



Research Master's programme Neurocognitive Psychology

Guidelines for Master's theses

September 2023

Dear students and supervisors,

this document intends to give comprehensive information about Master's theses performed within the programme Neurocognitive Psychology and should help both, students and supervisors, to better understand the expectations in content and form. The information should be understood as guidelines, but not as strict rules in all aspects. Please be aware that individual arrangements between student and supervisor may deviate from the information given here. The guidelines apply to internal and external theses.

Module description

The Master's thesis module (mam) consists of 30 credits for (independently) performing and writing an experimental thesis on a topic in cognitive neuroscience (27 CP) and the oral defence of the work (3 CP). The entire thesis should have a total workload of 900 hours (which is the equivalent of 24 weeks full-time work) and should be completed within 6 months.

Students will demonstrate that they are able to perform a psychological or neuroscientific experiment and/or analyse data originating from such experiments by means of methods according to contemporary scientific standards. Metaanalyses are accepted if they were conducted by means of up to date tools for data extraction and analyses, according to best practices outlined in relevant community guidelines, such as for example Cochrane. In addition, the students will demonstrate that they are acquainted with the necessary methods and can present their results orally and in written form. The students work on a given topic in cognitive neuroscience using literature research and the appropriate experimental methods. The preparation of the thesis is accompanied by regular participation in the lab meetings of the groups in which the thesis is performed. Students present their study design at the beginning of their thesis preparation and their results towards the end. In addition, they listen to the presentations of the other lab members and students in the group.

The most current version of the module description can always be found in StudIP.

Formal procedures

The Master's thesis should be performed at the end of the studies. Students can only start their thesis if they have completed at least 60 credits in the programme Neurocognitive Psychology including the module psy240 (or psy241) Computation in Neuroscience.

Students need to find supervisors and a topic for their thesis autonomously. They can either perform the thesis within the Department of Psychology (internal thesis) or at an external institution (external thesis). Usually, one supervisor needs to be a professor of the Department of Psychology. In exceptional cases, two staff members of the Department of Psychology can supervise internal theses. In this case, the head of the laboratory, in which the work will be carried out, needs to formally agree to the supervision.

For internal theses: In case one of your supervisors is not listed on the list of examiners for the study programme Neurocognitive Psychology <https://uol.de/fk6/studium-lehre/pruefungsberechtigte-der-fakultaet-vi>, he or she additionally has to sign the form 'Genehmigung Prüfer_ Approval examiner' which you can find on the course website.

If students perform their thesis externally, they need to follow additional rules as explained in the document 'Rules for external Master's theses'. In short, you need to send a short abstract of your planned thesis to Kerstin Bleichner who will allocate an internal supervisor (professor and laboratory head) to your thesis. This internal supervisor needs to agree with your topic before you start. The external supervisor needs to

have a doctoral degree if he or she is not member of the School of Medicine and Health Sciences, University of Oldenburg.

Students are free to choose the starting date of their thesis in agreement with their supervisors. This starting date does not have to be the semester start! Theses must be registered with the examination office in the beginning. Please use the official form, which you can find on the website of the examination office.

Apart from formal reasons, registering your thesis in the beginning helps you and your supervisors to plan your thesis realistically and thoroughly and work determined on its success.

It is possible to ask for an extension if unforeseen circumstances occur that hinder you from finishing on time. Apart from sickness, which you prove to the examination office with a doctor's note, this may also be a setup that did not work as planned, etc. In all cases other than sickness, your supervisor needs to approve the extension in written form which you hand in to the examinations office. The programme coordinator Kerstin Bleichner can advise you on the process.

Registration in short:

- Find topic and supervisors (usually one professor from the Department of Psychology)
- Register thesis at examination office (additional forms to be potentially attached: 'External Master's Thesis – Request for Approval' or 'Genehmigung Prüfer_ Approval examiner')
- Confirmation of official approval will follow via post from the examinations office to your home address (check that your correspondence address in StudIP is correct). The deadline will be set to 6 months after approval date.
- In case the student does not receive confirmation of approval within 3 weeks, please contact the examinations board: pa_neurocogpsy@uni-oldenburg.de.

