

**DIPLOMA PROJECT - PRODUCTION OF AND FINAL EXAMINATION (DEFENCE OF PROJECT)**

**REQUIREMENTS OF THE BME FACULTY OF ARCHITECTURE FOR THE MASTER'S DEGREE  
COURSE IN ARCHITECTURAL ENGINEERING 2017**

# **DIPLOMA PROJECT - PRODUCTION OF AND FINAL EXAMINATION (DEFENCE OF PROJECT)**

## **UNIQUE REQUIREMENTS OF THE BME FACULTY OF ARCHITECTURE**

### **Rules regarding master's degree course in architectural engineering**

#### **1. GENERAL STATEMENT**

For a candidate to be awarded an architectural engineering degree the Diploma Design project must be completed. It is a complex, individual task that requires the synthesis and creative application of acquired knowledge. By preparing and defending the diploma design project a candidate demonstrates their ability to perform in the architectural profession, at such a level as the diploma granted, otherwise fulfilment of prescribed conditions allows for the opportunity to continue studies at a higher level within the educational field.

This project is undertaken as the "Diploma Design" course subject. The diploma project is directed by a supervisor (consultant). The supervisor might be a full-time instructor of the faculty, a research assistant, adjunct professor or a university professor. The supervisor can be an external expert, on condition that administrative tasks must be undertaken by a full-time member of staff. An external expert must be approved of by the relevant head of department in order to work as project supervisor. It is expected that an external supervisor holds a DLA level degree, professional awards or is recognised for their competitive achievements. Naturally the same is expected of full-time staff. The same criteria is applied to all associated consultants as required of the project supervisor. Consultants that are not active in the fields of education or research can be employed on condition that the relevant department demonstrates a lack of capacity to provide an alternative. These consultants must be approved of by the Faculty Council and employed for a maximum period of two years. Proposed consultants must demonstrate their professional, educational and research achievements over the previous five years.

The subject is awarded a grade. Being awarded a grade for the "Diploma Design" is an absolute requirement for achieving a degree. This grade must be registered in the candidate's study record according to the general Study Rules information system.

The final result of this project should be subjected to critical assessment. The evaluator(s) or opponent(s) should hold professional qualifications in architecture or other relevant disciplines to the "Diploma Design" and be invited to the Assessment Panel by the head of department. The opponent's evaluation must be made available to the candidate no later than 2 days prior to the defence of the diploma work. The opponent is expected to make a proposal regarding classification (grade) of diploma project. The "template" setting out the opponents evaluation criteria will be published in the Dean's Instructions before Monday the 28th of August 2017, the 2017/18/1 semester's registration week.

The diploma work is to be presented to the Assessment Panel for defence by the candidate. The final grade is to be decided by the Assessment Panel, taking into consideration the opponent's evaluation. This grade must be registered in the candidate's study record according to the general Study Rules information system.

#### **2. THE DIPLOMA DESIGN SEMESTER**

According to prescribed course curriculum the preparation and defence of the Diploma Design

should take place in the 10th semester. "Diploma Design" is a subject that can be taken by a candidate who has completed compulsory and mandatory subjects prescribed by the curriculum as prerequisites. "Diploma Design" is open to the option of choice regarding which department hosts the candidate: These being the departments of: History and Monuments, Industrial and Agricultural, Public Building, Residential Building, Drawing and Design or Urbanism. It is also possible to develop a project which takes on a specific field of technical specialisation. In such a case the candidate is expected to consult with the specific department for this technology. By the end of the previous semester, or by the second week of its exam period, each department is expected to publish a comprehensive list of its supervisors for the "Diploma Design" course. At the same time each department is expected to publish its recommended list of study themes. Accordingly, a candidate may register with the department and tutors which best suit their course of study, it is from this department that their final diploma is issued. Once a candidate has registered with a department and supervisor it is then possible to commence independent project work as described in following details. Consultation should also take place with the departments of Construction Management, Energy and Mechanical Engineering, Building Construction, Strength of Materials and Structural Engineering.

