



Good Doctoral Supervision at TH Köln

Information for Supervisors and Doctoral
Researchers

Graduate Center

Technology
Arts Sciences
TH Köln

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Preamble

Dear Doctoral Supervisors and Doctoral Researchers,

one of the primary responsibilities of TH Köln is to support early-career researchers, which includes providing high-quality supervision for doctoral researchers. To ensure a high-quality doctoral education, TH Köln aims to guarantee performance-enhancing and fair research and working conditions for doctoral researchers across the university with these information. They are in harmony with ***the order on good research practice at TH Köln*** [↗](#) and the ***principles of the European Charter for Researchers*** [↗](#), which TH Köln addresses as part of its ***Human Resources Strategy for Researchers*** [↗](#).

TH Köln's first guidelines for good supervision of doctorates at TH Köln were developed and adopted in 2017. The present information booklet is based on these 2017 guidelines and replaces them as a resource for supervisors and doctoral researchers. This information booklet was discussed with the Standing Commission for the Advancement of Early-Career Researchers in June 2024. The university's Executive Board approved the new information on September 18, 2024.

Prof. Dr. Klaus Becker
Vice President for Research and Knowledge Transfer

Introduction

First and foremost, a trusting relationship between the supervisor and doctoral researcher lies at the heart of **good supervision**. The **main tasks of supervision** for a doctoral project are:

- The provision of subject-related **support and encouragement** for the otherwise independent academic achievement by the doctoral researcher, e.g. with regard to the content-related and time-based structure of the doctoral phase.
- **Ensuring the high quality** and academic relevance of the research in the doctoral project, e.g. through constructive feedback on the status of the research,
- The **conveyance and adherence to the *principles of good research practice***,
- The provision of adequate **time for the doctoral project and networking**,
- Introduction to the **national and international scientific community**, e.g., through conference participation,
- Opportunities for **professional development and qualification, and advice on suitable career steps**, in and outside academia
- As well as **support in cases of conflicts** and complications.

The primary supervisor of the doctoral researcher bears responsibility for all these tasks, even if they do not have to be carried out solely by the primary supervising professor. In a supervisory team, a sensible coordination regarding these tasks should be established. Additionally, supervision can and should be complemented and enriched by integrating the doctoral researcher into an organized research or working group.

The following sections will outline specific aspects of supervision that should be considered during the various phases of a doctorate. Subsequently, the key aspects that constitute good supervision and apply across all phases will be examined in more detail.

Two Paths to a Doctorate at TH Köln

An increasing number of graduates choose to pursue a doctorate at a University of Applied Sciences (UAS) after completing their master's degree, often to benefit from specialized expertise, infrastructure, and proximity to industry. Those already working in industry also frequently select this doctoral path. At TH Köln, there are two paths to a doctorate:

Doctorate at the Graduate School for Applied Research NRW (PK NRW)

Since the conferment of the right to award doctorates to the PK NRW in 2022, it can independently conduct doctoral procedures and award doctoral degrees. Topic-specific, structured doctoral programs with an in-depth scientific curriculum offer high transparency regarding time planning.

A doctorate at PK NRW is possible for doctoral researchers at TH Köln if the supervisor at TH Köln is a professorial member of PK NRW. Each doctorate is guided by a supervisory team composed of three members. Detailed information can be found in the **general doctoral regulations of PK NRW** [↗](#) and the **specific doctoral regulations of the respective departments** [↗](#) (German only).

Cooperative doctorate

The cooperative doctorate as an already established form of doctorates at UAS, continues to be a second, equally valid path to a doctorate. Several professors have long-standing collaborative relationships within the framework of cooperative doctorates. The team at the Graduate Center Service Desk is available for consultation. Collaboration with a doctorate-awarding university, either national or international, should be formalized through a written cooperation agreement¹.

¹ Sample cooperation agreements for this purpose are available in **German** [↗](#) and **English** [↗](#) and can be provided by the Graduate Center upon request.

