



MAX-PLANCK-GESELLSCHAFT

# GUIDELINES

ON THE TRAINING OF DOCTORAL STUDENTS AT THE MAX PLANCK SOCIETY



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## PREAMBLE

The aim of the Max Planck Society is to carry out basic research at the highest possible level. As the research carried out by doctoral students is also subject to this aim, the Max Planck Society has a particular responsibility when it comes to junior scientists and must therefore select the best candidates and ensure optimum supervision and qualification. Doctoral students must meet high expectations and be capable of working independently and autonomously in order to contribute to the scientific achievements of the research facilities through their work. Similarly high requirements apply in terms of supervising doctoral students at the research facilities of the Max Planck Society, as responsible supervision with transparent framework conditions and rules is a decisive factor when it comes to successful completion of a doctorate.

The different subject cultures require different qualification and supervision structures that need flexible room to manoeuvre. In many cases, the qualification and supervision provided in doctoral student programmes has proven to be advantageous and attractive in terms of attracting excellent doctoral students, particularly from abroad. The IMPRS model leads the way here, particularly in terms of cooperation with universities. Max Planck Society research facilities should check the extent to which the establishment of an IMPRS would make sense and apply for additional central funds for an IMPRS if necessary. It may also make sense to undertake doctorates outside doctoral programmes.

The following statements should be considered binding guidelines for both doctorate models, in order to offer junior scientists reliable and transparent training and career structures. They are based on the *“Guidelines for Doctoral Training at Max Planck Institutes”* issued by the Scientific Council in 2012 and the *“Recommendations for the Supervision and Qualification of Doctoral Students in MPG Research Facilities”* issued by the “Support of Junior Scientists” Presidential Committee in 2014.<sup>1</sup>

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<sup>1</sup> The Cross-Sectional Committee of the Scientific Council acknowledged and approved the *“Recommendations for the Supervision and Qualification of Doctoral Students in Research Facilities”* in September 2014. The recommendations also refer to the so-called *Salzburg Principles*, (*Bologna Seminar 2005: Doctoral Programmes for the European Knowledge Society*, 3-5, February 2005).

1. The Max Planck Society is under an obligation to ensure scientific excellence. When it comes to research within the framework of dissertations, high expectations apply not only to the doctoral students themselves, whose work must contribute to a joint research programme, but also to those supporting them, who must do all they can to ensure that the doctoral students unlock their full potential. All research facilities should convey the framework conditions, requirements, processes and rules for the conferral of a doctorate in a generally accessible and transparent manner.
2. Max Planck Institutes that accept doctoral students cooperate with a suitable university in terms of the doctoral students being accepted onto the relevant doctoral programme at this university if any such programme exists, as well as in terms of their supervisor being approved as the first reviewer of the dissertation.<sup>2</sup>
3. The *Guidelines for Doctoral Training at Max Planck Institutes* are intended to supplement the provisions for doctoral studies at universities and apply to the extent that they are compatible with such provisions. Where not already agreed, MPG research facilities shall agree on rules with the respective partner universities that correspond to the principles of the Max Planck Society and allow appropriate participation by the Research Group Leaders and Directors in the doctoral procedure.
4. The doctoral training offered at Max Planck Institutes is primarily intended to serve the purposes of the doctoral students and support them in the pursuit of a successful scientific career.
5. Dissertations completed at Max Planck Institutes are independent pieces of work that are prepared within the limits of the respective subject-specific and professional practice. The Max Planck Institutes and the doctoral student supervisors ensure that the personal research efforts by the doctoral students for the scientific community are recognized as such.
6. The total number of doctoral students selected per supervisor should be such that a suitable level of supervision is ensured. A supervisor should usually not be the main supervisor for more than eight doctoral students at the same time. Higher numbers are feasible in certain research fields or if more experienced scientists are incorporated into daily supervision of the doctoral students. Supervisors should be given sufficient opportunity for further training relating to supervision.
7. During all phases of their work, the doctoral students must be aware of the date by which they are expected to complete their dissertation. Doctoral theses should be completed within a time-frame that complies with the normal practices of the relevant subject. Except under exceptional circumstances, doctoral theses should take no longer than four years.