### **3. THE DIPLOMA DESIGN SEMESTER REGISTRATION**

Following preliminary consultation with a course supervisor the candidate will be admitted to the "Diploma Design" course.

Individual departments are expected to evaluate requirements during the registration week.

### **4. THE DIPLOMA DESIGN SUBJECT, PROGRAM AND THEMES**

The subject of the Diploma Design is to design a building or group of buildings. This design is to be treated as a real project. This project should conform to existing building codes and standards, any deviations from these must be justified. The design should also comply with local town and country planning code, any deviations from these should be justified by presenting a draft plan explaining reasons for doing so.

There are two methods for presenting this project as a thesis:

A. First being to complete a theme suggested by chosen department, which should be published by the end of the previous semester, or by the second week of its exam period.

B. Second being a subject of the candidate's choice which must be justified and approved of by the chosen department by the second week of lecture period.

Methods A or B must also be followed even in cases where a candidate has chosen to follow a technically specialised theme. This theme must be set out providing a topic description, objectives, cross department consultancies and elaboration upon the technical problem requiring investigation. Approval of themes must be agreed by head of department. Should a candidate initiate deviation from the theme this must be approved by head of department.

The Diploma Design theme (as described by department or candidate) must contain the following:

Detailed location plan for the project including sufficient data and measurements required to design a building(s).

The intended purpose of the building(s).

The approximate design capacity of the building(s) and its functional program.

The relevant local town and country planning regulations and restrictions.

The list of items to be processed (scale, level of works required, etc.)

Consultancy requirements with other departments which should be published by the end of the previous semester, or by the second week of its exam period. Applies to departmental themes and alternatives alike.

Parallel to the theme description each candidate should receive:

Diploma Design schedule including deadlines for intermediate submissions and tasks.

A Progress Card, outlining tasks.

A Code of Conduct and Practice regarding the Diploma Design semester.

Any other department specific requirements regarding project theme.

## **5. THE DIPLOMA DESIGN PHASES**

The Diploma Design is divided into two core phases: Design of project followed by defence of the same.

### **5.1. DIPLOMA DESIGN Completion of subject**

Sketch Design completion:

Expected in 8-10th weeks of semester.

Evaluation of the sketch design takes place in the relevant department. The evaluation is by a departmental committee numbering a minimum of 5 staff members. This committee is to be chaired by the head of department (without voting rights), and to include full-time members of teaching staff, researchers and those with rights equal to the candidates supervisor. In specialisation cases a member of the committee can be appointed who has appropriate voting rights and the specialist area of study

department's approval. The chair person may also invite external members to the committee with full voting rights. This external member must conform to points outlined in point 1 of this document. The result of this committee is subject to a majority vote. Only in event of a tie, does the chair person have the right to cast a deciding vote.

The candidate is expected to present to this committee a detailed description of the theme and plans for implementation of the same. At this time deviations from the original program can no longer be accepted unless specifically approved of by the head of department.

The candidate should outline specific areas of study which require elaboration and assistance from other departments. This information should be supplemented in written form (qualified by sketch designs as a parallel process to theme description).

The candidate will receive an oral assessment of the sketch design. The sketch design will be "approved" or "rejected", rejections will be accommodated by a formal explanation, both are to be dated and entered on the Progress Card.

"Rejected" sketch designs will be allowed until week twelve in the semester the opportunity to correct submission. Only sketch designs rejected by the first sitting of the committee are allowed a chance to submit corrections, these corrections are to be assessed for fulfilment or non-fulfilment of the theme.

Closure of Diploma Design phase:

The Diploma Design must be submitted during the first week of examination period. In order to present the Diploma Design the following items maybe excluded from the compulsory submission:

Sketch designs, Models

Details described in the sketch design that require further development regarding consultant departments, that do not contain technical content.

