# Thesis requirements for the MSc in Computational and Cognitive Neuroscience

## Requirements for content

| The purpose of the thesis | The thesis is a scientific piece of work, that should follow the general requirements of a scientific research and publication. Furthermore, this paper should be completed individually, under the directions of a supervisor, and should contribute to prior research in the given field of cognitive science. Its purpose is to demonstrate the student’s proficiency and creativity within the relevant field, to research the chosen topic more extensively, and to show that they are able to carry out a scientific research and publication while maintaining high professional standards. |
| Types and topics | The thesis is based on an empirical research in a qualitative or quantitative approach (experiment, questionnaire, observation, case study, etc.). The student discusses the topic of their thesis with the supervisor while basing it on the announced thesis topics. |
| Required structure of the thesis | **Title page** See „formal requirements” |
| | **Inner title page** The name of the institute, the faculty, and the programme should be on the top of the inner title page, and the title of the thesis should be under that. The name of the student should be on the left side of the lower third of the page, the supervisor’s name and position should be on the right side. The year should be at the bottom of the page and centred in the middle. |
| | **Declaration of originality** The page after the inner title page should contain a declaration of originality, which states that the thesis is the student’s own intellectual property. The thesis is the student’s independent work in which they should follow the rules for references and reference lists. If the author of the thesis is suspected of plagiarism, a legal disciplinary action can be brought against them. |
| | **Proof of consultation, supervisor’s statement** The next page should contain a confirmation form which contains the supervisor's consent for thesis submission |
| | **Index/Table of contents, page numbering** The thesis should contain the table of contents as well as a list of the figures and tables. The page numbering is continuous. The list of tables and figures complement the table of contents. |
| Structure, chapters | The thesis may consist of one or two parts, depending on the length of the empirical part. |

## Empirical part

The empirical part of the thesis consists of the description of one or more studies and is written in the format of a manuscript ready to be submitted to a peer-reviewed journal. The empirical part has no minimal requirements for length: it should summarize the studies in the most concise but still
intelligible way. This is one of the main motivations behind having two distinct parts in the thesis: students should not feel forced to insert irrelevant sections of texts in order to increase length. Therefore, irrelevant sections may be regarded as an error during the evaluation process (contrary to prior practices).

The empirical part should be comprehensible on its own and it should not have any references to the theoretical part (if there is any).

**Theoretical part**
The theoretical part is related to the topic investigated in the empirical part of the thesis and it discusses either a selected aspect of it in detail and/or how it is nested in the wider scientific field. It differs from the introduction of the empirical part in that it also discusses phenomena not tightly linked to the study.

The aggregated length of the empirical and the theoretical part should reach the minimal requirements set for the thesis by the institutional regulations. Due to the characteristics of the task, the length of the theoretical part may be more freely adjusted by the student than that of the empirical part. If the length of the empirical part reaches the minimal requirements of the institutional regulations, the theoretical part may be omitted.

The theoretical part may include references to the empirical part and to the theoretical and empirical considerations mentioned there. However, the theoretical part should not contain repetitions of the descriptions already included in the empirical part. In the submitted thesis, the theoretical part should precede the empirical part (if it contains a theoretical part).

### Notes, references, reference list

The theoretical and the empirical part should contain separate reference lists and the end of the respective chapters. The references and the reference list should be used according to the publication requirements of APA 6 (www.apastyle.org), there is a detailed guide to this in the appendix. The reference list should only contain publications that are referenced in the text of the study.

### Preparation and submission

#### Choosing and submitting a topic

The topic submission form contains the topic of the thesis in the form of a title and the outline of the thesis which should be a paragraph of coherent text (approx. 1000 characters). It should also list the 3-5 most important literature references. The topic submission form (submitted by the student) should also contain the supervisor's statement that they will undertake the supervision as well as an approval of the educational structural unit responsible for the programme or of its representative. Deadline for thesis title submission:

- **if the final examination is in the spring semester**: 15th May (in the previous year)
- **if the final examination is in the autumn semester**: 15th October (in the previous year)

#### Supervisor

A supervisor can be a teacher and/or a researcher from the university or an expert who is not an employee of the university. The supervisor can guide the preparation of the thesis by work in
groups or by individual tutoring. The supervisor should inform the student who would like to work with them about the limits and conditions of the cooperation at the time of topic submission.