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<sup>2</sup> cf. also the *Memorandum of Understanding* between the German Rectors' Conference and the Max Planck Society dated 14 March 2008.

8. A written agreement should be made between the doctoral students and their supervisors at the start of the doctoral procedure, specifying the rights and obligations on both sides and defining the relationship between the doctoral student and supervisor on a clear basis that is transparent to both sides ("support agreement"). The main supervisor of the doctoral thesis and the doctoral student shall regularly discuss the schedule for dissertation completion. Model agreements may be prepared for individual subject groups and used as a basis by research facilities.
9. The doctoral students should be granted funding for the entire period of doctoral study specified in the support agreement, as long as the doctoral student achieves the expected level of scientific performance.
10. A second independent scientist should be available to each doctoral student in an advisory capacity, alongside the respective main supervisor. Supervisors hold regular advisory meetings with their doctoral students about the progress of the doctoral theses.
11. One tried and tested form of advice is the establishment of a Thesis Advisory Committee (TAC) to accompany the doctoral studies phase, whose members are independent of one another; documented meetings of this Committee should be held at least once a year, with doctoral students being given the opportunity to talk to other TAC members without the involvement of their main supervisor.
12. Doctoral students with a doctoral funding contract should primarily be given tasks that directly serve the purposes of their own doctoral project. However, they may also be asked to carry out other scientific services as long as these serve the purposes of their own scientific qualification and the overall primary focus of the employment relationship remains doctoral qualification. Where these contribute to the successful qualification of the doctoral student and do not have a negative impact on the timely completion of an excellent dissertation, doctoral students may/should therefore publish research results, attend courses and conferences, prepare contributions to scientific conferences, participate in teaching activities and contribute to other useful subject-specific activities pursuant to their field of study and in consultation with their main supervisor. This includes measures to develop specialist, methodology and personal skills within a scientific environment. Tools such as peer coaching, peer mentoring, self-organized retreats or meetings should also be supported financially by the Institute.
13. Author agreements between doctoral students and their supervisors must comply with the recognized international rules of good scientific practice for the respective research field. The supervisors should have already encouraged the doctoral students to publish research results during doctoral thesis work where such publications promote the scientific career of the doctoral students and do not have a negative impact on the completion of the doctoral thesis.

14. During their doctoral training, doctoral students must be given the opportunity to discuss any affairs relating to their supervision with an independent officer, particularly in the event of differences of opinion with their supervisor. An officer responsible for doctoral affairs should therefore be available to the doctoral students at MPG research facilities. All doctoral students should be made aware of the identity of this person when they start their doctoral studies. If necessary, this officer could also be employed by the relevant university. The independent officer must ensure that any conflicts are resolved to the satisfaction of all parties, with all due consideration of the justified interests of the doctoral students and the Max Planck Institute responsible for supervision, as well as taking all necessary steps to maintain or restore mutual trust and cooperation.
15. A so-called wrap-up may be carried out in connection with the completion of doctoral studies. Classic doctoral studies at the MPG end with the defence of the dissertation or viva. While the doctoral student concentrates on preparing and submitting his/her dissertation text and completing his/her doctoral studies, the wrap-up is used to finalize research work and refocus in professional and scientific terms. This includes the completion of started manuscripts for publication, as well as theoretical/experimental preparations for the person's next scientific career step. The postdoc phase is often particularly decisive to the student's career. Choosing the right subject focus, the right research environment and the right mentor are important steps when it comes to the qualification of a junior scientist. Any necessary final work on started experimental set-ups or initial pilot considerations for further theory or experiment development guided by an experienced mentor is in the interests of the junior scientist at this stage. The wrap-up phase runs for a limited period. A maximum of 12 months is usually sufficient and appropriate for transition from doctoral studies to the postdoc phase.
16. All rules and regulations should be applied in a flexible manner and in good faith. Doctoral training also ensures that the doctoral students are familiar with the principles of good scientific practice.
17. In their regular evaluations of the research facilities, the Scientific Advisory Boards should explicitly give their opinions on the quality of doctoral student training, with all due consideration of the guidelines for doctoral training and the IMPRS.