



POLITECHNIKA POZNAŃSKA



DIPLOMA THESES

Explanatory notes and guidelines for students writing their
Master's Thesis or Engineer's Thesis
at the Faculty of Architecture, Poznan University of Technology

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1. Introduction

The preparation of an engineer's thesis or master's thesis is a time-consuming and very responsible task. It is the basis for a university graduate to obtain their desired professional title or university degree. It is not easily achieved; the preparation of the thesis raises a number of questions and doubts concerning the role of the supervisor, the thesis writing method, the scope of the graphic part or the manner of preparing the written part.

This 'Methodological guide for persons preparing an engineer's thesis or a master's thesis' was written for students of the Faculty of Architecture at the Poznań University of Technology. It is intended for those who are close to the completion of their engineer's or master's programme and seek answers to questions concerning the scope, form and manner of writing the final thesis. The 'Methodological guide ...' contains basic information necessary to the preparation of a thesis summarising the whole university education cycle, whether of the first or second degree. This publication is also intended as assistance to supervisors and reviewers in the standardisation of the criteria (and the enforcement of the fulfilment of requirements) for students.

It is worth remembering that the completion of a thesis and the passing of a diploma examination is the basis for conferring the professional title of an architectural engineer or an architectural engineer/MSc, and then for obtaining design qualifications. The requirements concerning the level of execution and the scope of a thesis prepared at Faculty of Architecture at the Poznań University of Technology result from the long-established tradition in teaching architecture at the Poznań University of Technology, experience gained by the management of the Faculty, supervisors and reviewers and from the applicable legal documents.¹

In accordance with the teaching standards at the faculty of architecture, set by the Ministry of Science and Higher Education², a thesis should demonstrate that its author has appropriate skills and knowledge with regard to the following:

- 1) architectural, urban and conservation design, town and country planning

¹ Resolution No. 356/96 of the Main Council for Higher Education of 28 November 1996 specifies in more detail the general requirements for graduates from technological universities with regard to conferring on them the professional titles of an engineer or an MSc/engineer: *'The professional titles of an "engineer" or an "MSc/engineer" are conferred on graduates having completed higher professional or master programmes who, as a result of the completion of such programmes, have become skilled in design and gained the knowledge of methods for the making of products, items or facilities with useful characteristics and, in the case of highly complex facilities such as a public road network, a mine, a power plant or steelworks, the knowledge necessary to the operation of such a facility or to the organisation of the production process.'*

² The Ordinance of the Minister of Science and Higher Education of 29 September 2011 on the teaching standards for the faculties of veterinary medicine and architecture (Journal of Laws 2011 No. 207, item 1233)

- 2) the history and theory of architecture, theories of urban planning, fine arts, technical sciences and humanities
- 3) the shaping of the human environment taking account of the relationships between people and architectural facilities and the surrounding space
- 4) the application of procedures for preparing designs and projects of architectural facilities taking account of social factors
- 5) resolving problems regarding the function, usability, construction, structure, engineering and technology to a degree ensuring the safety and comfort of the use of facilities, including by persons with disabilities
- 6) the application of technical and building regulations and procedures, design and project economics, the building and use of an architectural facility as well as the organisation of the investment process and integration of plans into planning projects in Poland and in the European Union Member States. In addition, a graduate should understand the role of the profession of an architect in society.

According to the aforementioned requirements, the thesis should contain a solution to a specific and significant research task or design problem developed with the use of the knowledge gained during the studies. It can be a research or design thesis in the field of architecture, urban planning, town and country planning, regional planning or the protection and conservation of monuments.

The thesis should demonstrate that the student has learned to an appropriate degree the design and project tools and gained basic skills in architecture and urban planning and that the student can use their knowledge in a creative way to solve the design and project task set as the subject of the thesis.

This guide is divided into three main parts: the first section describes the process of preparing an engineer's thesis, the second part presents the preparation of a master's thesis, whereas the final section discusses practical issues related to the written part of the thesis. Additional chapters raise ethical issues and the most important rules of the preparation of a thesis.

The guide is a systematic study prepared for students of the Faculty of Architecture at the Poznań University of Technology and, certainly, it is not free from defects or understatements. We will be grateful for any comments from the teachers and students with regard to the manner of the preparation of a thesis, to be sent to the following address: piotr.marciniak@put.poznan.pl

2. Engineer's thesis

The engineer's thesis summarises the whole education cycle in the programmes of the first degree. It serves as the basis for the student to obtain the professional title of an architectural engineer.

The engineer's thesis should be, in essence, a project containing solutions to the main tasks facing an engineer drawing on general and specialist knowledge, with the application of theoretical and empirical research methods. The thesis should contain information on the literature used and the technical solutions employed. The summary should include a description of the results obtained. The final outcome of the thesis and the subject-matter of the defence should be an architectural or urban planning project. The actual goal of the engineer's thesis is supposed to be the student's demonstrating practical engineering skills in the form of a project study.

Note: the engineer's thesis must not be a show of the student's imagination and creative capabilities; rather, it should be a paper proving their professional skills put into practice – in both design and use of the tools of the trade!

It must be remembered that an engineer's diploma is not a building project; rather, it is a detailed conceptual project with elaborated technical elements and a project description (without the research part).

The student chooses the subject of their engineer's thesis in agreement with the supervisor, on the basis of the available materials (which can be obtained at the library of the Faculty of Architecture). Students of first-degree programmes are not allowed to choose and write on their own subject of the thesis. All the procedures relating to the selection, preparation and submission of the thesis are available at the website of the Faculty of Architecture of the Poznań University of Technology, at the tab for students writing their theses (*Dyplomanci*) (see: <http://architektura.put.poznan.pl/n/strefa-studenta/dyplomanci/>)

Any person preparing their thesis must demonstrate the following: their own work contribution, basic knowledge of architecture and urban planning and of related issues in technology, composition and fine arts, they should be able to correctly select items of the literature and source materials and to use them properly.

