



**Master's thesis**  
**field of study: Architecture**  
**Methodological guide for diploma students**

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Poznan 2023

## **Methodological guide for master's degree students**

### **Abstract**

Methodological guide discussing basic issues related to the preparation of the Master's thesis, from the selection of the thesis supervisor to the defence of the diploma at the Faculty of Architecture, Poznan University of Technology.

The guide is a continuously developed and updated manual containing the applicable guidelines, procedures and formal requirements for master's theses carried out at the Faculty of Architecture, Poznan University of Technology.

It has been prepared on the basis of: Act 2.0.(Law on Higher Education and Science of 18 July 2018 published in the Journal of Laws, Item 1668, of 30 August 2018) and the Regulation of the Minister of Science and Higher Education of 18 July 2019 on the standard of education preparing for the profession of architect (Item 1359) and based on: PP Academic Regulations, the programme of studies of the second degree for the Architecture major.

In its assumptions, this study is also intended to be an aid for supervisors and reviewers, allowing for the unification of criteria (and enforcement of requirements) for graduates.

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## 1. Purpose of the thesis

The Master's thesis is a summary of the entire educational cycle of the second degree programme. It has a problem-based character, in which the emphasis is placed on the creative solution of issues indicated in the thesis topic. The Master's thesis should contain solutions to complex tasks using general and specialised knowledge, applying research theoretical and empirical methods. The Master's thesis is carried out in the field of architecture and urban planning. The thesis should include information on the literature used and the research methods applied. The summary should include a distinguished specification of the author's original contribution to the thesis. The final result of the thesis and the subject of the defence should be an architectural, urban planning or conservation project. As a supplement to the thesis, other forms such as film, performance, installation, etc., are also acceptable, which will allow the full creative potential of the graduate to be presented.

The Master's thesis is a work of a design and research character, in which the diploma student presents urban planning, architectural, structural and other design solutions, adequate to the scope of knowledge and learning outcomes acquired during the entire cycle of education at level 2 studies, including research competences.

Please note that the thesis must be done independently. It must not be an appropriation of the authorship of someone else's work or part of it, both in the written and graphical parts. The problem of plagiarism is discussed later in this guide (see **appendix 3**).

The diploma thesis constitutes a confirmation of **the acquired learning outcomes**, in accordance with the standards preparing for the architectural profession<sup>1</sup>:

### **In terms of knowledge, the graduate understands:**

D.W1. detailed issues related to architecture and urban planning in the field of solving complex design problems;

D.W2. advanced issues related to architecture and urban planning useful for designing architectural objects and urban complexes in the context of social, cultural, natural, historical, economic, legal and other non-technical conditions of engineering activity, integrating the knowledge acquired during studies;

D.W3. principles, solutions, structures, building materials used in the performance of engineering tasks in the field of architectural and urban design;

D.W4. issues related to architecture and urban planning in the context of the multi-sector nature of architectural and urban design and the need to cooperate with other specialists;

D.W5. principles of professional presentation of architectural and urban concepts.

### **In terms of skills the graduate is able to:**

D.U1. formulate a critical analysis of the existing conditions, valorize the state of land development and buildings and formulate conclusions for design in a complex, interdisciplinary context;

D.U2. design a complex architectural object or urban complex by creating and transforming the space so as to give it new values - in accordance with the adopted program, taking into account non-technical aspects and integrating interdisciplinary knowledge and skills acquired during studies;

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<sup>1</sup> Regulation of the Minister of Science and Higher Education of 18 July 2019 on the standard of education preparing for the profession of architect (Journal of Laws of 2019, item 1359)

D.U3. prepare an advanced graphic, written and oral presentation of your own design concepts in the field of architecture and urban planning, meeting the requirements of a professional record appropriate for architectural and urban design;

D.U4. use analytical methods to formulate and solve design tasks;

D.U5. present the theoretical background and justification of the presented solutions in the form of a scientific study;

D.U6. organize work taking into account all phases of work on the design concept.

**In terms of social competence, the graduate is ready to:**

D.S1. effectively use imagination, intuition, creative attitude and independent thinking in order to solve complex design problems;

D.S2. speak and present publicly;

D.S3. accept criticism of the solutions presented by them and respond to it in a clear and matter-of-fact manner, also using arguments referring to the achievements of the scientific discipline, as well as to use this criticism in a creative and constructive manner;

D.S4. formulate and transfer information and opinions to society on the achievements of architecture and town planning, their complex conditions, and other aspects of the architect's activity; provide an opinion in a commonly understandable manner;

D.S5. properly prioritize activities serving task implementation.