By the end of the second week of the examination period the chair person, at least one member of the examination committee and all the relevant specialist consultants that hold voting rights should have had the opportunity to judge the work and propose a grade. the entire design package should be available for evaluation at the candidates chosen department by means of hard paper copy and/or digital media.

The Diploma Design is graded in a ratio of 6:10 for architectural content and four parts of 1:10 (4:10) for non-architectural technical content.

Completion of the Diploma Design is an absolute requirement for being awarded a degree.

## **5.2. DEFENCE OF THE DIPLOMA**

A candidate may graduate on completion of all qualifications and exams.

The Diploma Design subject is to be evaluated by an external expert (opponent) invited to do so by the head of department. Should a Diploma Design project be of special technical interest a reviewer familiar with that subject should be invited to offer expert technical and/or architectural evaluation. The opponent is expected to provide the candidate with their evaluation at least two days before final exam. If the opponent does not recommend a diploma for approval the candidate may ask for another opinion.

Should two opponents provide negative opinions then the project will be rejected from the current exam process.

Defence of a diploma must be organised by the relevant department.

Committee members for the Diploma presentation are delegated by the Faculty.

The result of the Diploma Presentation reflects the degree grade. This is based upon the vote cast by diploma committee. In questionable circumstances the chair person's decision is final. An inadequate grade can be awarded by 50% +1 member of the committee.

## **6. DIPLOMA DESIGN CONSULTANCIES**

The student should regularly meet with the chosen architectural and specialist consultants during the course of the diploma design. Proof of this should be recorded on the Progress Card, dated and signed. This demonstrates attendance and is not to be taken as mutual approval of design proposals.

Treatment of advice offered and criticisms that occur throughout the design process during professional consultations are the responsibility of the candidate. Every candidate has the right to disregard advice offered by consultants and should be prepared to defend these decisions before the examination panel.

It is forbidden to include the name of the supervisor and consultants in the final examination documents, including on drawings. The candidate takes full responsibility for architectural and technical solutions provided.

## **7. DEFENCE OF THE DIPLOMA PROCESS (FINAL EXAM)**

The Dean of faculty can designate two final exam periods per academic year. These final exam dates must occur during official examination periods. A candidate may sit the final exam on completion of all parts of the Diploma Design project, with a completed Progress Card and full course work portfolio. If a candidate does not complete the final examination prior to end of their legal status as a student expires, according to the regulations of BME Central Academic Office, they may return at anytime to do so.

All candidates (Final Exam) intending to pursue final graduation must formally register to do so. On expiry of the deadline for final examination applications the Dean's Office must forward a list of all candidates to the Central Academic Office. It is the duty of the Central Academic Office to notify the individual departments regarding students who have not met the required prerequisites to sit the final exam.

The date, location and panel members of the final exam must be proposed to the Dean's Office. This information will be shared with the candidates, at relevant departments, during the third week of the examination period. Following this the individual departments will confirm, in writing, necessary documentation for the Dean's Office to forward to the Central Academic Office.

The composition of the Final Exam Panel, as described in section 9, and its time scale must be mandated by the Faculties Council on basis of the Dean's proposal. Minutes of the final exam must be recorded by a designated member( Examination Secretary) of the host department. The Final Exam is

public. The rules and regulations of the Diploma Design subject must be available at the final examination so that anyone can study them upon request.

The candidate should present their Diploma Design project in the examination room, highlighting any conditions or solutions that might be considered unreadable. The Exam Secretary shall be invited to read the Opponent's critique. The candidate should answer questions made in the critique. Members of the committee may also forward questions. Questions naturally should be related to the presented design, although other questions regarding a candidates suitability to practice architecture may be asked. The examination panel then holds a closed meeting in which the design is evaluated, graded and determines the final grade of the degree to be awarded (The method for doing this is provided by the Central Academic Office). The final degree grade is an average of the grades awarded by the examination committee members. In case of dispute (grades of 2.5, 3.5 or 4.5) the chair person of the committee decides. On completion of this process it is the chair person's duty to announce the results.