Excursus:

Membership at Graduate Center and PK NRW

Graduate Center at TH Köln

All doctorates supervised at TH Köln are registered at Graduate Center of TH Köln. At the beginning of the doctorate, a registration at Graduate Center is mandatory. As members of the Graduate Center, doctoral researchers are part of the university-wide Doctoral Convention. Anyone who has membership status at TH Köln (through employment and/or enrollment) is granted access the resources of TH Köln (e-mail address, IT services, further education, etc.) and all **services of the Graduate Center** ↗ (advice, doctoral program, coaching program, funding program, e-mail distribution list, etc.).

Graduate School for Applied Research NRW (PK NRW)

Professors at TH Köln can become members in a department of the Graduate School for Applied Research NRW if they fulfill the requirements (membership criteria). Members are admitted for 5 years. If the membership criteria are not yet fully met, the status of an associate professor can be granted for a limited period of 5 years. Doctoral researchers can become members of PK NRW if they are supervised by a professorial PK NRW member and meet further requirements.

Further Information: www.pknrw.de/pknrw/aufnahme-und-mitwirkung ↗
(German only)

The phases of a doctorate

Preparation phase

- Reflect on interest and motivation
- Check fulfillment of formal requirements
- Clarify funding, potential application to scholarships
- Find a research topic
- Find a supervisor at TH Köln and obtain an official confirmation of supervision
- Assemble a supervision team at PK NRW together with the TH Köln supervisor / confirm supervisors at the cooperating university
- First exposé / research outline

Initial phase

- Establish a supervisory relationship
- Develop a work and time plan and discuss and finalize a supervision agreement with supervisors
- If necessary, finalize a cooperation agreement with the cooperating university
- Enroll at TH Köln
- Enroll at PK NRW / cooperating university
- Application for acceptance for the doctorate at PK NRW / cooperating university
- Proposal / literature review / initial research

Participation in workshops on good research practice and research data management,

Figure 1 Phases of a doctorate



Main phase

- Research
- Courses/activities from the doctoral program in accordance with the applicable doctoral regulations
- Regular exchange with supervisors
- Annual progress meeting, including an update of the supervision agreement and timeline
- Attend academic conferences
- Publish articles / papers
- Possible stay abroad
- Write the dissertation

Finishing phase

- Career planning
- Revisions and finalization of the dissertation
- Application for opening the doctoral examination process and submitting the dissertation
- Defense/doctoral examination
- Implementation of conditions if necessary
- Publication of the dissertation

as well as other qualification and networking events and the collegial coaching program

Preparation phase

A core element of supervision during the preparation phase is a detailed initial meeting with the potential doctoral researcher. The key points to be addressed are summarized in this checklist:

Checklist

– Framework conditions:

- Requirements according to path for a doctorate at TH Köln
- Assessment of suitability for a multi-year research project: (academic) experience, conditions for the doctorate, motivation
- Intended degree and doctoral subject - Identify and read the applicable doctoral regulations
- Admission formalities (cooperative/PK NRW): Review of prerequisites for the doctorate: usually a university degree (Master's, Diplom, or equivalent); further requirements depending on the doctoral regulations
- Clear communication of mutual expectations and requirements
- Intended career path

– Financing

- Doctoral research position as a research associate (see **information sheet on hiring doctoral researchers** [↗](#) (German only))
- Employment through third-party funded project: Support in finding follow-up funding
- Advice on/support in acquiring other funding options (e.g., **doctoral scholarship** [↗](#))
- Clarification of funding for additional costs (travel for events, research stays, research materials/services, conference attendance, publication costs for articles/dissertation)

– Topic of the Doctorate:

- Definition and delineation, scientific relevance, feasibility, own professional competence/capacity
- Assessment of the effort and risks associated with the research work
- Development of a work and time plan

Initial phase

Building a **trusting relationship** and good collaboration between the supervisor and the doctoral researcher is a crucial step in the initial phase of the doctorate. Therefore, it is important to communicate clear expectations in advance, both from the supervisors to the doctoral researcher and vice versa, to provide everyone with a realistic understanding of the requirements and offer mutual guidance. This **transparency in the supervisory relationship** significantly contributes to the success of the doctoral project.

