Guide to the doctorate procedure at the Faculty of Mathematics and Natural Sciences

Dear doctoral students,

welcome to the doctorate program at our faculty! This guide intends to provide an overview of the formal procedures of a doctorate at the Faculty of <u>Mathematics and Natural Sciences</u> (MNF) at the University of Rostock. Please read the official <u>Doctoral degree regulations of the MNF</u>; the guidelines presented herein contain supplementary explanations to the regulations.

You will find important information on the doctoral procedure on the MNF website, under the heading "Study" -> Dissertation / Habilitation, regarding:

- What do I have to consider before starting my doctorate?
- What do I have to take care of <u>during the doctorate</u>?

You can find the Doctoral degree regulations and guidelines in German and English on the websites of the MNF.

We hope we can answer most of your questions (if not all) with these documents. You can always contact the <u>doctoral commissioner</u> of the respective institute, too. We wish you much pleasure and good luck with your doctorate!

Klaus Neymeyr

Dean of the Faculty of Mathematics and Natural Sciences

In the following (I - VI), essential steps of the doctorate/dissertation procedures are explained:

I The First steps of the dissertation – Doctoral supervision:

Supervisor at the MNF (§ 3 PromO MNF)

In order to start a doctorate procedure at the MNF, it is mandatory to have a supervisor (if necessary as a secondary supervisor) at the faculty (§ 8, para. 1, sentence 2 PromO MNF).

This supervisor will provide an assessment of the submitted dissertation later on. According to the <u>Doctoral degree regulations</u> (§ 2, para. 1), the supervision can be carried out by university lecturers (professors) as long as they are faculty members (a junior professorship or habilitation status are also sufficient). If you wish to do your doctorate externally (not directly at the MNF), please contact your external supervisor as well as a possible MNF supervisor/assessor. The MNF supervisor should be involved in the work right from the start (planning, implementation, evaluation and presentation of results).

If your supervisor has a Heisenberg Professorship or an Emmy-Noether Scholarship, this supervisor may be granted the right to independent doctoral supervision upon application to the Faculty Council.

Doctorate commissioners of the faculty

At each MNF institute there is a doctorate commissioner who can help you with any questions you may have. In the affiliated institutes (IAP, IOW, LIKAT) there are responsible persons as well. The staff of the Dean's Office can also help you with your questions (a <u>list of contact</u> persons can be found here).

II. Admission requirements for a dissertation

First you need to clarify whether you meet the requirements for admission to a dissertation.

- You meet the requirements if you have a university degree (diploma or Master of Science degree. "Staatsexamen" This item does not apply to foreign candidates.
- In case of a foreign university degree, a degree in a differing subject or a technical college degree, a request for admission has to be directed to the faculty.

Application for admission to a dissertation

In case you require an application for admission to a dissertation, please use the application form on the MNF homepage under the heading "Study" -> "Before starting your doctorate". The <u>first page of the form</u> is to be filled in by you and <u>the second page</u> by your supervisor.

The application for admission must be submitted to the respective <u>doctorate commissioner</u> together with the following documents:

- University certificates with course overviews (Bachelor, Master or Diploma) and graduation certificates (Bachelor and Master or Diploma). Copies are sufficient if the supervisor confirms the submission of the original certificates.
- Degree thesis for inspection (will be returned).
- Letter of endorsement from the supervisor.

After reviewing the documents, the doctorate commissioner makes a statement about the admission. To reach a final decision, this statement and your submitted documents will be submitted to the Faculty Council via the doctorate commissioner. The decision of the Faculty C ouncil will be communicated to you immediately in writing. Perhaps you will have to fulfill certain other conditions for the admission to the doctorate. Please read the <u>doctoral degree regulations</u> and ask your supervisor or the doctorate commissioner concerning this process.

Regulations for the admission to a dissertation:

- The requirements in § 3 of the MNF doctoral degree regulations must be fulfilled.
- Graduates with a diploma or master's degree in natural sciences (i.e. physics, biology, chemistry, mathematics) from a German or ANABIN H+ university can expect to be admitted without additional requirements.
- For <u>university graduates</u> with a diploma or master's degree in an MNF-like subject (e.g. meteorology, geology, chemical engineering) from a German or ANABIN H+ university: In an interview between the supervisor and the doctoral candidate it will be clarified whether the candidate is suitable for the doctorate and whether further measures, such as attending further lectures, are advisable in order to acquire subject-specific qualifications. The result of the interview will be communicated to the doctorate commissioner through an application for admission to the doctorate by the supervisor (with copies of the relevant certificates).
- For <u>university graduates</u> with a diploma or master's degree with a weaker link to MNF (e.g. mechanical engineers, physicians, computer scientists) from a German or ANABIN H+ university: An examination interview will be conducted and minutes will be taken by the supervisor and another MNF university lecturer to assess subject-specific qualifications. During this interview, requirements may be agreed upon, which will be communicated to the doctorate commissioner together with the application for admission. The doctorate commissioner will then submit the documents to the Faculty Council for approval.
- Fachhochschulabsolventen: This item does not apply to foreign candidates.
- You mustn't have submitted a dissertation on a similar topic at any other university.
- Doctoral students whose native language is not German must also provide proof of sufficient German language skills (§ 3, paragraph 4). A certificate from a German course is sufficient.