The master's diploma should provide practical confirmation of the diploma student's design creative abilities and ability to solve simple research problems.

A detailed description of the graduation procedure is included in the document: *Procedure - Diploma Process*.

## **2. Pre-dissertation activities**

### **2.1. Selection of the thesis supervisor**

At the last meeting of the Faculty Council preceding the selection of the thesis supervisor, the Vice Dean presents the list of thesis supervisors to the Faculty Council for approval, in accordance with the regulations in force at FA PUT. The selection of the supervisor shall take place no later than one month before the end of the semester preceding the graduation semester.

The choice of a supervisor is made in a dedicated course on the platform [ekursy.put.poznan.pl](http://ekursy.put.poznan.pl), according to the schedule posted on the website:

- The student uploads the portfolio to the assignment module and selects a supervisor from the list of available ones.
- The supervisor approves or rejects the student.
- A student whose selection is not approved by a given supervisor has the right to participate in the next round of selection.

The schedule considers three rounds of selection. Teachers who have a full list are not available for the next round. At the end of the indicated period, a student who has not been accepted is randomly assigned to a free supervisors.

### **2.2. Choice of thesis topic**

#### **Individual topics**

In the Architecture II degree programme, it is possible to develop an individual topic for the diploma thesis, and to realise the topic individually or as part of a team.

The topic of the diploma thesis is selected in consultation with the supervisor and should address current issues related to architectural, urban planning or conservation design, and the diploma student should confirm the ability to obtain the necessary materials for its realisation. Difficulties in obtaining materials are not a basis for extending the time of developing the diploma thesis.

The topic may be a current or completed architectural competition, in Poland or abroad - this fact should be noted in the diploma topic form. The thesis supervisor is responsible for verifying the conditions of the competition and their adjustment to the requirements appropriate for a Master's thesis. The dissertation's supervisor should take care that the competition and its results do not affect the substantive quality of the dissertation and that no doubts arise as to the authorship of the dissertation. In the case of doubts concerning one's own thesis topic, the final decision is made by the Dean.

The graduation process is supported by the USOS APD platform.

Not later than two weeks before the beginning of the diploma semester, the supervisor together with the diploma student determines the topic of the diploma thesis and creates an Application - Submission of thesis topic on the Usos APD platform. The application is approved by the faculty committee appropriate to the course of study and the supervisor

#### **Topics approved by the Faculty Council**

The graduating student may choose a topic for the master's thesis using a list prepared by the Faculty of Architecture at PUT. Master's thesis topics are approved by the Faculty Council no later than one month before the beginning of the diploma semester.

Materials for the master's thesis (basic map, decision on land development conditions/local plan, functional programme) are made available to diploma students on the platform [ekursy.put.poznan.pl](http://ekursy.put.poznan.pl).

### 3. Scope of the diploma thesis

The diploma thesis consists of two parts, i.e. a graphic part in the form of boards and a written part in the form of a compact essay.

Both parts are obligatory and make up the whole diploma thesis. A diploma student prepares a written thesis and a graphic part in a digital version, additionally the boards should be printed (rigid) and delivered to FA PUT on the appointed day (date and place are each time determined in the diploma semester schedule). The diploma student shall also produce a mock-up of the designed object together with the immediate context.

The mock-up is delivered on the day of the diploma thesis defence

#### 3.1. Written part

The written part should be an essay of an estimated volume of 80-120 pages in A4 format, vertically arranged. The number of pages may be increased in justified cases and after agreeing the scope with the thesis supervisor.

The graduate prepares two versions of the thesis - an editable version (.doc, .docx) and a non-editable version (digital printout in .pdf format). Both versions of the thesis must be identical.

The graduate is not required to print the written thesis.