The joint development and signing of the **supervision agreement** is a central task of the initial phase and should be used to systematically discuss a wide range of topics. As a dynamic document, the agreement should be regularly reviewed and updated by all parties involved throughout the doctoral process.

Checklist

- **Registration**  at Graduate Center (by the doctoral researcher)
- **PK NRW:**
 - At the beginning of the doctorate, a confirmation of supervision² from the primary doctoral supervisor must be signed according to the template provided by PK NRW
 - After assembling the supervision team, enrolling at TH Köln and PK NRW, and being accepted at PK NRW, a **supervision agreement**  with the entire supervision team must be concluded
- **Cooperative doctorate:**
 - Conclusion of a supervision agreement according to the **template of TH Köln**  (alternatively according to the template of the cooperating university, if it meets the minimum criteria according to the guidelines of the DFG). It is recommended to conclude a trilateral supervision agreement jointly with the university supervisor.
 - If possible, a written **cooperation agreement**  between the cooperating university and TH Köln should be concluded. This agreement ensures the access, admission, and execution of the doctorate, as well as the involvement of supervisors in the evaluation on an institutional basis, in order to minimize the risk of a lack of continuity in supervision for both doctoral researchers and supervisors.
- **Participation in a seminar on good research practice** (by the doctoral researcher); mandatory for PK NRW doctoral researchers and highly recommended for all doctoral researchers in the initial phase.

²Templates for the supervision confirmation can be found on the pages of the **respective department**  of PK NRW.

Main phase

The focus of the main phase is on the research by the doctoral researcher and their integration into the Scientific Community, where the researcher is closely supported by their supervisors. This long phase is typically also characterized by unforeseen difficulties during the research work, conflicts, motivation problems, or crises (see excursus on page 16: *Crises of a doctorate and mental health* and page 19: *Conflict resolution strategies*), which need to be overcome. Therefore, the supervisor should always be open to engage in informal exchanges and situational conversations with the doctoral researcher.



Checklist

- **Regular supervision meetings** (at least quarterly)
 - Uninterrupted and one-on-one, maintaining professional distance
 - Documentation of the meetings
 - Topics:
 - Discussion of work results
 - Professional advice and support
 - Planning upcoming milestones
 - Clarification of fundamental questions regarding the research work
 - Discussion and potential support for personal/emotional issues affecting the progress of the doctoral process
 - Addressing and possibly resolving conflicts
- **Regular progress meetings** (at least annually)
 - Possibly with additional contacts (especially mentors, other supervisors, postdocs)
 - Documentation of the meeting
 - Topics:
 - Progress of the doctoral project and critical evaluation of achievements
 - Career planning
 - Review of preliminary dissertation results regarding linguistic presentation
 - Possible revision of the work and time plan
 - Send a copy of the updated work and time plan to the **Graduate Center** [↗](#)
- **Conveying the principles and ensuring compliance with good research practice**
- **Encouraging skill development and extracurricular qualifications**
 - Courses/activities in accordance with the applicable doctoral regulations (at the PK NRW these are defined within the framework of the doctoral programs by the framework doctoral regulations and the departmental doctoral regulations)

Finishing phase

The finishing phase is the phase of supervision in which further **career planning**, which is already important in the previous phases, comes into focus. In this phase, supervisors can serve as important mentors who can support and empower doctoral researchers in their decisions. Additionally, this phase includes the **completion, defense, and publication of the dissertation**.

