I. Purpose of the Doctoral Study Regulations

The aim of these regulations is to provide doctoral candidates and supervisors at ZMT with the necessary framework to ensure best practice in the management of the doctoral research process at ZMT. These regulations are applied in accordance with the regulations of the respective universities where the candidates earn their degree. All doctoral projects within ZMT have to comply with these two regulations.

This document will periodically be revised by the doctoral studies circle\(^1\) at ZMT taking into account the feedback from doctoral candidates and supervisors as well as applicable national and international policies and practices for doctoral studies.

II. Scope of a Doctoral Project and Thesis

The scope of the doctoral project is that the doctoral candidate acquires skills for developing into an independent scientist, completes the research project, and gains the doctoral degree. The doctoral candidate and the ZMT supervisor are both responsible for reaching this aim. The doctoral project is completed with the submission of the doctoral dissertation and the subsequent colloquium.

The doctoral dissertation is a substantial piece of scholarly writing that contains a significant contribution of new knowledge to the field of study. It presents the results and their analysis and is the candidate’s original research. The dissertation must be a coherent document that provides a complete and systematic account of the candidate’s research. Depending on the respective university’s regulations it may incorporate work from submitted, accepted or published articles, which may or may not have co-authors. The modality of the doctoral dissertation (cumulative or monograph, as well as the minimum number of planned publications) is mutually agreed on within the first panel meeting, following the rules of the respective university and faculty where the candidate is enrolled.

The dissertation reflects the candidate’s ability to do the following:

- Identify and critically analyse the relevant literature
- Use and describe in detail the appropriate methodology for the research undertaken
- Conduct research and present findings that result in a significant and original contribution to scientific knowledge
- Locate the work of the dissertation and its findings within the broader field or discipline
- Communicate the research and analyses effectively

\(^1\) The doctoral studies circle is responsible for the long-term strategic planning and the further development of the doctoral studies program at ZMT. It is composed of the doctoral studies coordinator and members of all scientific „status groups“ (doctoral candidates, postdoctoral researchers, work group leaders and the department heads).
In this context, the scientific supervisor offers constructive criticism and suggests improvements, but does not actively intervene in the writing of the final dissertation, except for the publications.

The doctoral candidates and their ZMT supervisors have to obey to the code of conduct for scientists as outlined in the regulations of the German Research Foundation (DFG).

As regular members of a ZMT department, the doctoral candidates and their supervisors also have to comply with the rules established by the leadership of ZMT (Guidelines for Ensuring Good Scientific Practice at ZMT) as well as the Bremen Criteria.

Following these guidelines will ensure that the candidate gets appropriate recognition for their efforts (e.g.: authorship on papers and acknowledgements at seminars).

III. Supervision Concept and Duration of the Doctoral Studies

Financial support for a doctoral candidate generally covers and is limited to three years. In special situations of scholarship holders, the time interval may differ.

If exceptional situations arise that prohibit the completion of the dissertation within the regular three years, the scientific supervisor (defined in § 5) needs to inform the doctoral studies coordinator as soon as a severe delay is realized, to find an adequate solution.

Due to these time constraints, it is essential that a general research plan for the doctoral project is available from the very beginning. The responsibility lies on the scientific supervisor in case that the candidate does not come with its own funding. In the latter case, the doctoral project has already been outlined by the candidate in their proposal. Since detailed and reasonable planning of the doctoral project (which usually includes the use of laboratory facilities, the conduction of fieldwork and the consideration of all costs) is a prerequisite for the success of the project, the financial issues of the doctoral project shall be discussed and planned with the candidate and the scientific supervisor.

The research work of doctoral candidate constitutes a mainstay of ZMT’s scientific activities. ZMT therefore provides administrative support (detailed in § 4) to ensure the success of the doctoral project. The scientific supervisor (defined in § 5) is responsible for the scientific support and guidance of the doctoral candidate. The doctoral candidate commits to the project and learns to and qualify as an independent researcher. The doctoral Panel (defined in § 7) brings additional expertise to the project and provides the space for scientific discussions.

Formal meetings are mandatory to ensure that all important understandings and recommendations are agreed upon. This is documented by written reports by the candidate at the end of each panel meeting (see Appendix D). The candidate is also liable of writing the refined project proposal (see Appendix B) and the first year report (see Appendix C).
The panel meeting reports should contain the following elements:

- The panel meeting reports have indication of what the candidate has achieved during the preceding period;
- Scientific work plan for the next months, to be followed up during the next panel meeting;
- If the candidate encounters difficulties, these must be listed in the report along with suggestions from the panel on how to resolve them.

The panel meeting reports have to be agreed upon by all panel members and shall be signed by the candidate and the supervisor before sending them to the doctoral studies program coordinator.

IV. Role of ZMT

In its relationship to the doctoral candidate and the respective universities, ZMT is represented by the directors, the doctoral studies circle and the doctoral studies program coordinator.

