



Guidelines for the Doctorate at Karlsruhe Institute of Technology (KIT)

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PREAMBLE

Karlsruhe Institute of Technology (KIT) is the Research University in the Helmholtz Association. It combines in a unique way the tradition of a renowned technical university with the work of a high-ranking large-scale research institution and, thus, offers extraordinary potential to its early-stage researchers.

KIT's early-stage researchers make essential contributions to research, teaching, and innovation. KIT understands the work of early-stage researchers to be gainful for the early-stage researchers themselves, for KIT, and for the scientific community. For this reason, it devotes special attention to its early-stage researchers. KIT demands that early-stage researchers' projects are completed by doctorates and supports them comprehensively, reliably, and with high priority.

A doctorate represents the first phase of independent scientific activity. A doctorate is aimed at making a substantial, independent scientific achievement. It is supported adequately by a supervisor. Hence, the doctoral phase is a qualification phase on high scientific level. Moreover, a wide range of scientific and personal qualification options is offered in the doctoral phase by KIT Departments, institutes, doctoral programs with their outstanding research and cooperation opportunities, and the central institution supporting early-stage researchers, Karlsruhe House of Young Scientists (KHYS).

The present Guidelines for the Doctorate at KIT summarize the relevant regulatory frameworks and are intended to give orientation for both doctoral researchers and their supervisors. The present Guidelines in particular take into account the German Research Foundation's Code of Conduct (DFG code) implemented in the KIT Statutes for Safeguarding Good Research Practice (of September 30, 2021), the Doctoral Guidelines of the Helmholtz Association (of April 30, 2019), and the KIT 2025 Strategy. These regulatory frameworks apply to all doctoral researchers of KIT, irrespective of their discipline, funding, and the place of their research work. The present Guidelines reflect the responsibility KIT assumes for its doctoral researchers.

1. GOAL OF A DOCTORATE AT KIT

The goal of a doctorate is to make a substantial, independent scientific achievement. In the doctoral phase, KIT supports the independence and responsibility of doctoral researchers when they specialize in a scientific area and complete this specialization by a successful doctoral examination. KIT supports the way towards scientific independence by offering comprehensive and adequate supervision and rendering discipline-related and interdisciplinary services.

2. DEFINITIONS

2.1. DOCTORAL RESEARCHERS

Doctoral researchers of KIT conduct research into topics covered by KIT's portfolio and are supervised (scientifically) at KIT. The doctorate is conferred either by a KIT Department or by a department of another university. In the latter case, doctoral researchers conduct their research at KIT where they are scientifically supervised, but pass their doctoral examination at another university. This is one of the consequences of KIT being the Research University in the Helmholtz Association.

In any case, the doctoral relationship at KIT starts with the confirmation of scientific supervision and the conclusion of a doctoral agreement or written agreement.

2.2. SUPERVISORS

All doctoral researchers at KIT are supervised by a primarily responsible supervisor. The supervisor of doctoral researchers who are conferred their doctorates by one of the KIT Departments is a person authorized to participate in doctoral procedures as outlined in the respective doctoral regulations.

Doctoral researchers, who are conferred their doctorate by another university, are scientifically supervised by persons authorized to participate in doctoral procedures or other experienced researchers at KIT. However, the other university or its department is responsible for the doctoral procedure.

In case of structured doctoral programs in particular, additional scientific contact persons may be involved e.g. to support highly interdisciplinary doctoral projects and to better intertwine scientific and interdisciplinary expertise.

3. ESSENTIAL STAGES OF A DOCTORATE

3.1. START OF A DOCTORATE

The start of a doctorate usually encompasses the following steps:

- Conclusion of a doctoral agreement directly after the confirmation of supervision
- Central registration with KHYS via the Docata web portal
- Acceptance as a doctoral candidate by a KIT Department (followed by enrollment, if applicable)

Upon conclusion of a doctoral agreement, doctoral researchers of a KIT Department are obliged to register in Docata, the central web portal for doctoral researchers of KIT, and to regularly update their data there. Within a period of six months upon conclusion of the doctoral agreement and registration, the doctoral researchers apply for acceptance by a KIT Department. In case acceptance is refused by the Doctoral Admissions Committee, the doctoral agreement is canceled.

KIT doctoral researchers who are conferred their doctorates by another university also register in Docata and apply for acceptance by the respective department according to the rules valid at their university. In case acceptance is refused by the Doctoral Admissions Committee, the written agreement is canceled.

In the subject areas of the graduate schools or research training groups implemented at KIT doctoral researchers can apply for admission to a structured doctoral program in addition to acceptance by the respective department.