**Consultation**

The preparation of the thesis should be supported by regular consultation (at least once per month) with the supervisor. The student can only submit their thesis for evaluation with the written permission of the supervisor.

**Submission**

The students should submit the Thesis electronically to Neptun exclusively.

**Deadline for thesis submission:**
- in the autumn semester: 20th November.
- in the spring semester: 20th April

**Evaluation**

The thesis is evaluated by the supervisor and a specified second reviewer in writing. The grade for the thesis is the mathematical average of these evaluations rounded to the nearest integer. There are, however, two special cases:

1. If the average grade of the two evaluations is fail (average=1-1.50 – this is the case when both evaluations are fail or one evaluation is a fail and the other one is a pass), the defence of the thesis cannot be processed. The student should prepare a new thesis after the approval procedure based on the Section 82 of the Academic Regulations for Students (HKR) with the condition that its specified time limitation is not applicable. In case of a repeated thesis the student may apply at the earliest for the upcoming final examination period. Modification of a thesis at least with grade pass (the average of the thesis is at least 2) is not possible.

2. If one evaluation is fail (1) and the other one is at least satisfactory (3) the supervisor responsible for the specialization completed by the student should to choose a third evaluator. If the third evaluator evaluates the thesis as fail as well which means that there are two evaluations with grade fail, the grade will be fail for the thesis. In this case the defence cannot be processed. The student should prepare a new thesis based on the conditions written in point 1. Mutatis mutandis the student cannot participate on the oral defence. The final evaluation of the thesis is the average of the evaluations given by further invited evaluators.

The Thesis course is a mandatory course to be completed in order to receive an absolutorium. The course is completed by submitting the Thesis itself. The evaluation of the Thesis course is based on the grade given by the evaluations. The evaluation reviews have to be attached to the thesis. Besides the evaluation each of the reviewers formulates two topics which the candidate will receive together with the evaluation so that they can prepare themselves on the 4 topics. One of these topics will be chosen by the final examination committee and the student will be asked to elaborate on it at the exam. The evaluation can be collected at the relevant department at least two weeks before the date of the final
exam. The final evaluation of the Thesis at the Defence is the average of the grades given by the evaluators and of the Defence. The Defence grade is based on the presentation and the answers given for the supervisors’ questions at the final examination.

| Points of evaluation | - justification of the chosen topic and the purpose of the thesis;  
|                      | - presenting the literature of previous research in the relevant field, the standard of analysis-interpretation-application;  
|                      | - the researched question being novel and well-grounded, the precise statement of the hypothesis(es);  
|                      | - the choice of relevant research methods and statistical procedure(s) for testing the hypothesis and the clear presentation of their application;  
|                      | - presenting the results in a way which is clear and well-grounded from a statistical-methodological and professional point of view;  
|                      | - placing the student’s own results within the research on the topic, self-reflection on the strengths and weaknesses of the research, future research directions  

| Oral defense | a summary of the researched question which focuses on the essentials, presenting how the thesis contributes to earlier research in the field;  
|              | - self-reflection in connection with the completed work while taking into account the evaluations of the thesis (the supervisor’s and the second reviewer’s), presenting the advantages and weak points of the thesis;  
|              | - a part of the final exam besides the defence is also the elaboration on one of the topics which has been given by the reviewers. If the grade of the defence is fail, students cannot elaborate and answer the topic and the presentations can be retaken during the next final exam session. Should this happen, students have the right for further consultation with their supervisor.  

### Formal requirements

| Length | The length of the thesis should be 35-70 pages (100,000-200,000 characters with spaces) without the reference list and appendices. It can be either in single-sided or duplex printing.  
| Font, size, line spacing | Times New Roman, 12pt, 1.5 spacing (distance between the lines)  
| Margins | On the left side 4 cm, on the right, top, and bottom side 2.5 cm margin  
| Language | English  
| Cover | The cover should contain the name of the university, faculty and programme at the top. Under that, write „Thesis”. On the left side of the lower third of the page should be the name of the student. At the bottom of the page, in the middle should be the year.  
| Electronic format | The students should submit the Thesis electronically to Neptun exclusively.  

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