III. Registration as doctoral student / Enrolling in the graduate academy

We strongly recommend you to register as a doctoral student. This offers a number of advantages, such as reduced prices in the Mensa (canteen) and the semester ticket (discounted ticket) for public transport. For the enrolment, one has to provide the confirmation of admission (or proof of the ongoing process) at the beginning of the second doctorate semester. Enrolment is also highly recommended for external students. Upon request, external students, who do not live in Rostock, can be reimbursed the fee of the semester ticket.

The best way to register as a doctoral student is via the website of the <u>Student Service Center</u>. Information can also be obtained directly from the Student Service Center, Parkstraße 6, 18057 Rostock, Tel.: +49 (0) 381 498-1230; E-Mail: <u>studium@uni-rostock.de</u>

After enrolling, we recommend you to become a member of the <u>Graduate Academy</u> at the University of Rostock. This provides additional funding opportunities, ensures networking between doctoral students from different disciplines, and the academy represents the doctoral students' interests within the university. For this purpose, a supervision agreement must be made between doctoral student and supervisor. A sample agreement can be found on the web pages of the <u>Graduate Academy</u>.

IV. Writing the dissertation

The research work for the dissertation must be coordinated with the supervisor. The work will be concluded when the supervisor agrees that the dissertation is worthy of a doctorate. The dissertation can be written in German or English. It is possible to submit a monograph or a cumulative thesis. Please consult your supervisor about this and note the following:

Monograph

A monograph represents a complete essay and has the following structure, which can deviate subject-specifically:

- title page
- one-page summary
- introduction
- possibly basics
- material and methods, results, discussion
- reference list and appendix.

A monographic dissertation should comprise a maximum of 100 pages, not including the reference list and the appendix. If the page limit is exceeded, a well-founded application must be submitted before submitting the dissertation. The Faculty Council will decide on this. Comprehensive additional information should therefore be provided in the appendix. Your own publications cannot be included in a monographic dissertation in a complete/unedited form. In case of a cooperation with other scientists, e.g. when conducting experiments, your personal contribution has to be detailed explicitly in the monograph.

Citing

Citations from publications must be indicated correctly and clearly (right at the cited passage). It is also permitted to include longer citations. Citations from your own publications which are several pages long, however, lead to the problem of self-plagiarism and should therefore be avoided. Translating long passages (of several pages) from publications into another language does not meet the requirements of a scientific monograph either.

Cumulative dissertation (see § 6, paragraph 5 doctoral degree regulations MNF)

For a cumulative dissertation, at least three manuscripts are required. They must have been published in peer-reviewed scientific journals or accepted for publication, and you have to be the first/main author for at least two of them.

In order to avoid delays in the completion of the dissertation, you may deviate from the above rules at the request of the supervisor. In this case, only two accepted publications and a further submitted one may be sufficient (in this case, the Faculty Council's decision from 04/12/17 is canceled). In his / her request the supervisor has to confirm

- that the submitted manuscript is scientifically correct and worthy of publication, and
- that he / she, together with the doctoral student, will take care of resubmitting the manuscript to another journal in case of rejection.

The cumulative dissertation must be submitted in bound form and it consists of the following parts:

- Cover page indicating that this is a cumulative dissertation.
- Table of contents and possibly other lists, e.g. abbreviations.
- A summary (not more than one page)
- Main part, which similarly to a review article, embeds the cumulative dissertation's publications into the context of the research field. The main section must meet the requirements of § 6 paragraph 5 a) and b) of the doctoral degree regulations. The recommended length is 40 pages (minimum 20 pages).
- The main section must contain a reference list for the citations (not included in the page count).
- An explanation concerning your own contributions to the manuscripts. It must be clearly stated how much you have contributed personally to the publications. This must be described in detail for each manuscript. In particular, your part in writing the manuscripts must be described. This declaration must be signed by you and countersigned by the supervisor and must also be handed in together with the submitted documents.
- The main part of the cumulative dissertation contains the published or accepted manuscripts with appendices.
- Appendices, if any, such as original data, methods and explanations which are not documented in the manuscripts. Further complete manuscripts which have not yet been submitted or accepted (manuscripts in preparation) may be accepted as part of the appendix upon a well-founded request to the Faculty Council.

First authorship:

A shared first authorship is generally permitted, but then the publication is weighted according to the number of first authors. This means that in the case of two first authors, it only counts as half a publication. At the request of the supervisor, the Faculty Council may - in exceptional cases - accept such publications in a non-weighted form, e.g. for papers with clearly separate experimental and theoretical parts.

Patent regulation:

In general, patents cannot be regarded as independent scientific work. Therefore, patents in the context of cumulative dissertations do not represent achievements equivalent to publications. The Faculty Council decides on exceptions upon request.