The person preparing their thesis should show practical knowledge of the issues contained in the main legal acts such as:

1/ the act of 7 July 1994 – Building Regulations (Journal of Laws 1994 No. 89 item 414, as amended); available at:

<http://prawo.sejm.gov.pl/isap.nsf/DocDetails.xsp?id=WDU19940890414>

2/ the act on town and country planning and land development of 27 March 2003 (Journal of Laws 2012 item 647; codified version of 24 April 2012; available at:

<http://prawo.sejm.gov.pl/isap.nsf/DocDetails.xsp?id=WDU20030800717>

3/ practical application of the provisions contained in the Ordinance of the Minister of Infrastructure of 12 April 2002 on the technical conditions for buildings and the situation thereof (Journal of Laws 2002 No. 75 item 690, as amended), together with the invoked detailed norms and provisions; available at:

<http://prawo.sejm.gov.pl/isap.nsf/DocDetails.xsp?id=WDU20020750690>

Any thesis must be composed of the following parts:

1. **The written part**, including a description of the thesis
2. A **graphic study**, comprising hard boards in the format 100x70cm
3. A **mock-up**, or a smaller model of the project (together with photographs of the mock-up)
4. An **electronic version**, contain the text of the thesis, the graphic study and photographs of the mock-up (to be uploaded in the e-account)

2.1. The written part

The written part of the thesis contains the following obligatory elements:

A. The **title page**, according to the model available for download from the website of the Faculty of Architecture (the tab 'Student zone' – *Strefa studenta*), containing basic information concerning the author, the subject of the thesis and the conditions of its preparation, including:

- the name of the university
- the author's full name
- the title of the thesis
- the person having supervised the preparation of the thesis (the supervisor)
- the place and date of preparation

The page must be submitted within the indicated time limit to the secretary's office of the entity concerned and the original collected (with seals and signatures affixed by the Director of the entity and by the Dean) is to be included in the thesis.

B. **The student's declaration** that they have independently prepared the thesis.

The whole thesis is an independent work of the student. If the thesis is a collaborative work (by two persons), each of the authors submits the thesis with the original thematic page and two copies of the thesis with copies of thematic pages intended for archiving purposes (i.e. a total of 4 copies). In the case of such a collaborative thesis, the following must be completed: *Declaration of independent preparation of parts of the thesis*.

Note: the declaration is appended to the written part of the thesis.

C. **The student's consent to the exercise by the University of their copyright** (necessary to the presentation of the thesis at exhibitions, competitions and promotions of the diploma organised by the University). It is not obligatory to give such a consent, it depends on the student. The declaration contains the student's authorisation for the Poznań University of Technology to exercise copyright in the aforementioned fields. The authorisation allows the transfer of the Student's copyright to the University.

Note: the consent is not included in the thesis; it must be given separately.

Both the declaration of the independent preparation of the thesis and the declaration of giving or refusing to give the student's consent to the participation of the thesis in competitions can be found at the website of the Faculty of Architecture, the tab 'Student zone/model applications' – *Strefa studenta/wzory wnioskow*).

D. The **table of contents of the thesis**, specifying the components of the thesis:

1. The summary of the thesis (a maximum of 100 words in Polish).
2. Translation of the summary into English.

3. The text of the thesis (A4 format).
4. The graphic study (with the graphic boards included in a reduced A-4 format (vertically) or in the A3 format (folded to the A4 format)).
5. The mock-up (it is necessary to include photographs of the mock-up in the A-4 format, with information on the scale in which the mock-up was prepared).

E. The **text of the thesis**, it is a description of the design project solution presented on the boards including the following:

1. Introduction (introducing and giving reasons for the selection of the subject)
2. The descriptive part of the design project, contained in the subsequent (two, a maximum of four) chapters, comprising:
 - a/ pre-design studies (or analyses), showing the path leading to the final design project solution. In the part in question, it is possible to include necessary studies and sketches, drawings, photographs of draft mock-ups, etc. explaining the essence of the spatial solutions adopted
 - b/ a description of the most significant architectural and urban planning issues (a conceptual description) to be resolved in the thesis, including a description of the main aesthetic, composition and functional solutions
 - c/ the technical solutions adopted in the thesis; it must include the most important material and technological solutions for specific elements of the building, the fire protection principles; in addition, it is necessary to discuss the basic structural and installation solutions. The description must contain material and technological solutions, balances, the fire protection principles and the solutions adopted with regard to the structure, installations, roads, infrastructure, energy efficiency, etc. In addition, it is necessary to discuss the landscape context (reference to the surroundings) of the design project solutions proposed as well as landscape design solutions.
 - c/ balances and area statements, including for:
 - land development (the area of the building development for the facilities designed and adapted, % of building development, the area of paved surfaces, the area of green surfaces, etc.) as well as the necessary architectural and urban planning indicators.
 - the area of buildings and structures (the total, net, usable area) and the cubic capacities of the facilities designed; statements of rooms and premises
3. The conclusion, containing a summary of the whole thesis and the findings
4. The literature, i.e. a list of the written sources used, broken down into:
 - a. books
 - b. periodicals /articles in journals/
 - c. online sources
 - d. other /e.g. legal acts, etc./

5. List of illustrations, with references to their sources
6. Boards, i.e. the graphic part reduced to the A4 format (exact copies of the 'large' boards from graphic study). Please remember that those are the basis for polemic evaluators to prepare their review of the thesis!
7. Photographs of the mock-up, a minimum of 2 pieces (a maximum of 4 pieces), in the A4 format, colour or black and white (those must be provided during the defence)
8. Annexes which may contain other documents such as: the full texts of the building development conditions from the Planning Consent, extracts and map extracts from the local land use plans, conservation guidelines, etc.