Where to find the documents/forms:

- 'Anmeldung der Masterarbeit / Application for Final Thesis': https://uol.de/en/no_cache/students/course-of-study/?tab=pruefungen&id_studg=545&cHash=5083579b6a5401a5af551d4d5e76082c
- 'Rules for external Master's theses including approval form': www.uol.de/en/neurocogpsy/course-overview
- 'Genehmigung Prüfer_ Approval examiner': www.uol.de/en/neurocogpsy/course-overview
- List of examiners: <https://uol.de/fk6/studium-lehre/pruefungsberechtigte-der-fakultaet-vi>

Attending lab meetings and presenting your work

Students have to regularly visit a Master's colloquium, which is usually the weekly lab meeting of the group they are working in. Please discuss with your supervisor how often and in which format you will have to present your thesis work in this colloquium. External Master's theses also need to be presented in Oldenburg at least once!

Supervision

Supervisors should make sure that the topic is adequate for a Master's thesis. They should help the student keeping track of the thesis progress. Students and supervisors should discuss the priorities they have. This can be e.g. finishing in time as a job is to be started or a more in-depth work on the topic as a publication is

aspired. They should also discuss and agree on the aspects of supervision (e.g. regular meetings, intermediate drafts of the thesis, trial defence).

Thesis format

According to the examination regulations, the thesis needs to be written in English!

To make life easier we provide students with a LaTeX template for the thesis. This template layout will be discussed in the module psy130 Communication of scientific results and will be explained in detail in the LaTeX workshop organized each year. Using this template is voluntary, but highly recommended. If you chose not to use it, you have to follow the formal requirements given in the leaflet of the examination office (appendices A and B).

We do not give strict rules for the length of the thesis. Your thesis should be written in the format of a manuscript for a research article. As long as necessary to thoroughly explain what you did, but as short as possible. Be concise and precise! Usually students need between 30 and 50 pages (without appendices) in the provided layout. Please find additional information on the expected content of a thesis in appendix C.

You need to comply with the guidelines for good scientific practice (appendix D)! Please remember that you need to mark contributions from others (e.g. programming scripts or if someone else collected the data).

Please discuss with your supervisor the option of checking your thesis with Plagscan in StudIP before you hand it in!

Handing in the thesis

Students need to hand in a digital PDF version of their thesis to the examinations office according to the information they will receive from the examinations office upon registration. Please find this information also in the appendix A in this document. Please ask your supervisors, whether they want a paper version of the thesis. If so, please deliver this paper version directly to the supervisor(s). Do not print paper versions without asking them first.

Grading of the written work and defence

The written thesis will be evaluated by the supervisor and an additional reviewer (90%). They will both individually assess the written thesis. They can use the grading scheme provided (see appendix E) or they are free to give their assessment in free text. Supervisors hand in their assessment directly to the examination office usually until 8 weeks after submission of the thesis.

The oral presentation and defence of the thesis results will be also evaluated (10%) by both supervisors. The defence always takes place at the Department of Psychology. If necessary external supervisors can attend via video conference. Online defences are allowed if the student and both supervisors agree. Students should find a suitable defence date together with their supervisors well in advance.

The final defence of your thesis should be open to interested students/scientists. Therefore, please send your defence date, time, place, title and names of first and second supervisor to Kerstin Bleichner, so that your defence can be publicly announced on the course website. You are responsible that a room will be booked for your thesis defence (ask the secretary sekretariat.psychologie@uni-oldenburg.de or Kerstin Bleichner for help). In case of an online defence, please clarify with your internal supervisor(s) which room will be used.

Please note that you have to pass both, the thesis and the defence, to pass the entire module.

Data protection and intellectual property issues

In the beginning you have to discuss formal issues with your supervisor, e.g. who is in possession of the data, whether you need to hand in all scripts!