Book articles:

Book contributions cannot normally be counted as independent scientific work. If, however, the book article can be proven to have been peer-reviewed with the standard of an anonymous peer review of scientific journals and if, in addition, the article does not have a review character, but presents new scientific results, then the faculty council may recognize an exceptional case.

For both types of dissertation please refer to the <u>information sheet of the university concerning the procedure</u> for obtaining a doctorate. This contains a recommendation for the title page as well as information on how to submit the required copies. In monographic or cumulative dissertations a declaration of having written everything independently must also be included; an example can be found <u>here</u>.

V. Submitting the dissertation and opening the dissertation procedures

Having met the admission requirements according to § 3 PromO MNF, you can apply to the doctorate office for the opening of a doctorate procedure and submit your dissertation.

The doctorate procedure is opened by the Faculty Council. The dates of council meetings can be found on the MNF homepage (usually on the first Monday of the month). The documents must be submitted to the doctorate office by 12.00 noon on the next to last Friday before a meeting. If they are not submitted in time, they can only be dealt with at the next meeting of the Faculty Council.

The contact details of the doctorate office are as follows:

Universität Rostock Zentrale Universitätsverwaltung Referat 1.2 - Akademische Selbstverwaltung 18055 Rostock Contact person: Gundula Rogge Universitätsplatz 1, room 227

Tel.: +49 (0) 381 498-1206; Fax.: +49 (0) 381 498118-1206

E-Mail: gundula.rogge(at)uni-rostock.de Office hours: Tue, Wed, Fri. 8 am till 12 am

The following documents must be submitted (the relevant forms are provided as links):

- Three copies of the dissertation (in hard- or softcover; further copies must be supplied if the dissertation is to be handed over to more than two reviewers).
- An <u>application for opening</u> the doctorate procedure.
- The candidate's informal application for opening the procedure (with the topic of the dissertation and the proposed field of the dissertation).
- The supervisor's statement on the candidate's admission. In this statement, two possible reviewers (apart from the supervisor himself) are proposed to the Faculty Council. The Faculty Council welcomes the proposal of external reviewers. If honors (summa cum laude) are under consideration, another (fourth) reviewer must be proposed. The reviewers are elected by the Faculty Council. Therefore, you may not yet list the reviewers or thank them for their reports in the submitted dissertation, as this would anticipate the decision of the Faculty Council. The reviewers can be added to the final (print) version.
- An MNF declaration according to § 4, section 1.
- A generally comprehensible summary of the dissertation. Summaries of dissertations from recent years can be found here. A form template can be found here.
- An academic curriculum vitae with signature.
- A certified copy of the graduation certificate according to § 3 section 1 of the doctoral regulations.
- A list of publications and lectures at conferences.
- An official "good-conduct certificate" ("Führungszeugnis"), which may not be older than three months.

All these listed documents (apart from the disseration itself) must be compiled in a loose-leaf binder.

Subject areas of the dissertation

When submitting the dissertation, it must be assigned to one of the following subject areas of the dissertation:

Institute of Biosciences

Biochemistry, Didactics of Biology, Biophysics, Botany, Genetics, Marine Biology, Microbiology, Molecular Biology, Ecology, Plant Physiology, Animal Physiology, Cell Biology, Zoology

Institute of Chemistry

Chemistry, Didactics of Chemistry

Institute of Mathematics

Mathematics, Didactics of Mathematics

Institute of Physics

Applied Physics, Atmospheric Physics, Experimental Physics, Didactic of Physics, Physical Oceanography, Theoretical Physics

VI What happens after the submission?

- The Faculty Council decides on the opening of the doctorate procedure and names the reviewers.
- The Department of Academic Self-Governance (Referat 1.2 Akademische Selbstverwaltung) of the University of Rostock asks for the reviewers' reports.
- Once all the reports are there, the Dean consults the doctorate commissioner before deciding whether or not to accept them and passes the process on to the respective doctorate commissioner.
- You will be informed of the acceptance by the doctorate commissioner. Together, you will determine the date for the scientific colloquium.
- The doctorate commissioner then appoints the doctorate committee. In case of interdisciplinary doctoral theses involving professors from different MNF institutes, you can ask the doctorate commissioner of the respective institute where the doctoral thesis is being supervised to include a doctorate committee participant from another institute.
- You'll defend your thesis with a colloquium lecture (30 minutes), followed by a discussion and questioning with examination character. The scientific colloquium is open to the public.
- The doctorate committee evaluates the scientific colloquium. Together with the grades from the reviewers' reports, this evaluation is used to calculate the overall grade for the doctorate.
- The result has to be confirmed by the Faculty Council. After that you will have completed your doctorate.
- Twice a year (in January and July) the doctoral certificates are ceremoniously awarded at the University Church. If you need your doctoral certificate before that, you can ask Ms Rogge at the <u>doctorate office</u> (Dept. 1.2) to be given your doctorate certificate earlier after handing in the required copies at the university library. Of course, you are still invited to the award ceremony. Please discuss this with Ms Rogge, Department 1.2.

We wish you good luck with your doctorate at our faculty!