The written thesis should be aesthetically bound in the form of a book, its size tends to be approx. 40 to 60 pages (including the lists, appendices, etc.); naturally, it can be larger if more difficult issues are addressed (but please remember that a greater size has no effect on the evaluation of the thesis)

Note:

- the descriptive part of the thesis and reduced boards must be bound as a single, book-form study (as a whole)! The student is free to choose the binding method
 - in the written part, it is possible to include necessary analyses, studies and sketches explaining the essence of the solutions adopted, one must remember to limit their size in favour of the technical description
 - one must avoid the presentation of the historic background, examples of similar facilities already completed, descriptions broadly analysing design issues, etc.; such fragments of the thesis are only required in a master's thesis
 - the written thesis is not to be accompanied by dimensioned (prepared separately) technical drawings! The only graphic study as the design boards!

2.2. The graphic study, mock-up, electronic version

The engineer's thesis is the main design project study (usually of a single building or a complex of buildings) containing obligatory elements such as:

- the land development design with a legible legend and area balance, including e.g. the area of the parcel/site, the area of building development, % of building development, net intensity, the total area, the net area, the usable area, the cubic capacity, the number and type of dwellings (in the case of a residential building), the number of parking spaces (including at the site and in the underground garage) in the scale of 1:500 (or possibly in the scale of 1:250)

- in the engineer's thesis, it is allowed to provide a graphic solution to the analytical part (on the first board presented), it is not obligatory to include them, their inclusion remains at the discretion of the student

- views of the above-ground and underground floors with planned rooms and premises

- a minimum of two sections

- the façades designed (if it follows from the subject of the thesis, also in the context of the existing building development)

- two perspectives (a minimum of one, a maximum of three) showing the building or complex of buildings in space

- fragments of the view and section, dimensioned and described in detail (in the scale of 1:50)

- an architectural or urban planning detail together with technical solutions (in the scale of 1:20, 1:10, 1:5); it must be an architectural detail and not a copied construction detail!

Note: the last two parts are contained on the so-called 'technical board' (i.e. the dimensioned fragments of the view and section and the detail)

- necessary descriptions and text information

The **graphic study** includes a visual (graphic) presentation of the design project in widely used scales, i.e. 1:50, 1:100, 1:200, 1:250, 1:500, 1:1000, 1:2000 (and not in any intermediate scale such as 1:300 or 1:450!) and only indispensable studies and sketches (if the author of the thesis wishes to include them – without any detailed analyses!).

The study should be prepared on boards in the format of 70x100 cm (in vertical presentation), on a rigid foundation (foam, cardboard, etc.), in a manner enabling their exhibition (perforated corners).

Each board should be marked with a sequential number, unambiguously indicating the layout and composition of the boards. Every board must contain the following information:

- the title of the thesis

- the author's full name

- the supervisor's scientific title and full name
- the names of the faculty and of the university
- the preparation date

The diploma design project must be included on the 'intro' board and on the 'master' boards.

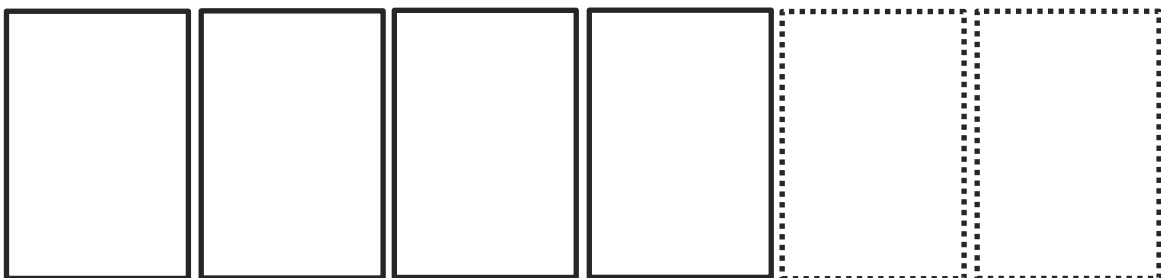
The **'intro' board** is the initial board, general in nature, kind of a visual presentation card of the thesis, containing the most important conceptual and design project elements, e.g. visualisation, site development, a characteristic view or section, necessary descriptions. The purpose of presenting that board is for all the diploma evaluation boards to be able to inspect and compare the theses. The 'intro' boards will be posted together, for all the students, in a manner enabling their preliminary evaluation.

The recommended layout of the presentation of the 'intro' board – exclusively vertical (due to the exhibition facilities of the Faculty of Architecture):



The **'master' boards** are the proper boards intended for the presentation of the design project. The optimum number of the boards is 4 pieces (a minimum of 4 pieces, a maximum of 6 pieces) – the number of boards has no effect on the evaluation!

The recommended layout of the boards – exclusively vertical (due to the exhibition facilities of the Faculty of Architecture):



The **mock-up** presents, in the form of a three-dimensional model, the spatial effect of the proposed creative (architectural, urban planning, architectural and urban planning, other) concept

The scale of the mock-up should be adjusted to the size of the thesis; therefore, for mock-ups of:

- facilities or architectural complexes, the scale of 1:100 or 1:200

The size of the mock-up should result from the scale of the design project, it should show and reflect the main design project assumptions presented by the student. In the case of mock-ups, it is allowed to use intermediate scales (e.g. 1:300). Monochromatic colour schemes are suggested, any material can be used (cardboard, wood, plastics, etc.). The degree of detail of the mock-up depends on its scale.