Most students will work with personal experimental data in their Master's theses. To comply with data protection regulations, these data need to be stored on university servers. Storing any data from your experiments on private computers or data storage media is forbidden!

Regulations regarding a 'semester on leave' if you want to perform an external thesis

A 'semester on leave' is possible only if

- **you do NOT want to take any courses in Oldenburg or take part in any exams.**
Once you have the status 'semester on leave' you cannot take part in any courses or written or oral exams (including your Practical Project presentation and Master's defence) at the University of Oldenburg. This means you can also NOT HAND IN any reports or your Master's thesis while you have the status 'semester on leave'.
- **the amount of supervision here at the University of Oldenburg is limited to a maximum of 2 substantial contacts between you and your internal supervisor** (e.g. giving a presentation here at a lab meeting twice or discussing your project with your supervisor). If you need significant support from your internal supervisor, you have to be registered with the University of Oldenburg while you do your Master's thesis.
- **for your Master's thesis you are registered with the university where you perform your work** (e.g. as guest or exchange student). If a registration with the university is not possible, you will have to stay enrolled at Oldenburg University.

Appendix A: Rules for the thesis issued by the examination office

L E A F L E T

For writing of the final thesis (text)

Please observe the following when creating your final thesis:

- Use a word processing program (DIN A 4 – Format)
- Title page according overleaf example
- Title thesis has to be stated as indicated on the application
- Single and a half spacing; 3 – 4 cm left and right margin; 2 – 3 cm top and bottom margin
- Font and font size, e.g. Arial 11 or Times New Roman 12 or equivalent
- Precise naming of all sources and aids in the usual form
- All passages which are literally or analogously taken from other publications need to be indicated accordingly
- Table of Contents, List of Figures, List of Tables, and List of Symbols and Abbreviations need to be at the beginning
- Two copies need to be bound (glued bond or hardcover), one copy needs to be presented as a digital copy
- The following statement is to be handed in as the last page of the thesis and needs to be signed

- For a single person:

I hereby confirm that this thesis is entirely my own work. I confirm that no part of the document has been copied from either a book or any other source – including the internet – except where such sections are clearly shown as quotations and the sources have been correctly identified within the text or in the list of references.

Moreover, I confirm that I have taken notice of the ‘Guidelines for good scientific practice’ of the University of Oldenburg

- For a group:

(Description of “the academic assessment of the single group members” based on the indication of single sections, page numbers, or other objective criteria, which allow a definite classification) - followed by the statement (in German) as above and signed by every student of the group.

One digital PDF copy of the final thesis needs to be handed in at the academic examination office in due time. Another electronic copy may be given to the library of the C.v.O. University of Oldenburg (see attached leaflet).

Appendix B: Title page (information from the examination office)

[optional additional logo for external theses]

[Department logo]

Carl von Ossietzky Universität Oldenburg
University of Oldenburg

Department of Psychology

Master's Thesis

Title:

The title according to admission letter is to be mentioned here

Presented by: *Your Name*

First examiner: [Name with titles]

Second examiner: [Name with titles]

Place, Date: *Oldenburg,*

Appendix C: The Master Thesis – Expectations & Downfalls

Introduction

Presentation of the issue or phenomenon the thesis intends to examine, the context where the issue has arisen or the phenomenon is found, and references to previous research with particular emphasis on whether current knowledge is lacking or contradictory. *Common shortcomings: The issue is imprecisely defined or formulated incorrectly; references to previous research are incomplete.*

Rationale

The relevance, purpose and aim of the thesis, i.e. what one intends to achieve by increasing knowledge on the issue or phenomenon.

Common shortcomings: The purpose is not mentioned, not linked to previous research in the field or does not agree with what the work discusses.

Outline

An indication of what the reader can expect on the next pages and in which order.

Common shortcomings: The reader is left to guess.

Questions & Hypotheses (against the background of relevant theories)

Research questions that require answers to satisfy the purpose of the thesis; hypotheses that are made on the basis of valid theories in the field or hypotheses in the form of innovative guesswork one wishes to test.