Should the committee decided that a Diploma Design presentation is not satisfactory the work will be graded insufficient. This must be agreed by a majority vote. A rejected Diploma Design can not be resubmitted in the same exam period. According to the examination panel a candidate can, at a later date, present the same project with improvements or a new project. The method suggested for improving upon an unsuccessful presentation must be recorded by the examination secretary. If a candidate is required to resubmit one (or two) sub-tasks this should be undertaken as a continuation of the previous presentation as noted in the minutes. Otherwise the full defence of the diploma should be retaken. A candidate is only allowed one chance to present a Diploma Design following an insufficient result.

The final Diploma Design must be kept for a period of at least 5 years, a digital version is held by the department. The candidate is obliged to forward a copy of the diploma work to the Central Academic Office prior to making final presentation.

## **8. THE DIPLOMA ( BASED UPON BME CENTRAL ACADEMIC OFFICE)**

On successful completion of the final examination and all course criteria the faculty will issue a diploma describing the candidates qualification. This is to be signed by the Rector and the Chair Person of the Examination Panel.

The final grade is based upon the following formula:  $0.2 FE + 0.3 D + 0.3 CW + 0.2 E$

FE: Average mark of final examination subject(s). Rounded to two decimal points.

D: Grade given for Diploma Design/ Thesis project.

CW: Weighted average for all course work excluding Diploma Design/ Thesis project

E: Average score for all exams. Rounded to two decimal points.

Based upon an average grade calculated as above the diploma is classified as:

Excellent: 4.50 - 5.00

Good: 3.50 - 4.49

Average: 2.50 - 3.49

Satisfactory: 2.00 - 2.49

An honours degree is awarded to a candidate that has been consistent in achieving remarkable grades in all final exams, for either the diploma design project, thesis or throughout the course having a weighted average marks of 4.00 or more. Having needed to resubmit work or improve upon previous exams does not exclude a candidate from being able to achieve an honours degree.

The degree should be issued in two languages (Hungarian and English, or Hungarian and another language on completion of formal examinations in given language) within 30 days of completion of course. A degree can be presented in another language at the students request and own expense. The degree presented in Hungarian and English within this 30 day period is in compliance with the regulations developed by the European Commission and the Council of Europe.

If the candidate can not present a language certificate proof of passing the final exam will be given in writing. Records of all certificates must be kept.

## **9. COMPOSITION OF THE FINAL EXAMINATION PANEL FOR DIPLOMA DESIGN PROJECT**

The Diploma Design final examination is undertaken by a panel of the following members:

Chair Person: ( Recognised within the profession as a holder of the Kossuth, Széchenyi, Gábor Dénes or Ybl Prize winner, Member of the Hungarian Academy of Science, Member of the Hungarian Academy of Art or other similar relevant professional establishments. Holds a full-time appointment in the faculty as a non-teaching architect or similar professional)

Head of Department. ( Or a full-time teacher/ researcher appoint by head of department as a substitute)

Representatives of specialist departments: (full-time teacher/researcher, professor emeritus or retired teacher with relevant qualifications in building construction, strength of materials, mechanical engineering or similar construction disciplines)

Two acclaimed members of the Faculty Council who are not architectural teaching staff at BME. In case of specialisation an external examiner who has relevant qualifications at doctorate level and the ability to chair diploma work.

The composition of this examination panel must be approved by Faculty Council and mandated for the exam period, where appropriate approval must be sought from specialised departments.

## **11. REQUIREMENTS FOR FORM AND CONTENT OF DIPLOMA DESIGN**

### **11.1. GENERAL REQUIREMENTS**

#### **11.1.1. CONTENT OF PARTS REQUIRED**

##### **11.1.1.1. Mandatory Diploma Design parts:**



The diploma theme ( provided by department or by candidate and approved by head of department) should include a schedule of work, scale/complexity and need for consultancies. The following list provides guidance notes and should not be significantly different from the ones listed here, not at least in size or content.