The mock-up must be signed and contain the following information:

- the title of the thesis
- the author's full name
- the supervisor's scientific degree/title and full name
- the names of the faculty and of the university

The **electronics version** is uploaded by the student to their student e-account (subsequently, it is possible to print a declaration of the consistency of the electronic version with the paper version). The instructions for the use of the e-student account include a detailed description of the procedure for uploading the thesis to the server (*System eStudent 2*). The instructions are available at the website of the Faculty of Architecture PP, the tab 'Students' – *Dyplomanci* (in the red paragraph), see: http://architektura.put.poznan.pl/n/wp-content/uploads/2018/01/eStudent2-Instrukcja_u%C5%BCytkownika.pdf

Please remember that the files uploaded to the e-account are accessible to the supervisor and the reviewer who can use those in the preparation of their reviews.

Note: the thesis must not be accepted by the supervisor if it fails to meet the aforementioned formal requirements. The supervisor of the thesis confirms the fulfilment of the above-mentioned requirements with their signature. The student must present to the supervisor 3 copies thesis ready for submission to the Dean's office. Please refrain from placing your supervisors in an awkward situation by forcing them to sign before the completion of your theses.

2.3. The examination and defence of the thesis

The examination part leading to the obtaining of the title of an architectural engineer is composed of two elements: the engineer's theoretical examination and the defence of the engineer's thesis.

The engineer's examination

The condition for being admitted to defend your engineer's thesis is the completion of the subjects required by the curriculum and the passing of the engineer's theoretical examination.

The examination issues useful as learning aids can be found at the website of the Faculty of Architecture (the tab 'Student zone', for students writing their theses – *Strefa students/Dyplomanci*). The engineer's examination is conducted in writing and precedes the defence of the thesis; in the case of failure, it is possible to re-take it as a repeat examination (in accordance with the schedule of the end-of-term diploma examinations) or, in exceptional cases, during the defence.

Note: the passing of the examination is the condition for being admitted to defend the thesis!

The defence of the engineer's thesis

The defence of the thesis is a public presentation of the design project prepared before the Faculty Examination Board and consists of four main parts:

1. The presentation of the Student (a maximum of 15 minutes!) – please remember that it is necessary to maintain time discipline!
2. The reading of the opinion by the Reviewer
3. Answers given by the student – replies to the remarks of the Reviewer
4. Discussion on the issues related to the thesis presented

Having examined the thesis presented and after hearing the opinions expressed by the reviewer and the supervisor of the thesis, the Board evaluates the thesis.

Note: the following elements of the thesis are subject to review: orderly development and the adopted composition solutions, the functional solutions, the structural solutions, car and pedestrian traffic routes, car parks, the green areas as well as the landscape context (i.e. links with developed or undeveloped surroundings) and the architectural or urban planning detail and the graphic study quality (aesthetics and comprehensibility of the provision of information); the mock-up is also subject to evaluation.

3. Master's Thesis

Master's Thesis sums up the entire cycle of education at the 2nd degree studies and the degree of a master is the first professional title. Master's Thesis shall focus on a design problem and analyse it. It shall contain solutions to complex engineering and scientific issues with the use of general and area specific knowledge and with the application of theoretical and empirical methods. It may be a research or design work in the area of architecture, urban and regional planning or protection and conservation of historical buildings. The thesis shall include the information about the field specific literature referred to and about the applied research solutions. Conclusions shall contain a separate paragraph on the original contribution of the author. An architectural design or an urban plan shall represent the final effect of the thesis and it then shall be the subject of the defence of the thesis. Other, equivalent forms of the thesis are also admissible (such as the film, performance, installation etc.) if they allow the student to present his/her full creative potential.

The student selects the topic of the thesis, in the agreement with his/her thesis supervisor, on the basis of available source materials (available at the library of the Faculty of Architecture). At the 2nd degree studies students can independently select their topics of the thesis. The requirements regarding independent selection of students' topics of their Master's Theses are specified by the Head of the unit (institute or chair) which confers the degree. Students can independently select their topics of Master's Theses provided their thesis supervisor grants his/her consent. In such a case the thesis supervisor shall consult the topic with the head of the unit.

All the procedures concerning the selection of the thesis topic, manner of writing the thesis and its submission are available on the website of the Faculty of Architecture, Poznan University of Technology, in the tab „Dyplomanci” [MSc Candidates] (see: <http://architektura.put.poznan.pl/n/strefa-studenta/dyplomanci/>)

The student who writes the thesis must prove to sufficient extent: his/her independent contribution into the work, general knowledge of architecture and urban planning, ability to properly select the field specific literature, source materials and their proper use.

The thesis shall include the following parts:

5. **Written part**, comprising major theses posed in the work
6. **Graphical presentation**, composed of rigid printouts of the size of 100x70cm
7. **Mock-up**, a small scale model of the design
8. **Electronic version**, which includes text of the work, graphical presentations and photographs of the mock-up
9. **Portfolio** (to show during the defence of the Master's Thesis)

3.1. Written part

The written part of the Master's Thesis shall include the following, obligatory elements:

A. Title page, compliant with the template that can be downloaded from the website of the Faculty of Architecture (tab *Strefa studenta (Students' Zone)*), shall include basic information about the author, topic of the thesis and how it was developed, in this:

- name of the University
- name and surname of the author
- title of the thesis
- name and surname of the thesis supervisor
- place and date of work submission

The title page shall be submitted to the secretary's office within a specified deadline. Next, the original of the title page (sealed and signed by the Head of the unit and the Dean) shall be attached to the Master's Thesis.

B. Declaration of the student that the thesis is his/her independent work

The thesis shall be entirely written by the student. In the event of team work (two students), each author submits the thesis with the original title page and the team submits two copies of the thesis with copies of the title page for the archives (4 copies in total). If the thesis is a team work, the authors need to complete: *Declaration that part of the work has been independently written by the student.*

Master's Theses developed as a team work are admissible at the Faculty of Architecture, Poznan University of Technology, under the condition that respective parts of the thesis are clearly separated and allocated to respective authors. It is suggested that the information which parts of the thesis have been developed by respective authors be included in the descriptive part, directly under the table of contents.