3.2. PROGRESS OF THE DOCTORATE / DOCTORAL PHASE

Regular scientific exchange between doctoral researchers and their supervisors as well as accompanying qualification measures are defined in the doctoral agreement. Persons having acquired a doctoral degree at KIT are able to do independent scientific research, have a good overview of their discipline, and are well networked. They have developed to independent and competent researchers in line with the culture of their discipline and have published their research results. The doctoral phase is also used by doctoral researchers to qualify for various professional careers and to be successful in the national and international competition for attractive positions within or outside of science.

3.3. COMPLETION OF THE DOCTORATE

Completion of the doctorate is subject to the doctoral regulations of the responsible KIT Department. As a rule, it includes the following steps (among others):

- Application for admission to the doctoral procedure and submission of the thesis to the responsible KIT Department
- Decision of the Doctoral Admissions Committee on opening the doctoral procedure
- Review of the doctoral thesis and oral doctoral examination
- Publication of the doctoral thesis (after a revision, if required) and conferral of the doctoral degree

4. REGULATORY FRAMEWORKS

A doctorate at KIT is embedded in several regulatory frameworks that provide orientation. These include:

4.1. DOCTORAL REGULATIONS OF THE RESPONSIBLE KIT DEPARTMENT

The doctoral regulations represent the legal framework for the doctorate, from acceptance as a doctoral candidate by the KIT Department to the handing over of the doctoral certificate.

The doctoral regulations may be consulted on the websites of the KIT Departments: <https://www.khys.kit.edu/english/doctoral-regulations.php>.

4.2. DOCTORAL AGREEMENT / WRITTEN AGREEMENT

The doctoral agreement or written agreement¹ between the supervisors and the doctoral researchers is concluded directly after the confirmation of supervision. In case this is not feasible, the agreement is concluded as early as possible but not later than within three months upon confirmation of supervision. The doctoral agreement covers the relationship between the supervisor and doctoral researcher and provides transparency in terms of content and time frame of the doctorate. It defines the rights and obligations of the parties. The doctoral project is planned and organized by the involved parties, such that it can be completed with high quality and within an appropriate period. In addition, the agreement may outline mutual expectations, also with respect to e.g. interdisciplinary qualification goals. Supervisors and doctoral researchers use the conclusion of the doctoral or written agreement as an opportunity to answer still open questions regarding framework conditions etc. If acceptance is refused by the Doctoral Admissions Committee, the doctoral agreement or written agreement is canceled.

KIT provides a template of the doctoral agreement and additional information at <https://www.haa.kit.edu> (under "Informationen und Formulare").

4.3. GOOD RESEARCH PRACTICE

All researchers and scientists of KIT are obliged to safeguard good research practice. For the associated regulations and measures, click <https://www.kit.edu/research/scientific-integrity.php>.

4.4. GUIDELINES FOR ETHICAL PRINCIPLES

All scientists and researchers of KIT assume ethical responsibility. The associated rules and measures can be found on the KIT Intranet at <https://intranet.kit.edu/2797.php>.

4.5. GOOD WORK AT KIT

The regulations listed above refer to the doctorate as an academic qualification phase. Aspects of labor law relevant to doctoral researchers working as scientific employees at KIT are covered by other agreements and commitments, e.g. transparent regulations on fixed term contracts in the agreement "Good Work at KIT" https://www.pse.kit.edu/downloads/jobs_karriere/Good%20Work%20at%20Karlsruhe%20Institute%20of%20Technology.pdf.

KIT seeks to ensure that doctoral researchers are funded throughout the entire doctoral period (e.g. through a scholarship or employment).² Supervisors and doctoral researchers always are in close contact with regard to this topic. In the case of a planned employment, KIT seeks to offer its doctoral researchers employment contracts of at least three years' duration³ upon conclusion of the doctoral or written agreement.

¹ The doctoral agreement is concluded with doctoral candidates who are conferred their doctorates by a KIT Department. The written agreement is concluded with doctoral candidates who are conferred their doctorates by another university and do their doctoral research at KIT.

² In the case of parental leaves, funding of the doctoral phase is extended accordingly.

³ Cf. KIT 2025 Strategy, Section 5.2.1, p. 35 (https://intranet.kit.edu/downloads/kit_2025_strategiepapier.pdf; in German) and commitment "Good Work at KIT", Section II, p. 3 (https://www.pse.kit.edu/downloads/jobs_karriere/Good%20Work%20at%20Karlsruhe%20Institute%20of%20Technology.pdf).