Checklist

- **Career planning** (see p. 18, *Excursus: The European Competence Framework for Researchers*)
- **Planning the completion**
 - Agreement on whether and when which parts of the dissertation will be proofread by the supervisor
 - Clarification of the formal steps in the procedure in accordance with the doctoral regulations
 - Preparation for the doctoral examination, e.g. by referring to preparatory workshops and attending other doctoral examinations
- **Application for the opening of the doctoral procedure and submission of the dissertation in accordance with the applicable doctoral regulations**
 - Review phase and display
 - Finding a date for the examination
- **Planning of publications and patents**

Information on the framework conditions for the publication of the dissertation (see p. 14, *Excursus: Utilization of research results and transformative research practice*)

Excursus: Utilization of research results and transformative research practice

TH Köln sees itself as a key player in cooperation with academia, industry, and civil society. The focus is on the transfer of ideas, knowledge, and technology within, with, and for society. Research results are not only for the gain of knowledge at universities; they often have (monetary) benefits for the economy and/or society. Transformative research practice simultaneously sets new impulses for one's own research by involving civil society, serves as evidence of one's own innovative capacity, and increases the competitive advantage in acquiring third-party funding. The networks and revenues arising from transfer projects can, in turn, be used as drivers and to finance further research. Research communication plays a central role in facilitating understanding and dialogue with society. Accordingly, transformative research practice can also be used for personal profile building and as an alternative career path (spin-off).

Legal questions regarding the **utilization of research results** ↗ (German only) should generally be clarified at the beginning of research projects. In cooperation with companies on third-party funded projects, it should be ensured for doctoral researchers that results may be published within the framework of the dissertation (possibly with a confidentiality clause). A template contract for regulating the rights to research results is available for doctoral researchers without an employment relationship with TH Köln.

Whether it be initial evaluations, patent searches, commercialization, or support in the patent application process—the Department of Research and Knowledge Transfer offers individualized and comprehensive advice for researchers at TH Köln in collaboration with PROvendis GmbH.

Links und Contact:

Knowledge Transfer ↗

Patent Service: patentservice@th-koeln.de

Entrepreneurship: gateway@th-koeln.de

Acquisition of Third-Party Funding:

forschungsfoerderung@th-koeln.de or drittmittelkoordination@th-koeln.de

Cross-phase aspects of good supervision

Promotion of skills development

All doctoral researchers should be granted sufficient freedom for further qualification. The supervisor can provide support by informing the doctoral researcher about **opportunities for qualification** that serve personal and professional development, and by making participation possible within the timeline. The *RESEARCH COMP* model (see the excursus on page 18) can serve as a support in this regard. The Graduate Center of TH Köln recommends extracurricular further qualification for approximately 4-5 hours per week for those in full-time positions. Relevant agreements regarding both the extent and content should be part of the supervision agreement. The Graduate Center of TH Köln offers a cross-disciplinary, **qualification program** for acquiring extracurricular competencies for the further career path, which can be used free of charge. Other qualification opportunities, such as those offered by the cooperating university or the PK NRW, should also be considered for this purpose.

Integration into the scientific community

Integration into the scientific community and establishing **one's own professional network** are essential components of the doctoral phase. Doctoral researchers should be encouraged from the beginning to present their doctoral projects and receive feedback at various levels within their immediate and broader research environment. This includes, on the one hand, **presenting (initial) research results** within the research group, during (interdisciplinary) research colloquia on-site, as part of presentations to other research groups, and/or at national or international conferences. Additionally, supervisors should support doctoral researchers in developing an **individual publication strategy**, encourage them to engage in (peer) review activities, and jointly explore the possibility of research stays abroad.

Support with career planning

The doctorate is considered a **period of qualification for a responsible professional career**. Therefore, good supervision includes addressing and supporting the doctoral researcher's career planning for the time after their doctorate while they are still in the doctoral phase. Given that most doctorate holders (nearly 80%³) leave the academic sector, discussions should also cover possible career fields in research management, government agencies, and administrations, as well as in industry, business enterprises, and entrepreneurship.

Supervisors should inform doctoral researchers about career workshops, coaching, or relevant advisory services and suggest specific actions to qualify for their desired career path. Career paths of former doctoral researchers, both within and outside academia, can serve as guidance. In the search for specific positions, supervisors should provide support and, particularly for those aiming for an academic career, offer advice on the career option of becoming a professor at a UAS.