In the event of team work, each author submits the thesis with the original title page and as a team they submit two copies of the thesis with copies of the title page for the archives (4 copies in total). If the thesis is a team work, the authors need to complete: *Declaration that part of the work has been independently written by the student.*

Note: the declaration is enclosed to the written part of the thesis.

C. Consent granted by the student (MSc candidate) to the University for the use of his/her copyrights

Such consent is indispensable for the presentations of the work at exhibitions, competitions and diploma promotions organised by the University. Granting the consent is voluntary. Contents of the declaration include the consent of the student (MSc candidate) for the use of his/her copyrights in the areas as aforementioned by Poznan

University of Technology. The consent permits for the transfer of the copyrights of the author of the thesis upon the University.

Note: the consent is not inserted into the thesis; it shall be submitted separately.

The template of the declaration that the thesis is the independent work of the student and the declaration on granting the consent or on no consent granted for exhibiting the work in competitions can be found on the website of the Faculty of Architecture in the tab *Strefa studenta/wzory wnioskow* (*Student's Zone/templates of motions*).

D. **Table of contents**, where the following elements shall be included:

1. Abstract of the Master's Thesis (maximum 100 words in Polish).
2. Translation of the abstract into English.
3. Text of the work (number of pages shall be provided, A4 format,).
4. Graphical presentation (small scale graphical presentations - A4 or A3 folded to A4 format shall be included).
5. Mock-up (photographs of the mock-up shall be included in A4 format).
6. Other elements (e.g. multimedia presentation, film etc.)

E. **Text** of the thesis shall include:

1. Introduction
2. The introductory statement composed of:
 - a/ topic of the thesis (with reasons behind its selection), which poses the problem being the scope of the work
 - b/ design assumptions (e.g. diverging from the recommendations of the local master plan)
 - c/ state of research and adopted method(s) of work
3. Chapters of the descriptive part composed of:
 - a/ **research part** (three to five) chapters (with sub-chapters), comprising:
 - presentation of the main architectural and urban problems to be solved in the Master's Thesis
 - overview of the state of knowledge and output in the area of the design problem solved in the work
 - information about the location, with the account for urban planning and economic information and a historical overview
 - presentation of the manner and methods of solving the problem

In this part of the work, the student must carry out respective research, find relevant field specific publications (not only the Internet source materials but also books and articles published in magazines) and present the current state of knowledge and research.

b/ **analytical part** (preliminary design analysis), which shall among others include:

- analyses, design studies, source materials and a description of the design conception In this part the student must obligatorily include the analyses, sketches, drawings and photographs of mock-ups etc. which explain the core idea of the assumed spatial solutions (2-4 pages)
- descriptions of the most important architectural and urban planning problems (description of the idea) that are solved in the thesis, in this the description of the basic aesthetic, compositional and functional solutions; reference to the surroundings and landscape context as regards the assumed design solutions (it is important to show them also on printouts, detailed drawings, projections etc.)

c/ **design part**, which shall include among others:

- description of the design resulting from the proposed and implemented original concepts. The description shall be composed of the characteristics of the basic formal, aesthetic, compositional and functional solutions
 - technological solutions of the major building elements, applied materials and technologies and basic fire safety principles connected with the said solutions. Solutions concerning the structure, systems, roads, infrastructure, energy efficiency etc. and economic and organisational aspects of the design shall also be discussed.
- breakdown of area (m²) and volume (m³), in this:

a/ area development (area of development of designed and adapted buildings, % of development, hardened surface area, green areas etc.)

b/ inventory of volume area (total area, net floor area, usable area) and volumes of the designed buildings and the necessary architectural and urban indicators.

c/ technological solutions assumed in the thesis; here the major material and technical solutions of respective elements of the building and fire safety principles shall be included; moreover, basic structural and system solutions need to be presented. This part must account for the material and technological solutions, area inventories and site summaries, fire safety principles and solutions in the scope of the structure, systems, roads, infrastructure, energy efficiency etc. Furthermore, the landscape context (in reference to the surroundings) shall be analysed in view of the proposed design solutions and (if so falls from the topic of the thesis) also in view of the Conservator's Protection.

4. Conclusions shall comprise the analysis of the results and an overall summary of the entire thesis and conclusions falling thereunder (typically two or several pages). This is a very important part of the thesis confirming its proper development from assumptions to final results.

5. References, that is a list of source materials referred to in the thesis, subdivided into:
 - a. books
 - b. periodicals/articles in magazines
 - c. website source materials:
 - d. other/ e.g. legal regulations
6. List of illustrations, with references to their sources
7. Scale size graphical presentations in A4 format (precise copies of full-size graphical presentations) It must be remembered that the full-size graphical presentations are the basis for the review of the thesis!
8. Photographs of the mock-up, 2 pcs at the minimum (maximum 4 pcs) in A4 format, in colour or black and white
9. Annexes, which may contain other documents such as: full texts of conditions of development, copies and excerpts of local master plans, guidelines of the conservator etc.

Note: descriptive part of the thesis and scale size graphical presentations and photographs of the mock-up must be bound into one, compact paperback with a hard cover (as a whole)!

The manner of binding is at the discretion of the student, however, the entire thesis must be held together in a permanent manner.

3.2. Graphical presentation, mock-up, electronic version, portfolio

Graphical presentation includes visual (graphical) presentation of the design in commonly used scales (1:50, 1:100, 1:200, 1:250, 1:500, 1:1000, 1:2000), excluding any intermediate scales (e.g. 1:300 or 1:450!) and the necessary analyses, sketches, analyses and visualisations, which explain the core idea of the assumed spatial, architectural and urban planning assumptions.