The doctoral studies program coordinator monitors all matters related to doctoral studies as well as the implementation of these regulations. The monitoring of the doctoral candidate and ZMT supervisor compliance to the regulations is performed via automated forms, developed by the doctoral studies circle that are completed independently by the doctoral candidate and the ZMT supervisors after each panel meeting and transmitted to the doctoral studies program coordinator (templates available in the intranet).

In addition, the doctoral studies program coordinator monitors that all milestones mentioned in the timeline (see Appendix C) are met by the relevant parties. All required reports, written by the doctoral candidate, need to be delivered to the panel members and submitted to the doctoral studies program coordinator for archiving and monitoring.

V. The Scientific Supervisor

The "scientific supervisor" is the lead scientist of the research project (either a senior or a postdoctoral researcher). The scientific supervisor provides guidance and support on the research carried out by the doctoral candidate. Where co-supervision is appropriate, e.g., for interdisciplinary or cooperative projects, or for administrative reasons, the scientific supervisor takes full responsibility for the overall management of the candidate’s training and research project, and for relevant administrative matters. This includes the compliance with security regulations in the laboratories and with the regulations concerning fieldwork (incl. diving), as well as compliance to international and national regulation (e.g., research permits, CITES, ABS).

The commitment and expertise of the scientific supervisor are critical to the success of the doctoral project. The specific responsibilities of the scientific supervisor include:
• Advising the candidate on their responsibilities and duties in particular at the beginning of their studies;
• Providing guidance on the standard requirements for a doctoral degree, as defined according to § 2;
• Supporting the candidate in the refinement of the initial research plan (crucial in particular for the first three months of the project);
• Ensuring that the candidate has been introduced to the members of the panel and relevant staff of ZMT at the beginning of their studies;
• Providing advice and guidance, throughout the whole time interval, about the direction of the research project and the strategies that might be used to achieve the research goals;
• Advising the candidate on their specific training needs;
• Communicating clearly to the candidate how they are performing;
• Regularly holding structured meetings to ensure progress and that all important understandings and decisions are discussed and agreed upon;
• Providing the candidate with opportunities to meet other researchers in the field by, e.g., facilitating their attendance at conferences as appropriate and as permitted by resources;
• Informing the candidate about additional funding opportunities (with support from the doctoral studies program coordinator);
• Providing guidance and feedback on written or oral presentations given by the candidate;
• Ensuring that adequate supervision is in place for the candidate during extended periods of absence by the scientific supervisor;
• Promptly reading and evaluating work written by the candidate and making sure that thorough feedback is provided in good time.

In summary, the scientific supervisor should act as mentor and coach and be available for the doctoral candidate.

Leave of the supervisor. In case a supervisor is on longer leave (e.g. sick leave) the department head substitutes the supervisor in formal matters (e.g. signatures for holiday application, scholarship matters, travel forms) and can be contacted by the doctoral candidate. In case a department head is the supervisor the scientific director substitutes the supervisor.

VI. The Doctoral Candidate

The commitment of the candidate to their doctoral project is essential for the success of the undertaken research. The specific responsibilities of the candidate include:

• Presenting their work at events of importance to the institute, representing the doctoral student body and the institute in an adequate way;
• Recording accurately and carefully all relevant tasks (e.g. lab book, meeting protocols), and producing timely progress reports as required (see Appendices A, B and C);
• Providing a working effort and output that meets the expectation for a doctoral degree, as defined in accordance to § 2;
• Taking into account the input of their scientific supervisor and the entire panel regarding the research plan;
• Communicating their activities to the relevant persons (lab staff, administration) as indicated by the scientific supervisor;
• Discussing throughout the whole time interval the progress and direction of the research with the scientific supervisor to ensure the achievement of research goals;
• Getting necessary training as advised by the scientific supervisor;
• Communicating progress and difficulties regularly to the scientific supervisor;
• Regularly discussing ideas with the scientific supervisor and/or panel members;
• Taking the opportunities to increase their scientific network and present their research (e.g. conferences, workshops, talks);
• Applying for funding for workshops or conferences if not covered by the project budget;
• Timely presenting the content of written or oral presentations to the scientific supervisor before abstract submission and performance, for receiving feedback;
• Informing about wishes to take long leave (e.g. parental leave, sabbatical leave, internship, summer schools) in due time so that this can be arranged according to the legal regulations or agreed upon with the scientific supervisor;
• Providing written work that needs feedback from the scientific supervisor in advance, so that there is reasonable time for feedback and discussion.

In summary, the candidate is liable to provide regular reports of progress to their scientific supervisor and ask for meetings or advice whenever needed. The doctoral candidate strongly encouraged to also consult other panel members. The candidate is strongly encouraged to make use of the interdisciplinary atmosphere at ZMT, for broadening their own scientific culture, by attending the arranged seminars and workshops within ZMT (e.g. Lunch seminars, BEST series seminars).