5. RESPONSIBILITIES

All persons responsible at KIT cooperate to make the doctoral phase a success. Cooperation of doctoral researchers and supervisors is based on the principles of collegiality, transparency, fairness, scientific honesty, as well as mutual respect and trust. At the earliest possible stage when starting the doctorate, doctoral researchers and supervisors agree on framework conditions (funding, presumable duration, necessary research resources, infrastructure, etc.) and their mutual expectations. During the entire doctoral phase, these aspects are discussed openly and honestly. Doctoral researchers and supervisors are aware of their mutual responsibilities for the completion of the doctorate. They regularly discuss the necessary steps to be taken and the contents to be covered in order to monitor the progress of the doctoral project and to decide on the further proceeding in due time.

5.1. DOCTORAL RESEARCHERS

Doctoral researchers have carefully weighed their motives and deliberately decided in favor of a supervisor, a subject of their doctorate, and a doctoral project at KIT.

The doctoral researchers are primarily responsible for the execution and progress of their doctoral project as well as for their scientific and personal further development. They are aware of the fact that a doctorate covers a longer period of time and may be associated with various challenges. They inform themselves about their rights and obligations as well as about framework conditions and regulations (see above). In particular, doctoral researchers use the conclusion of the doctoral agreement as an opportunity to address open questions with respect to e.g. supervision conditions, regular meetings, integration in working groups, visits of conferences, expected publication performance, qualification and networking options, and conversations on potential career chances, etc. and to have them answered.

Doctoral researchers actively ask the supervisors for a feedback on their doctoral project. They communicate potential difficulties early and openly. In case of conflicts or challenging situations, they cooperate actively to find a solution and look for help by e.g. ombudspersons of KIT and/or other contact offices, if the conflicts between the parties involved cannot be settled directly.

5.2. SUPERVISORS

The supervisors know the regulatory frameworks and decide deliberately in favor of supervising doctoral researchers, the associated responsibility, and their model function. Together with other scientific contact persons, they ensure scientific supervision of the doctoral project and provide advice on scientific and interdisciplinary issues (e.g. career development and further qualification of doctoral researchers). Supervisors support the independence of doctoral researchers, motivate them, and act as e.g. sparring partners in the scientific discourse with them (especially in the advanced doctoral phase).

Supervisors will only confirm supervision of doctoral researchers, if they are able to adequately supervise the latter and consider them qualified to handle the research subject chosen and if the requirements of acceptance are fulfilled. Supervisors provide advice regarding the development and definition of the topic such that it can be handled within an appropriate period of time.

Supervisors also use the conclusion of the doctoral agreement as an opportunity to address and answer open questions regarding supervision conditions, regular meetings, integration in working groups, visits of conferences, expected publication performance, qualification and networking options, and conversations on potential career chances, etc. In the case of difficulties, supervisors, together with their doctoral researchers, look for solutions. In case of conflicts, supervisors actively contribute to finding a solution. If conflicts between the persons involved cannot be settled directly, supervisors contact the respective offices and persons (e.g. ombudspersons).

Supervisors urge their doctoral researchers to apply for acceptance by the Doctoral Admissions Committee of the KIT Department or the respective department of the other university early after the conclusion of the doctoral or written agreement, so that it is clear whether or not any supplementary requirements need to be fulfilled during the doctorate.

The doctoral researchers are given sufficient space to carry out their research projects in order to advance their doctoral project. Throughout the doctoral phase, supervisors account for the compatibility of the doctorate with the personal situation of their doctoral researchers. They give their doctoral researchers an early and transparent feedback on the chances of success of their doctoral projects.

Supervisors have a special responsibility for the rules for safeguarding good research practice being known in their team and seek to ensure their implementation.⁴

5.3. KIT DEPARTMENTS

The right to confer doctorates lies with the university, with details of doctoral procedures being outlined by the doctoral regulations of the eleven KIT Departments. For doctoral researchers who are conferred their doctorate by a KIT Department, the doctoral regulations of the KIT Department ensure transparency of admission requirements and of the doctoral procedure. They specify minimum quality requirements and describe doctoral procedures in cooperation with other universities. The KIT Departments also are primarily responsible for assuring the quality of doctoral procedures.

With the acceptance of the doctoral candidate by the Doctoral Admissions Committee, KIT Departments are obliged to ensure supervision to the extent possible until completion of the doctoral project in accordance with the provisions of the Act of Baden-Württemberg on Universities and Colleges (Landeshochschulgesetz). This also applies when the doctoral agreement is terminated by the supervisors and when supervisors can no longer fulfill their task for an important reason.

The Doctoral Admissions Committee decides on the application for admission to the doctoral procedure that is to be submitted by the doctoral researcher and establishes the Doctoral Examination Committee or Doctoral Committee. The KIT Department seeks to ensure observation of deadlines for the review of the thesis and its defense in particular. Moreover, the principles of equal opportunities and diversity are adhered to by all parties involved.