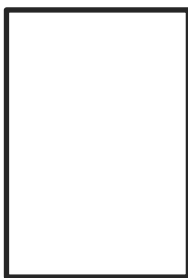
The graphical presentation shall be made on printouts of the size of 70x100 cm (in vertical layout) Each printout shall be designated with a subsequent number, indicating unambiguously the layout and composition of the printouts. Each shall include:

- title of the thesis
- name and surname of the author
- professional degree, name and surname of the thesis supervisor
- name of the faculty and university

The thesis design shall be included in the “intro” printout and “basic” printouts.

The ‘intro’ printout is a preliminary printout of general nature, a type of visual card of the diploma dissertation, which includes the most important elements of the conception and design e.g. visualisation, area development, characteristic projection or cross-section, the necessary descriptions. The purpose of the presentation of that printout is to allow all the MSc examination boards to see and compare the diploma dissertations. The ‘intro’ printouts shall be displayed jointly by all the authors of diploma theses, which shall allow for the preliminary assessment of their works.

The recommended layout of the ‘intro’ printout - only and exclusively vertical layout (for the reason of displaying capacities of the Faculty of Architecture):



“Basic printouts” are the printouts relevant for the presentation of the design. Optimum number of the printouts - 8 printouts. (minimum number - 6 printouts, maximum number - 12 printouts) - number of printouts does not affect the assessment of the thesis!

The recommended layout of the printouts - only and exclusively vertical layout (for the reason of displaying capacities of the Faculty of Architecture):

Other layout is also admissible - the decision is at the discretion of the student.

Mock-up presents, in the form of a 3D model, the spatial effect of the proposed conception (architectural, urban planning or architectural and urban or another type of conception)

The scale of the mock-up shall be adjusted to the work volume and so, in case of mock-ups of:

- architectural facilities or complexes - 1:100 or 1:200
- urban planning complexes - 1:500 or 1:1000

The size of the mock-up shall follow from the scale of the design and shall present and represent the main design assumptions of the Master's Thesis. In case of mock-ups intermediate scales are admissible (e.g. 1:300). Monochromatic colours are suggested, any material (cardboard, wood, plastics etc.) can be used for the mock-up. The degree of details of the mock-up depends on its scale.

- title of the thesis
- name and surname of the author
- professional degree, name and surname of the thesis supervisor
- name of the faculty and university

Electronic version is uploaded by the student onto his/her e-account (next, a declaration on compliance of the electronic version with the hard copy can be printed). The guidelines to the e-accounts of the students include precise procedure of uploading the diploma thesis onto the server ("eStudent 2 System"). The guidelines are published on the website of the Faculty of Architecture, Poznan University of Technology, in the tab „Dyplomanci” [MSc candidates] (in the paragraph in red) (see: http://architektura.put.poznan.pl/n/wp-content/uploads/2018/01/eStudent2-Instrukcja_u%C5%BCytkownika.pdf)

Kindly note that the thesis supervisor and the reviewer have access to the files uploaded to the e-account of the student in order to prepare their respective reviews.

Note: the diploma thesis may be rejected by the thesis supervisor if it does not meet the aforementioned formal requirements. By signing the thesis the supervisor confirms that the work meets the above-mentioned criteria. The student shall be obliged to submit to the thesis supervisor 3 copies of the thesis in the form ready to be filed with the dean's office. We kindly request you to refrain from putting your thesis supervisors in uncomfortable positions and persuading them to sign your diploma thesis prior to its full completion.

Portfolio, prepared by the student during the semester classes (2 semesters) at the 2nd degree studies (for inspection during the defence of the thesis). It is an important part of the work, an individual business card of the student (MSc candidate); owing to the portfolio the examination board can verify previous works and achievements of the student.

4. General principles of writing the diploma thesis

The written work shall contain about 80-100 pages of standard, typewritten pages and small scale drawing printouts included in the graphical part. The work must be bound with hard cover and the pages must be held together in a permanent manner (paperback, stitching, binding etc.)

The written part, apart from the main text, contains also literary references, quotations, footnotes etc.

References - in other words are a list of documents, compiled in certain order, meeting certain criteria and specific informative tasks (in practice both apply simultaneously).

Field specific references - list of publications used in the thesis The list of references per items which refer to the topic of the analysed issue, typically placed at the end of the work. List of publications on related topics, whereas it does not have to mean that respective publications have been used in the thesis. The term 'field specific references' has a broader meaning than the term 'references'. The recommended number of publications referred to in the Master's Thesis is 20 at the minimum.

Quotation - literal citation of words from some written text or oral expression; quotations are marked with quotation marks. It must be remembered that long quotations are best avoided; the average length of a quotation shall not exceed several verses. It must also be remembered that any quoted thought or expression (or any other fragment of a written text) must be clearly indicated and its source needs to be provided (in the footnotes!) Quoting other works without providing the information on its source is a crime!

Footnotes - are marked with indices at the end of the chapter (or most frequently) at the bottom of the page.³ (Look at the bottom of the page!) The purpose of footnotes is:

- the **identification of the source materials** the author uses when writing his/her thesis / the so-called Bibliography footnote/
(e.g. G. Piątek, Centrum Wykładowe Politechniki Poznańskiej, Architektura-murator, No. 09/2005, p. 41-49.)
- reference to the **original work from which the author quotes** the text in his/her thesis (reference to a particular page)
(e.g. G. Piątek, Centrum Wykładowe Politechniki Poznańskiej, Architektura-murator, No. 09/2005, p. 41)
- Footnotes may also contain **additional information**
(e.g. The described design variant is known to us from two sources. The first one is *Poznań. Przewodnik po mieście*, Poznań 1949, p. 54, the second - competition for a relevant design)
- as well as additional comments, explanations, polemics
(e.g. Premises in the building were rented among others by: PKO BP, Rzemieśnicza Spółdzielnia Odzieżowo-Galanteryjna „Dąbrówka”, Przedsiębiorstwo Handlu Zagranicznego i Informacji Techniczno-Handlowej „Intrex”, Centrala Handlu Zagranicznego „Agros” and Przedsiębiorstwo Wielobranżowe „Polstar”)

³ footnote

4.1. Editorial standards

The following formatting standards are recommended:

a) basic fonts: Arial CE or Times New Roman CE (letters CE stand for Central European, with Polish diacritical characters) or any other similar. Other simple and legible fonts are also admissible.