Common shortcomings: Absent or flawed research questions; not a good relation between the questions provided; poorly formulated hypotheses; questions that cannot be answered.

Methodology

Choosing an adequate method, materials and practical implementation based on the purpose of the study, its research questions and hypotheses.

Common shortcomings: Choosing a method and working with data that is inappropriate.

Results/Findings

Answers to the questions asked using the collected data.

Common shortcomings: Lack of logical relation between the results/findings presented and the question or hypotheses provided; confusion between results/findings and discussion; presentation of more data than what is relevant to illuminate the issue.

Discussion

Brief summary of the most important results/findings; whether or not they support the hypothesis or hypotheses. Critique of the methodology applied and the reliability and relevance of the results/findings; comparison with other research results/findings.

Common shortcomings: Conclusions that cannot be supported by the results/findings, such as guesswork without any basis in the study data; introduction of new questions and subsequent discussion of these.

Conclusion

Consequences of results/findings in relation to the formulated purpose, such as consequences for further research, development of new theories or practical application.

Common shortcomings: Conclusions not warranted by the results/findings or building on other data than what stems from the study; conclusion shows no connection to the rationale.

- > think and work with cards
- > prepare an outline with page / word count
- > write what you do, but also write what you don't do
- > always anchor your arguments and findings before you move on

Appendix D: Guidelines for good scientific practice

The Carl von Ossietzky University of Oldenburg is committed to good scientific practice¹.

- Highest Priority is given to honesty and truth in scientific work, in short the scientific fidelity
- Records, protocols, and data of experiments need to be recorded truthfully, unaltered, and completely.
- Results need to be verifiable and the confirmability of theoretical deductions need to be given at any time. This includes the meticulous storage of records, data (e.g. from experiments), or any other material. Insight into the particular approach must be possible and must be allowed on request, to allow verification of the results and the way these were obtained.
- For verification it is imperative that the exact sources used are indicated and a clear identification of quotation is mandatory. The use of text passages or ideas without identification is considered plagiarism (theft of intellectual property).
- On suspicion of scientific misconduct, the University of Oldenburg will review the case according the respective code of procedure². If scientific misconduct is identified, the necessary action, including legal measures, will be taken.
- Creation or Use of incorrect statements in applications, e.g. for scholarships, is also considered scientific misconduct.

You should actively participate in the realization of good scientific practice during your studies and throughout your scientific career.

¹ Guidelines for good scientific practice of the Carl von Ossietzky University of Oldenburg (30.09.2002), official document http://www.uni-oldenburg.de/uni/amtliche_mitteilungen/dateien/AM2002-04_Leitlin.pdf

² Procedure for dealing with scientific misconduct (26.01.2000), official document http://www.uni-oldenburg.de/uni/amtliche_mitteilungen/dateien/AM2000-01_Ordwissf.pdf

Appendix E.1: Grading scheme English

Date:

Reviewer: ...

Evaluation of the thesis by...

entitled

.....

for completion of the degree Master of Science.

Criteria (Exemplary assessment aspects)	Percentage weighting %	Achieved score (0-100 points per category)	Comments
Practical part (literature research, experimental design, running the experiments, regular preparation of lab reports and presentations, independent work, working in a group, ...)	30%		
Definition, development, and presentation of the research question (clear presentation of the research question, introduction to the topic, explaining its relevance, development of line of arguments regarding the research question and not only claims/speculations)	10%		
Systematic structure of the thesis (coherent and comprehensible structure, recognition of a common thread running throughout the thesis), consistency and clarity of the arguments, providing evidence to support the claims (empirical data/literature)	10%		
Completeness and correctness of the thesis (consideration of all important and necessary aspects of the topic, appropriate explanations of the tables and figures, clear formulation of the results, linking results to research question, discussion of results)	10%		
Independent contributions (integration of results into larger context and/or further questions, development of own reasonable	20%		

concepts, possible solutions, experiments, theories, own experimental setups, employed measurement techniques, as necessary regarded variations, explanation why other potential ways of solutions were not chosen or were not possible, inventiveness, thoroughness, critical analysis and questioning of the results, among others also regarding the scientific value of the work, analyses and graphical illustrations with own figures/tables etc.)			
Linguistic adequacy of the written text Style, proper definition and usage of the relevant terms/scientific language, comprehensibility	10%		
Respecting the formal framework (Literature references, front page, margin etc.), orthography, punctuation	10%		
Total points			The total points are the sum of the points per category each multiplied by the weighting factor for the corresponding category.