Each KIT Department has established a Convention of Doctoral Researchers that is actively supported by the KIT Department in fulfilling its tasks and addressing its concerns. The KIT Department ensures that doctoral researchers can exercise their right of co-determination in certain bodies (e.g. KIT Department Council).

5.4. DOCTORAL PROGRAMS

A wide range of doctoral programs (graduate schools, research training groups, etc.) exists at KIT. They offer the opportunity to pursue a doctorate as part of a research program and a structured qualification concept in a certain field. Doctoral programs are aimed at qualifying doctoral researchers in future-oriented research areas and at supporting their personal career development and scientific independence. Moreover, the programs support early networking, internationalization, and cooperation of doctoral candidates across disciplines. Membership of one of the doctoral programs is optional and subject to the requirements adopted for the respective doctoral program.

⁴ See "Statutes for Safeguarding Good Research Practice at KIT", Article 2 (2), https://www.sle.kit.edu/downloads/AmtlicheBekanntmachungen/2021_AB_061_English.pdf.

5.5. KARLSRUHE HOUSE OF YOUNG SCIENTISTS (KHYS)

Karlsruhe House of Young Scientists (KHYS) is the central institution for supporting early-stage researchers at KIT. It is the contact point for all students interested in doctorates, all doctoral researchers, and supervisors and the link that connects all doctoral programs of KIT. KHYS offers comprehensive advice and information on the doctoral phase.

KHYS offers a wide range of courses for interdisciplinary qualification in order to support young scientists in fulfilling their many tasks in research, teaching, and innovation.

In addition, KHYS offers funding measures to enhance independence, initiative, mobility, and (international) networking of doctoral researchers in the science community. Through its specific training programs and various event formats, KHYS prepares KIT's doctoral researchers in the best possible way for their next career steps within and outside of science.

KHYS is responsible for the implementation of the QualityDoc@KIT concept and coordinates quality assurance of the doctorate at KIT. For this purpose, it organizes evaluations and supports the Executive Board and institutions of KIT by providing empirical facts, compiling reports, and preparing presentations on the further development of the doctorate.

In addition, KHYS records all doctoral projects in the central Docata web portal and compiles the higher education statistics required by law.

5.6. KARLSRUHE INSTITUTE OF TECHNOLOGY (KIT)

Irrespective of the scientific responsibility of KIT Departments, supervisors, and doctoral programs, KIT is institutionally responsible for all doctorates. The Executive Board of KIT defines the structural framework needed to ensure a maximum of equal opportunities and it aims to achieve highest quality of the doctorate. To this end, a concept was developed for assuring quality of the doctorate at KIT (QualityDoc@KIT).⁵ Moreover, KIT offers further training on supervision and leadership skills for supervisors.

Doctorates are supported extensively and sustainably. For doctoral researchers, the doctorate is an excellent basis for a professional career in science, industry, and society. For this purpose, KIT provides:

- Binding framework conditions and transparent decision processes as regards selection, employment matters, and work conditions⁶
- A portfolio of career paths at KIT compatible with the national and international science systems
- Structured advice, qualification, and support by instruments, such as Karlsruhe House of Young Scientists (KHYS), graduate schools, and research training groups
- Support with regard to specific topics (inventions, patenting, startups, assistance in the acquisition of third-party funding, university didactics, mentoring, leadership skills, advice concerning national aliens' legislation, etc.) by the respective institutions
- Comprehensive support of the compatibility of family and a scientific career by the corresponding regulations and concept to implement equal opportunities and diversity

To prevent scientific misconduct, KIT has adopted the corresponding statutes, appointed Ombudspersons for Safeguarding Good Research Practice, and established a Commission for Good Research Practice. Moreover, there are Ombudspersons for Doctoral Researchers and Supervisors at KIT, who act as independent persons of trust in case of conflicts and disputes in the doctoral phase. KIT also has several other points of contact, such as a Conflict Management and Psychosocial Counseling Staff Unit. In serious cases, the Executive Board may be contacted in agreement with the respective KIT Department.

⁵ For more information, click the website of KHYS: https://www.khys.kit.edu/english/quality_assurance.php.

⁶ See Commitment "Good Work at KIT" (https://www.pse.kit.edu/downloads/jobs_karriere/Good%20Work%20at%20Karlsruhe%20Institute%20of%20Technology.pdf) and "Grundsätze und Verfahrensbeschreibung für die Personalauswahl am KIT" (Principles and process description for staff selection at KIT) (in German) (<https://www.peba.kit.edu/3165.php>).