Remember, simple fonts like Arial look nicer but serif fonts like Times New Roman are more legible.

b) font size Size 10 for the text, size 9 for footnotes (Arial) or size 12 for the text, size 10 for footnotes (Times New Roman). Size shall be adjusted to the font (so that it is legible (not too small but also not too big - larger size means less textual contents!)

c) leading that is space between the lines 1.5

d) space before and after the verse: 6 or 12

e) standard page margins i.e. left, right, top and bottom margin - 2.5 cm; allow for the margin on the left side for the hard cover of the thesis (about 0.5-1cm)

f) pages must be numbered (except for the title page)

Note: 1,5 line leading between the verses have been applied in this sub-chapter and the right fonts have been marked

4.2. Quotations and footnotes

Quotations and footnotes referring to printed materials (basic rules)

- **text published by one author**
 - quoted for the first time
E. Rewers, *Post-polis. Wstęp do filozofii ponowoczesnego miasta*, Cracow 2005, p. 32-34.
 - quoted again in further parts of the thesis
E. Rewers, *op. cit.*, p. 32-34.
 - quoted directly after the first or subsequent quotation
Ibidem, p.5)
- **text published by several authors**
 - quoted for the first time
S.Barbacki, Z. Borny, E. Matusiewicz, *Dzieje akademickich studiów rolniczych i leśnych w Poznaniu 1919-1969*, Poznań 1970, p.67
 - quoted again in further parts of the thesis
S.Barbacki, Z. Borny, E. Matusiewicz, *op.cit.*, p.32-35
- **editorial publication**
 - quoted for the first time
G. Klause, *Wybrane problemy ochrony zabytków początku XX wieku i odbudowa Poznania po II wojnie światowej*, [in:] T. Jakimowicz (editor), *Architektura i urbanistyka Poznania XX wieku*, Poznań 2005, p.189
 - quoted again in further parts of the thesis
G. Klause, *Wybrane problemy ...*, [in:] *op.cit.*, p.189
- **article from a magazine**
 - quoted for the first time
G. Kodym-Kozaczko, *Planowanie urbanistyczne w Poznaniu w latach 1900-1990, a teorie budowy miast od końca XIX wieku*, *Kwartalnik Architektury i Urbanistyki*, no 1-4/2007, p.69
 - quoted again in further parts of the thesis
G. Kodym-Kozaczko, *op.cit.*, p.69
- **non-published material**
 - quoted for the first time
Gałkowski A., *O architekturze nowoczesnego szpitala*, Poznań 1971, typewritten text (article not yet published), p.4
 - quoted again in further parts of the thesis
Gałkowski A., *op.cit.*, p.4
- **archival material**
 - quoted for the first time
L. Wejchert, *Opis do planu porządkowania ośrodka staromiejskiego*, *Archiwum MKZ (Archives)*, file no. 1240, Poznań 1961 (typewritten text)

- quoted again in further parts of the thesis

L. Wejchert, file no. 1240 , p.12

- a legal document

Resolution no. 364 of the Council of Ministers of 20 August 1959 on the approval of design standards for residential housing (Monitor Polski, 1959, no. 81, item 422.)

or

the Copyright Law of 4 February 1994 (Journal of Laws 1994, no. 24, item 83, consolidated text: Journal of Laws 2006, no. 90, item 631).

Quotations from electronic sources and references to electronic sources

- CD-ROM records

- quoted for the first time

E. Rewers, Post-polis. Wstęp do filozofii ponowoczesnego miasta, Cracow 2005, CD-ROM, p. 32-34.

- quoted again in further parts of the thesis

E. Rewers, op. cit, p. 32-34.

- The Internet sources

Information from the Internet requires the provision of two additional pieces of information: access path and date of access. Full website address from which a given document or an illustration was accessed, e.g. <http://> or <ftp://> full access path Avoid the hypertext and always provide the date of access.

http://pl.wikipedia.org/wiki/Jerzy_Gurawski (19.11.2008)

or

<http://kpsc.umk.pl/dlibra/doccontent?id=29400&dirids=1> (A.Majdowski, 2007, Stylistyka powojennych kościołów w Polsce) (10.10.2008).

Basic forms and abbreviations

Ibidem means *tamże* [therein], used in footnotes not to cite a full title of a publication that has already been referred to

tamże [therein] means the same as *ibidem*

zob. abbreviation from *zobacz* [see] indicates a direct reference to a source or view

por. abbreviation from *porównaj* [compare] indicates that some fragment of the thesis shall be compared to another source or view referred to

op. cit. abbreviation from *opus citatum* (a cited work) or *opere citato* (in the cited work), used instead of quoting a full title of the work prior referred to in the footnotes

5. The issue of plagiarism

A Master's Thesis is an independent work but – as any research work – it may (and sometimes even should) refer to theses and investigations of other authors. It is absolutely normal to refer to prior findings, works and studies, subject to the indication of their sources. The sources of such references must be always precisely identified (e.g. in the bibliography footnotes). Similarly, each quotation should be properly marked and have an appropriate source indication. Failure to comply with the above-mentioned rules is reprehensible and simultaneously constitutes a major breach of research ethics.