List of necessary elements of the written thesis:

- The front page in accordance with the stencil (model: appendix 1),
- Table of contents,
- **Abstract** of the paper in Polish and English,
- **Introduction** - contains the justification for the choice of the topic, subject and aim of the thesis, indication of research methods used in the thesis, as well as the status of the research, i.e. the characteristics of the sources used and a brief description of the layout of the content presented in the remaining parts of the study,
- **Research part** - should be a study of a scientific nature, thematically related to the topic of the thesis. In this part, the student should demonstrate basic knowledge of the methodology of conducting scientific research in the discipline of architecture and urban planning and the manner of its presentation. The exact scope of the research part should be agreed with the thesis supervisor.
- **Analytical part** - contains necessary analyses resulting from its character, height of the development, functions, greenery, communication, composition and character of existing development, etc.). Graphic solution of the analytical part is acceptable (on the first presented board), their placement is not obligatory and is left to the discretion of the graduate,
- **Descriptive part** - containing the description of the project: main assumptions, including the description of basic ideological, aesthetic, compositional and functional solutions, including the land development project (graphic and written part) of the land development with a legible legend and balance of area containing (inter alia plot/site area, development area, percentage of built-up area, intensity, total area, usable area, cubic capacity, number and type of dwellings (in the case of a residential building), number of parking spaces (including on site and in the underground garage) on a scale of 1:500. The descriptive part should also explain the accessibility of the building for the disabled persons (universal design) and indicate the applied climate-friendly solutions, as well as indicate the adopted technical and installation solutions.

The description depends on the nature of the work. In the case of a problematic, conceptual theme, it will take more account of the description of the idea and its nature.



In the case of a more specific elaboration, it should also include a description of the technical solutions adopted in the work; in which the most important material and technological solutions of the individual building elements, fire protection principles should be included; moreover, basic structural and installation solutions should be discussed. It should include material and technological solutions, balances, principles of fire protection and solutions in the scope of construction, installations, roads, infrastructure, energy savings, etc.

The scope and content of the descriptive part should be individually agreed with the supervisor in each case.

- **Summary** - including a synthetic summary of the results obtained, a critical view of the research and design process
- List of illustrations (with sources), including photographs, drawings, sketches, etc.
- List of tables (if any)
- **Bibliography** - system of citation and creation of bibliography - suggested traditional (Oxford) system (to be agreed with the supervisor, see **appendix no. 2**)
- Reduced boards (reduction of the graphic part to the A4 format)
- Annexes - covering additional appendices, which, due to their volume or nature, do not fit in the main body of the thesis, and other elements influencing the presentation of the thesis (e.g. a sample questionnaire, etc.).

Editing of the text should conform to accepted norms and standards of the thesis in terms of font selection and size (max.12 points) and line spacing (1.15 or 1.5). The font used should make the work easy to read (Arial, Times, Calibri etc.); black is suggested.

Chapters and subchapters of the work should be distinguished graphically. The paper should demonstrate the ability to use bibliographic footnotes. All citations and photographs should be described with the source.

### 3.2. Graphic part

The graphical part of the thesis should be presented on boards of 100x70 format in a vertical arrangement, in the number of 6-8 pcs. (up to a maximum of 12 pcs. in the case of complex subjects) The boards should be stiffened to enable their presentation. The number of boards may be increased with the approval of the thesis supervisor.

The charts should include:

- land development plan (graphic part with a legend and site balance, all signs and contents of the PZT should be in accordance with the applicable law), scale 1:500
- projections of all aboveground and underground storeys with a list of rooms and the roof projection, scale dependent on the scope of the thesis - to be agreed with the thesis supervisor, permissible scales: from 1:200 to 1:50
- a minimum of two cross-sections, made in characteristic places (vertical communication), scale dependent on the scope of the thesis - to be established with the thesis supervisor, acceptable scales: from 1:200 to 1:50
- designed elevations (if it results from the subject of the work, the elevations should be juxtaposed with the existing buildings)
- axonometrics (minimum one, maximum three) showing spatially the building or group of buildings
- architectural or urban detail with technical solutions (on a scale of 1:20, 1:10, 1:5). The detail should relate to the solution of the fragment characteristic for the designed building - building details found in the literature or on the Internet should not be redrawn
- visualisations of the project, showing its scale, the context of the existing buildings, the designed materials and the colour scheme of the building.

- necessary descriptions and textual information

Additionally, the boards may include elements presented in the written part, e.g. analyses, diagrams, etc. Each board should be marked with a consecutive number, indicating clearly the layout and composition of the boards. The layout of all the charts should be clear, consistent and in accordance with the principles of appropriate composition of graphic works.

Each board must include:

- title of the work
- author's name and surname
- degree or academic title, name and surname of the supervisor
- name of faculty and university
- date of preparation.

### **3.3. Mock-up**

The Diplomate shall agree with the thesis supervisor the scale of the mock-up, its detail and the technique of making it.

The actual model is delivered by the Graduate to the Department on the day of the defence.