During the doctorate, various **crises** typically arise. Regardless, there may be good reasons during the doctoral process to decide not to continue with the doctorate and to pursue a different career path. Such considerations should be openly discussed with the supervisor. If an alternative career path is pursued before completing the doctorate, supervisors should supportively provide guidance on the next steps (e.g., through job contacts) and discuss these jointly.

Excursus: Crises of a doctorate and mental health

Pursuing a doctorate is not a straightforward path, and doctoral researchers typically experience various crises over the course of their doctorate. It is crucial that doctoral researchers receive special support from their supervisors during these crises, and that, depending on the nature of the crisis, additional institutions and

professionals are involved to help overcome the challenges. Supervisors should therefore engage in regular professional development and take advantage of networking and qualification opportunities (such as networking meetings for doctoral supervisors, offerings at the PK NRW, and training program for newly appointed

³ *Bundesbericht Wissenschaftlicher Nachwuchs 2021* ↗

Crises of a doctorate

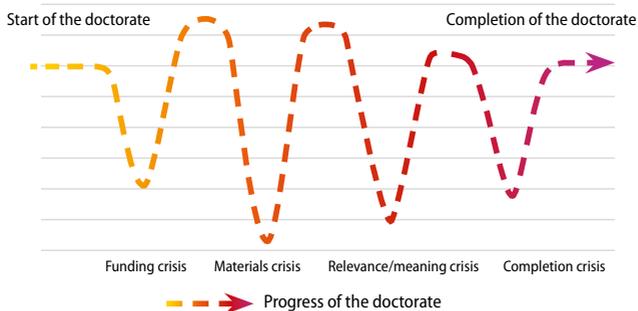


Figure 2:
Crises of a doctorate.
Own figure based on
Fiedler and Hebecker
(2005) and Wergen
(2024)⁴

professors at TH Köln). Additionally, there are health-promoting programs available that are particularly relevant for doctoral researchers during crisis phases.

In addition to the challenges mentioned above, supervision crises may also occur (see page 19: Conflict resolution strategies). To manage these crises, doctoral researchers should seek support and advice, and supervisors should encourage them to do so, particularly by participating in

coaching programs for doctoral researchers. Supervisors should critically reflect on their own and communication and, if necessary, discuss these with third parties. For doctoral researchers, exchanging experiences with peers has also proven helpful. In joint discussions, support for overcoming crises should be sought, and next steps should be explored. Each crisis that is overcome contributes to the maturation process on the path to earning a doctorate and can be considered a significant success.

Points of Contact for Crises and Mental Health:

- Initial Consultation at the **Graduate Center Service Desk** ↗
- **Coaching Program for Doctoral Researchers** ↗
- **Health Promotion for Doctoral Researchers and Students** ↗
- Website **normalersdudenkst.de** ↗
- **Psychological counseling of Kölner Studierendenwerk** ↗
- **Psychosocial counseling of AStA TH Köln** ↗

⁴Fiedler, Werner/Hebecker, Eike (2005): Promotionskrisen und ihre Bewältigung. Empfehlungen zur zielführenden Planung und ergebnisorientierten Gestaltung des Promotionsverlaufs. In: Behrendt, B./Voss, H.-P./ Wildt, J. (Hrsg.): Neues Handbuch Hochschullehre. Berlin: Raabe-Fachverlag für Wissenschaftsinformation.
Wergen, Jutta (2024): Krisen im Promotionsprozess. Coachingzonen Wissenschaft. Ressourcen für Promovierende und Postdocs. URL: <https://coachingzonen-wissenschaft.de/krisen-promotion/>. Zugriff am: 22.07.2024.