Grading scale

Points	100-96	91-95	86-90	81-85	76-80	71-75	66-70	61-65	56-60	50-55	<50
Grade	1,0	1,3	1,7	2,0	2,3	2,7	3,0	3,3	3,7	4,0	5,0

Final remark and grade:

....

Signature

Appendix E.2: Grading scheme German

Datum:

Gutachter: ...

Bewertung der Abschlussarbeit von ...

mit dem Titel

.....

zur Erlangung des Abschlusses Master of Science.

Kriterien (Exemplarische Bewertungsaspekte)	Gewichtung in %	erreichte Punkte (0-100 Punkte je Kategorie)	Bemerkungen
Praktischer Teil (Literaturrecherche, Planung der Versuche, Durchführung der Experimente, regelmäßige Erstellung von Lab-Reports und Präsentationen, selbstständiges Arbeiten und Arbeiten in der Gruppe,...)	30%		
Erfassung, Entwicklung und Darstellung der in der Themenstellung enthaltenen Probleme (klare Formulierung der Problemstellung, Hinführung zum Thema, Verdeutlichung der Relevanz des Themas, Entwicklung von Beleg- bzw. Argumentationsketten bzgl. der Problemstellung und nicht nur Behauptungen/Mutmaßungen)	10%		
Logischer bzw. systematischer Aufbau der Arbeit (schlüssiger und verständlicher Aufbau, Erkennbarkeit eines „roten Fadens“), Schlüssigkeit der Argumentation, Verständlichkeit und Aussagekraft der an- gebrachten Argumente, Beleg der Aussagen durch (Mess- Daten/Literatur)	10%		
Vollständigkeit und Richtigkeit der Ausführung (Berücksichtigung aller wichtigen und relevanten Aspekte des Themas, ausreichende Erläuterung von Tabellen und Abbildungen, klare Formulierung der Ergebnisse, Bezug der Ergebnisse zur Problemstellung, Diskussion der Ergebnisse)	10%		

Eigenständige Beiträge (Hinweise auf übergreifende Zusammenhänge und/oder weiterführende Fragen, Entwicklung begründeter eigener Konzepte, Lösungsansätze, Experimente, Theorien, selbst erstellte experimentelle Aufbauten, verwendete Messtechniken, als notwendig erkannte Variationen, Darlegung, warum andere Lösungswege nicht gewählt wurden bzw. nicht möglich waren, Ideen- und/oder Interpretationsreichtum, Sorgfalt, kritische Analyse und Hinterfragung der Ergebnisse u.a. auch bzgl. des wissenschaftlichen Werts der Arbeit, Auswertungen und Darstellungen mit eigenen Bildern/Tabellen etc.)	20%		
Sprachliche Angemessenheit Stil, richtige Definition und Verwendung der für die Problemstellung wichtigen Begriffe/ Fachsprache, Verständlichkeit	10%		
Beachtung formaler Vorschriften (Literaturnachweis, Titelblatt, Rand etc.), Rechtschreibung, Zeichensetzung	10%		
Gesamtpunktzahl			Die Gesamtpunktzahl errechnet sich aus der Summe der Punkte je Kategorie jeweils multipliziert mit der der Kategorie zugehörigen Gewichtung.

Notenskala

Punkte	100-96	91-95	86-90	81-85	76-80	71-75	66-70	61-65	56-60	50-55	<50
Note	1,0	1,3	1,7	2,0	2,3	2,7	3,0	3,3	3,7	4,0	5,0

Abschlussbemerkung und Note:

....

Unterschrift