The mock-up should be made by the Diplomate's own hand; mock-ups made by professional offices are not acceptable. Its character should be working - the scope should enable the assessment of the adopted formal and compositional solutions placed in the immediate context of the study area.

## 4. Completion of work on the diploma

### 4.1. Submission of the diploma thesis - APD system

At FA PUT, the entire diploma process is carried out in the APD system.

After approval of the Dissertation Topic Submission by the relevant Committee, the proposals are transferred to the Dean's Office module, where the dissertation is created. This is the first step in preparing for the diploma examination. From this point on, the thesis topic cannot be changed.

Once the thesis supervisor is satisfied that the student has a thesis ready for the diploma examination, the thesis form is transferred to the APD for the diploma student to enter data and files. The diploma student fills in the abstract and keywords, in Polish and English.

After saving the data entered, the student declares by approval that has written the thesis independently.

The next step is for the student to upload the electronic version of the thesis and its appendices into the system. To do this, the student goes to the Files tab, where he or she creates a set of files to upload to the system.

The required files are:

- written work
- graphic attachments:
  - o boards,
  - o declaration about competitions.

The diploma student then submits the form to the supervisor for approval

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- written work
- graphic attachments:
  - o graduation charts,
  - o declaration about competitions.

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#### **Anti-Plagiarism System - JSA**

The promoter receives an email with information about a pending task in the APD system. The promoter should check that the submitted work is complete. After the promoter accepts the data entered by the student, the attached files are examined with the Anti-Plagiarism System. The promoter gets acquainted with the results of this examination in the Anti-Plagiarism tab, where detailed and general reports are available.

- if the promoter accepts the result of the examination, in the APD system next to the given examination result he/she has to click Accept examination result.
- if the supervisor does not accept the JSA examination result, he/she can withdraw the work to the graduate and have the work corrected and create a new set of files to be examined by the JSA. If the supervisor has verified the incorrectness of the uploaded files prior to examination, they can submit the files for correction without creating a new set of files.

**The date of acceptance of the JSA examination result** is considered, according to the Academic Regulations, **to be the date of submission of the thesis**. The graduating student should take into account the time needed for the examination of the thesis and the analysis and acceptance of the examination result and upload the thesis in good time before the

statutory deadline for the submission of the thesis<sup>2</sup>. A safe deadline is assumed to be approximately 48h.

Once the JSA examination result is accepted, the next step is to propose a reviewer and enter the promoter and reviewer's opinions into the system. Once the reviews are accepted, the promoter reports in the system that the thesis is ready for defence. The student receives an email indicating that the thesis is ready for the diploma examination. The schedule of the diploma semester, made available on the FA PUT website, indicates the day on which printouts of the diploma boards must be delivered to the indicated place.

**The schedule of defences** is set by the Vice-Dean for Student Affairs and sent by e-mail no later than two days before the scheduled defence. The schedule includes information on the time and place of the diploma defence - you should arrive early enough, taking into account the time needed to set up the project charts and mock-ups in the indicated room.

## 4.2. Criteria for the evaluation of the diploma thesis

The diploma thesis is subject to evaluation by the thesis supervisor and by a reviewer indicated by the Dean for Student Affairs. The thesis supervisor confirms a positive assessment of the thesis by approving it in the system. Before approving the thesis, the thesis supervisor should check its completeness.

The condition for admittance to the thesis defence is the positive assessment of the thesis reviewer. In case of a **negative review**, the Vicedean appoints an additional reviewer.

- In case of a positive opinion of the second reviewer, the thesis examination takes place according to the schedule.
- in case of a negative opinion of the second reviewer, the diploma examination does not take place. The diploma student is struck from the list of students. The graduate may resume studies in the final semester.

The following criteria are taken into account by the supervisor and the reviewer when assessing the thesis:

- A. Correct formulation of the research and design issue. Research part. Research methods. The correctness of the applied design solutions in relation to the indicated research issue.
- B. Analysis and assessment of the existing state (location, context of the place), the correctness of formulating proposals for design. Analytical part.
- C. Reference to regulations resulting from legal conditions.
- D. Evaluation of the adopted formal solutions, including the connection with the built-up and undeveloped surroundings (spatial order, building context).
- E. Evaluation of the functional solutions used, in accordance with the adopted utility program. Availability assessment (universal design).
- F. Evaluation of applied technical solutions and evaluation of economic efficiency.
- G. Evaluation of the solutions applied, taking into account the requirements of sustainable development and climate protection (water, renewable energy), the design of greenery and biologically active surfaces, the impact of the investment on society.
- H. Written work: layout and structure of the text, the ability to logically present the research process and the use of scientific and editorial techniques.