Article 29 paragraphs 1, 2 and 2¹ of the Copyright Law specify the scope of quoting and referring to works of other authors by laying down, *inter alia*, that: 'It shall be permitted to quote, in works constituting an independent whole, fragments of disseminated works or minor works in full, within the scope justified by explanation, critical analysis, teaching or the rights governing a given kind of creative activity.'⁴

Plagiarism can be the concealment or intentional non-disclosure of the use of fragments of another study (also a Master's Thesis). The so-called direct plagiarism means the acquisition (wrongful appropriation) of all or significant part of a work, simultaneously indicating the plagiarising person as the author of the thesis.

The wrongful appropriation of another person's thesis and its part, whether concerning the text or graphics, constitutes an offence. Even the use of several quotations from another thesis without indicating their source may be considered transgression against the principles described above. If plagiarism is proved by, for example, the reviewer of the thesis concerned, it may be the basis for refusal to award a Master's degree. It must be pointed out that a Master's diploma issued on the basis of plagiarism may be cancelled by operation of law also after graduation (Article 193 of the Act of 27 July 2005 Higher Education Law (Journal of Laws No. 164, Item 1365, as amended)).

⁴ The Law of 4 February 1994 on copyright and related rights (Journal of Laws 1994 No. 24, Item 83, consolidated text: Journal of Laws 2006 No. 90, Item 631).

6. Additional information

A **Master's Thesis** is a wholly independent work of the student. The author of a Master's Thesis is the only creator of that thesis within the meaning of copyright law⁵. Therefore, the student cannot require that their thesis supervisor should creatively contribute to the writing of the thesis. The tasks of the thesis supervisor include the supervision of a timely and organised manner of writing the thesis, the provision of advice, guidance, opinions, the indication of appropriate ways of solving problems and methods of seeking creative solutions, pointing to suitable design techniques at every stage of writing the thesis, assistance in making independent decisions, assistance in the selection of adequate research methods and the research tools at the level required for a Master's Thesis. Any advice, opinion or guidance given by the thesis supervisor which is artistic or research criticism of the Master's Thesis may but need not be taken into account by the author (student). The supervisor must not co-author the Master's Thesis!

If the substantive contribution of the thesis supervisor to the thesis qualifies them as a co-creator of the work (the Master's Thesis) within the meaning of copyright law, such a work will not meet the requirements for Master's Theses and must not be defended. The author of the thesis has full moral rights in the Master's Thesis. The issue of economic rights is governed by the Higher Education Law and the Regulations of Studies of the Poznan University of Technology.

The supervision of the Master's Thesis is carried out in the form of regular thesis consultations, required from both the student and the supervisor of the Master's Thesis. Due to the interdisciplinary nature of Master's Theses at the Faculty of Architecture, in the preparation of the thesis the student may seek the assistance of consultants.

The student prepares their Master's Thesis under the supervision of a professor, an assistant professor or a habilitated PhD. Subject to the consent of the Board of the Faculty of Architecture, the Dean may authorise an assistant, a senior lecturer or a specialist holding a vocational title (the so-called 'master' – *mistrz*) awarded by an institution other than the University to act as the supervisor of a Master's Thesis. *At the Faculty of Architecture at PUT, the Dean is responsible for assignments to specific units and the student independently chooses the thesis supervisor. If the student makes no choice of their own, the supervisor of their Master's Theses will be designated by the Dean within the teaching duties of university teachers.*

The **topics of Master's Theses** are common for the whole faculty, published at the website and posted on the bulletin board by the Dean's office. The thesis topics are determined by the Dean in collaboration with the heads of departments or units. (With

⁵ The author of the thesis has full moral rights in the Master's Thesis. This is one of the reasons why the student must write the thesis independently. The issue of economic rights is governed by the Higher Education Law and the Regulations of Studies of the Poznan University of Technology.

regard to the Master's Thesis, the student may decide on the thesis topic in agreement with the thesis supervisor, see below).

The **Master's Thesis** is graded according to the adopted grading scale, the starting grade being 'good' (4.0).

The student's own topic of the Master's Thesis. Any student who wishes to write their Master's Thesis on an individual topic must obtain an approval of the thesis supervisor. The adopted principle is that the thesis supervisor approves the student's independent topic by signing a topic acceptance certificate (to be subsequently submitted by the student to the Dean's office).

Any student in a Master programme who fails to choose the topic of their Master's Thesis before registering in the penultimate term of the studies cannot complete the *Master's Thesis Seminar*.

7. References:

Boć J., Jak pisać pracę magisterską, Wrocław 1994

d'Alleva A., Jak studiować historię sztuki, Kraków 2008

Gambarelli G., Łucki Z., Jak przygotować pracę dyplomową lub doktorską, Kraków 2001

Opoka E., Uwagi o pisaniu i redagowaniu prac dyplomowych na studiach technicznych, wyd. 2, Wyd. Politechnika Śląska Gliwice, 2001

Wojciechowska R., Przewodnik metodyczny pisania pracy dyplomowej, Warszawa 2010

Wolański A., Edycja tekstów. Praktyczny poradnik, Warszawa 2008

Wójcik K., Piszę pracę magisterską. Poradnik dla autorów akademickich prac promocyjnych (licencjackich, magisterskich, doktorskich), Warszawa 2000

Przygotowanie prac licencjackich i magisterskich oraz innych prac pisemnych, Instytut Nauk Politycznych Uniwersytetu Warszawskiego, http://www.inp.uw.edu.pl/files/prace_pisemne/prace_pisemne_20091013.pdf (08.06.2012)

<http://architektura.put.poznan.pl/n/wp-content/uploads/2011/06/wymaganiaPRACA-DYPLOMOWA-WA20102011.pdf> (08.06.2012)

8. Exemplary printouts of engineering diploma works

