations.
- The adequate and correct exploration of the construction processes, the practical and effective settling of the organizational arrangements, and the time saving and economic way of the storing.
- The intelligent handling of the information among the different parts of the exercise, and the consequent elaboration of the tasks.

Information and recommended literature

Consultation

Consultation is compulsory.

Recommended literature

Syllabuses of the lectures on the webpage of the department (www.ekt.bme.hu), and the cited literature.

All publication in the field of construction technology and management applied with professional critical approach.