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<sup>2</sup> For studies ending in the winter semester, the statutory deadline for submitting a diploma thesis is January 31, for studies ending in the summer semester - June 30 (Regulations on first and second cycle studies approved by the Academic Senate of Poznań University of Technology, Resolution No. 42/2020-2024 of May 31, 2021 year).

- I. Graphic presentation/boards - application of the principles of professional presentation of architectural and urban concepts, readability and composition of design boards.
- J. REAL MODEL/VIRTUAL MODEL (during the pandemic) - the degree of mapping the adopted formal solutions in relation to the existing context - built-up and undeveloped surroundings.

### **4.3. Diploma thesis defence**

The diploma thesis defence consists of two parts - the project presentation (this part is open and invited guests may also attend) and the diploma examination (this part is closed to the public).

#### **Project presentation**

On behalf of the Dean of FA PUT, the Chairperson of the Commission opens the public part of the Master's diploma defence.

The presentation of the project is oral and lasts about 10-15min. It is necessary to present the main assumptions of the thesis, the research part and the method of solving the selected research problem, as well as discuss the structure of the designed building (context, land development, mass, function, technical solutions). The student may use a previously made graphic presentation or design charts during the discussion of the thesis. Elements of the design (visualisations, technical drawings, etc.) which were made after the submission of the diploma thesis may not be shown in the presentation. An exception to this rule is the possibility to present a physical model of the designed building.

After the presentation of the project by the student, the Chair of the Committee gives the floor to the thesis reviewer. The reviewer reads the prepared thesis review. The Chairperson then asks the student to respond orally to the reviewer's comments and concerns.

After the student has responded, the Chairperson opens a discussion on the thesis. Participation in the discussion is open to all present, gathered in the room. When the discussion is over, the Chair closes the open part of the Diploma Defence and asks all guests to leave the room.

#### **Examination part**

The Diploma Committee asks the Student three questions based on the applicable examination questions. (No later than before the beginning of the diploma semester, the Faculty Council approves the list of obligatory diploma questions. The list of questions is published on the website).

A positive result in this part of the examination is conditional on obtaining positive marks for at least two questions. In justified cases (two negative marks, one positive mark), the Commission may ask the Graduate another two questions. The number of positive marks should be greater than the number of negative marks. After all questions have been answered, the Chairperson asks the Student to leave the room and opens the discussion of the thesis presented for defence by the members of the Committee.

After the grades have been determined, the Chair asks the Diplomat to return to the room and presents the result of the defence to the Student.

During the defence, the student obtains the following grades comprising the final result of the study:

- evaluation for the presentation of the diploma thesis (the evaluation depends on the manner of the presentation, the clarity of the message, the behaviour of the diploma student during the presentation and when answering the reviewer's questions)
- evaluation of the thesis (according to the evaluation criteria, point 4.2)

- separate marks for each examination question (the mark relates to the range of knowledge of the student).

The final result of the studies is determined by the Diploma Examination Board, calculating it with rounding to two decimal places on the basis of the sum of:

- 0.6 the weighted average of the marks from the course of study;
- 0.2 the grade for the diploma thesis;
- 0.2 the grade from the diploma examination.

A diploma student who has obtained a mark of 5.0 for his/her diploma thesis is required to submit the boards to the Dean's Office on the day of the defence.

#### **4.4. Competitions**

Diploma theses may be submitted independently or through the Faculty Authorities to diploma thesis competitions, in accordance with separate regulations and competition rules. Announcements of current competitions are regularly posted on the Faculty website and Facebook page. For a period of six months from the date of defence, the faculty (dean's office) must be informed of the fact of participation in a competition<sup>3</sup>.

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<sup>3</sup> In accordance with the Regulations of first- and second-cycle studies approved by the Academic Senate of Poznań University of Technology, Resolution No. 42/2020-2024 of May 31, 2021, the diploma thesis is subject to copyright. The university has priority in publishing the student's diploma thesis. If the University has not published the diploma thesis within 6 months of its defense, the student who prepared it may publish it, unless it is part of a collective work..

## **5. List of attachments**

1. The front page stencil
2. Bibliography - rules for creating a literature list and bibliographic footnotes.
3. The problem of plagiarism.