## **Studies**

Serve as the theoretical foundation of the Diploma Design. Broken down into conceptual elements, attached to chosen topic, chosen site and professional research results. Architectural studies should form the basis of a "developmental history" from inception to completion. This work should be individually based upon defensible thoughts presented in professional literature. Study of other related disciplines are also valid as parts of the research package.

## **Designs**

Presentation of the site location and project program:

Mainly by means of drawings it should be possible to document the site location and project characteristics as a tool to evaluate analysis and design concepts.

Location plan:

Depending upon the size of the proposed project a location plan at a scale of 1:1000 or 1:500 should be sufficient to describe the urban character, planning parameters and function of the project. This can be presented by means of hand drawn or computer generated images. The location planning concept can also be presented at a similar scale with a physical model.

Architectural designs:

A detailed location plan (scale 1:500 or 1:200) showing the roof plan and surrounding environment (site) formation (roads, parks, site contours, and main landscaping solutions) designed in such a way as to demonstrate connection to public spaces. Floor plans at all levels (1:100), sections and elevations to demonstrate spatial concepts (1:100). The spatial design of the building(s) in three dimensions illustrated by a physical model or drawing(s).

Typical construction sections:

Minimum 1 typical cross section at a scale of 1:50 describing construction method, materials and layers of development, fully labelled. At a scale of 1:20 a detailed section explaining how the building's facade is developed supported by the same part of the building's facade at a scale of 1:20.

## **Technical Specifications for Non-Architectural Disciplines**

The designed building should also have technical specifications prepared regarding: mechanical engineering, construction management, construction technology and structural engineering. These specifications are to be written documents supported by calculations and conceptual sketches. These specifications do not form part of the final presentation drawings! Each specification should be presented,

according to discipline, on max 15 sides of A4 paper and should included the following:

A description of proposed solutions.

An explanation of chosen solutions, compared to possible alternatives.

A description of requirements to be met.

Technical solutions and their relationship to the building design concept.

Individual Disciplines (Mechanical-Environmental Engineering, Construction Management, Construction Technology, Structural Engineering).

The Diploma Design project 's associate disciplines information will be published by the Dean's office by the 28th of august 2017 for the 2017/18 academic year's first semester.

### **11.1.1.2 Specialised development of non-architectural discipline in design**

It is expected that the candidate develop part of their design at Diploma Design level beyond the previous mentioned written specifications. This area of design development should be chosen at sketch design stage and developed for presentation at final exam. This area of interest should appear in presentations at both sketch design and final exam stages. The student must consult with the relevant disciplinary advisor, presenting developed ideas as part of their design documents (this process must start within two weeks of having the sketch design approved). From a technical point of view gravity is added to the project's development by inclusion of this work. This work is to be formally elaborated in the written description.

The development of this design is to be specialised by the candidate to include analysis, detailing and calculations. Individual Disciplines (Mechanical-Environmental Engineering, Construction Management, Construction Technology, Structural Engineering). Possible information regarding the choice of specialisation will be published by the Dean's office by the 28th of august 2017 for the 2017/18 academic year's first semester.

## **11.2 FORMAL REQUIREMENTS**

Written parts of the Diploma Design must be presented in individually bound, typed documents, format A4. Each document should clearly display on the cover sheet the candidates name, project name, subject area and date.

The Diploma Design can not be submitted as a digital document. Digital presentations (animation for example) can be presented in the final exam, on condition that the candidate provides equipment needed and limits time required to do so.

In addition to the final Diploma Design presentation a portfolio should be provided containing previous work phases (concept development, program, studies, sketch design). Diploma Deign works must be submitted in person to the department, submissions by post or other methods are not acceptable.

## **12. EFFECTIVE DATE**

With exception of items described in point 4 the conditions came into effect on the 1st of July 2017. Items described in point 4 come into effect in the second semester of the 2017/18 academic year.

Budapest 31st May 2017

Csaba Molnár DLA  
Dean