The doctoral candidate is obligated and ensures to submit all scientific data they collected or produced during their doctoral study to the ZMT database.

VII. Course Program for doctoral candidates

Every doctoral candidate at ZMT attends a Welcome Week, which is held in autumn (November) of every year. At the heart of the “ZMT Welcome Week” is a three-day course on the ZMT’s mission. It also features one day of intercultural training that all doctoral candidates complete.

Participation in the course “Marine Research in an Inter- and Transdisciplinary Environment” is mandatory for doctoral candidates at ZMT. Doctoral candidates shall attend the Welcome Week in their first 12 months at ZMT. In urgent, not to be delayed matters (e.g. field trip) candidates can participate in the following year.

Beyond this, doctoral candidates may attend any course at the ZMT Academy. They are also offered advice on the matters relating to the doctoral programme or career development.
VIII. The Doctoral Studies Panel

The doctoral study panel consists of three academic staff members: the scientific supervisor, a co-supervisor, also expert in the field of research (holding a doctoral degree) and a ZMT scientist from another department (holding a doctoral degree). Additional members can be assigned according to the topic of the dissertation, and these panel members can be external to ZMT. Among the panel members, one has to be the formal supervisor. The doctoral study panel does not need to mirror any examining committee according to the respective university's rules. The latter will be composed according to university regulations.

The scientific supervisor and the co-supervising specialist provide expert knowledge and respective guidance to the candidate. The other ZMT scientist acts as an advisor, who is not directly connected to the research project, and monitors whether the doctoral project meets the requirements defined by these regulations. This person should be identified by the supervisors in consultation with the candidate at the beginning of the project.

During the course of the doctoral studies, panel members can be added or replaced if deemed necessary by the supervisor(s) and the doctoral candidate. The doctoral studies program coordinator has to be promptly informed.

The doctoral studies panel formally meets at fixed intervals (Appendix A) to discuss work progress and future directions and to guide the candidate through their study period. The duration of the panel meeting may vary with the complexity of the subject discussed and should be scheduled for approx. 90 minutes.

IX. The Consequences of non-compliance to these Regulations

These regulations have been established in order to ensure that the candidate can submit their thesis dissertation within the commonly accepted time frame of 36 months (as restricted by the financial support) to meet the expectations required for a doctoral degree, as defined by faculty-specific University regulations and communicated by the scientific supervisor. If there are good reasons to derive from the timeline proposed in these regulations (e.g. parental leave, illness), it is the joint duty of the doctoral candidate and the scientific supervisor to make these reasons explicit and detail them in the Panel meeting reports adequately. In case of agreement on these reasons, the non-respect of the timeline will not be qualified as non-compliance or misconduct of the candidate nor the scientific supervisor.

In case the scientific supervisor or the candidate do not comply with their duties as defined under § 5 and 6, respectively, and as monitored by the Doctoral Studies Program Coordinator, communicated within the Doctoral Studies Circle, and ratified by the Ombuds-Person of ZMT, the following could apply:
Misconduct by the scientific supervisor

If misconduct by a scientific supervisor has been ratified by the Ombuds Person, this scientific supervisor will not be eligible for the ZMT-internal funding for one year's cycle. In case of repeated misconduct, the directorate of ZMT will choose adequate measures.

Misconduct by the doctoral candidate

Doctoral candidates will only be eligible for ZMT-support for attending courses/workshops or conference/research stays, if they fulfil their duties as outlined in detail in § 6.

In case of misconduct by a doctoral candidate, this leads to considering the candidate’s dismissal. If consideration of dismissal is confirmed by the Doctoral Studies Circle, the Doctoral Program Coordinator, and the Ombuds Person after this meeting and a rehearsal of the candidate, the scientific supervisor informs the candidate in written form, co-signed by the directors, and gives them an appropriate period of time to correct their deficiencies. A copy of this letter has to be immediately sent to all members of the panel, the Doctoral Studies Circle, the Doctoral Program Coordinator, the Works Council, and the ZMT Directorate. The letter needs to detail the specific problems to be corrected by the candidate to avoid dismissal.

During the time assigned for correcting the deficiencies, the candidate is encouraged to contact any member of ZMT they trust, to seek help and advice. After the assigned time, the candidate, the panel (which includes the scientific supervisor) and the Doctoral Studies Circle meet to discuss whether or not the doctoral candidate succeeded in correcting the notified deficiencies. If the consideration of dismissal is confirmed, the scientific supervisor provides a final written justification to the scientific and administrative directors of ZMT, who will then proceed with the dismissal according to the legal requirements.

X. Termination of the Doctoral Studies or Change of Supervisor

In case of intended termination of the doctoral studies, either intended by the scientific supervisor or the doctoral candidate or both parties, the panel members and the coordinator of the doctoral studies program needs to be informed immediately via e-mail. The department head needs to be informed. In case the supervisor is a department head, the scientific director needs to be informed.

A panel meeting has to be scheduled by the doctoral candidate or the scientific supervisor in due time to discuss the intended termination with all panel members.

The result of the panel meeting will be documented by the doctoral candidate in minutes to be sent to the panel members and the doctoral studies program coordinator. The department head and the scientific director need to be informed.
In the case that documents for the scholarship agency of the doctoral candidate need to be signed, ZMT supports the doctoral candidate in getting the necessary confirmations to take further actions. In case of problems, the doctoral studies program coordinator can involve the scientific director.
Appendix

Appendix A – Doctoral Studies Timeline

time from start | milestones
---|---
2 weeks | Meeting with the supervisor to discuss next steps for project planning including administrative issues, logistics, project plan, signing supervision agreement. Meeting Janine Reinhard for the Welcome Talk.
3 months | 1st panel meeting with appointed panel members (the panel members shall be identified before the first panel meeting by the supervisor and the doctoral candidate): candidate submits the research proposal draft, which follows the structure outlined in Appendix B and contains a project plan to the panel members prior to the meeting; during the meeting the research plan is critically assessed and suggestions are given for improvements. If the plan requires a deviation from the doctoral time line as suggested in this Appendix A, alternative dates for the subsequent panel meetings need to be fixed at this stage. Writing of 1st panel report
12 months | 2nd panel meeting: candidate submits 1st year report and final project proposal (based on the draft submitted at the 3-months panel meeting; further attachments may be added); discussion of 1st year report and work progress, revising of the study plan for the second year, drafting of the 2nd panel report Participation in the ZMT Welcome Week within the first year and the attendance of ZMT Doctoral Studies program courses
18-24 months | Candidate prepares and gives an oral presentation of their dissertation project (current state, first results and projections) in ZMT internal meeting (e.g. department meeting)
24 months | 3rd panel meeting: Discussion of work progress, to evaluate time management of the candidate and to estimate overall performance and feasibility of finishing the project within the 3 years’ time frame, drafting of third panel report. Submission 3rd panel report
30 months | 4th panel meeting: Data collection should be completed. Discussion of progress and the work plan until submission. Submission of 4th panel report.
34-36 months | Dissertation submission and handing in of research data to the ZMT database Inform Janine Reinhard about submission of the thesis and date of defence (information to ZMT-all will be sent). In case your contract expires please make a (new) guest agreement with administration. Hand in list of attended courses during your PhD at ZMT to Janine Reinhard so that the ZMT certificate can be issued. Inform ZMT Library about Defence and publication of the thesis Submit your data to ZMT Data management unit. Register for the Alumni Database with Janine Reinhard

2 All panel reports and the project proposal have to be sent to the panel and to the Doctoral Program Coordinator.
Appendix B - Project Proposal

To be used for the 1st Panel meeting

Suggested structure (length not to exceed 20 pages):
This structure follows the regulations of research proposals of the German Research Foundation (DFG)

<table>
<thead>
<tr>
<th>Section</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. State of the Art and Literature Review</td>
<td>5-7</td>
</tr>
<tr>
<td>2. Detailed Project Description</td>
<td></td>
</tr>
<tr>
<td>2.1 Objectives</td>
<td>1.5</td>
</tr>
<tr>
<td>3. Work schedule (e.g. Ghant Chart)</td>
<td>1</td>
</tr>
<tr>
<td>4. Bibliography</td>
<td>2</td>
</tr>
<tr>
<td>5. Estimation of costs</td>
<td>2</td>
</tr>
</tbody>
</table>

Appendix C – 1st Year Report

Suggested structure:

1. Refined Project Proposal (see Appendix B)
2. Progress report for first year:
   - Work planned and conducted during the first year
   - First results
   - Problems encountered
   - Revision of work plan for the dissertation (if needed)
Appendix D – Panel Meeting Report

The panel meeting reports should contain the following elements:

- The panel meeting reports have indication of what the candidate has achieved during the preceding period;
- Scientific work plan for the next months, to be followed up during the next panel meeting;
- If the candidate encounters difficulties, these must be listed in the report along with suggestions from the panel on how to resolve them.

The panel meeting reports have to be agreed upon by all panel members and shall be signed by the candidate and the supervisor before sending them to the doctoral studies program coordinator.

The minutes of the thesis panel meetings must also contain the following information:

- Name of the doctoral candidate
- Number of the meeting (e.g. “2nd Thesis panel meeting”)
- Date and time of the meeting
- Names of the meeting participants and absentees (members of the panel committee and those who were present in the meeting must be clearly distinguished)
- Signatures of both, the doctoral candidate and the primary supervisor.
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