Excursus: The European Competence Framework for Researchers

During their doctorate, researchers acquire relevant skills that go beyond scientific expertise. Regularly reflecting on these skills is important to **identify one's strengths and areas for development**. The **European Competence Framework for Researchers (RESEARCH COMP)** ↗, see Figure 3, developed by the European Union in collaboration with relevant stakeholders as part of the new **European Research Area** ↗, is a tool that helps researchers identify, categorize, and further develop their interdisciplinary skills.

In RESEARCH COMP, 38 competencies are assigned to seven competency areas and are supported by learning objectives that can be categorized into four levels of experience (foundational, intermediate, advanced, expert). This model was operationalized into a **tool** ↗ by our doctoral researchers' representatives in 2024, which is suitable **for the entire doctoral phase** both as a self-assessment and as a basis for supervision meetings.



Figure 3: Visualization ResearchComp
©European Union, 2022 | Image: ©Kaisorn #468712596, 2022. Source: stock.adobe.com

Conflict resolution strategies

To prevent conflicts as much as possible, mutual expectations should be clarified at the beginning of the supervisory relationship, and conflict resolution strategies should be discussed. Ideally, these should be outlined in writing in the supervision agreement. Emerging problems and difficulties should be addressed very early on by both parties and resolved in a low-threshold manner whenever possible. If a direct agreement or solution between the conflicting parties is not possible, mediating third parties should be involved. TH Köln has appointed ombudspersons who can be approached by all researchers at the university for issues related to scientific misconduct and, more generally, as trusted individuals for mediation.

Potential Points of Contact for Conflicts:

- **Graduate Center Service Desk** ↗
First contact point for general topics
Email: graduatecenter@th-koeln.de
- **Ombudsperson of TH Köln** ↗
Confidential advice on good research practice
- **Central Equal Opportunity Officer** ↗
Personal counseling for female and queer students and staff
- **Anti-Discrimination Office of TH Köln** (in development)
- **Family Service** ↗
Balancing family and work, childcare, and caregiving responsibilities
- **AStA der TH Köln** ↗ and **Kölner Studierendenwerk** ↗
Psychological counseling
- **Staff Council Representatives** ↗
Concerns of academic and artistic staff

Supervision promoting gender equality

TH Köln considers gender equality to be a matter of course. However, the involvement of women in the academic system and in managerial positions still does not correspond to the proportion of well-qualified women. While »the gender distribution in the transition from university graduation to a doctorate hardly changes,« the proportion of women newly appointed to W2 and W3 professorships is only 27% on average nationwide, despite a continuous increase in recent years.⁵

Therefore it is of an even higher importance that the supervisors play an active mentoring role and shows empathy for the type of pressure that women are subjected to within the academic community. Supervisors should be **aware of gender stereotypes and gender-related biases and must avoid them within the supervisory relationship**. Furthermore, personal career development after the doctorate should be a particularly important topic in the supervision of female doctoral researchers. It should also be ensured that family planning during the doctorate is not a reason for discontinuing it. The Equal Opportunity Office and the Family Service at TH Köln offer counseling and support for doctoral researchers concerning equality and compatibility issues.

Contact the Equal Opportunity Office [↗](#)

Contact the Family Service [↗](#)

⁵ **Bundesbericht Wissenschaftlicher Nachwuchs 2021** [↗](#)

Supervising international doctoral researchers

International doctoral researchers may require special attention: Besides general supervision, they often require **guidance in administrative and practical matters**, such as looking for an apartment, visa and insurance arrangements, and other formalities, especially at the start of their research stay. They should be encouraged and supported to learn the German language and to familiarize themselves with the prevailing academic methods and approaches within the German higher education system and their particular discipline as part of the doctorate-accompanying program at TH Köln.⁶

The supervisor should always place importance on **intercultural sensitivity** in the supervisory relationship, reflecting on and openly discussing cultural differences. They should be aware that accepting international doctoral researchers may involve additional responsibilities, which can enrich their own perspectives.

Contact to the International Scholar Service [↗](#)

⁶TH Köln offers a wide range of qualification workshops in English as well as free **Individual German Language Assistance for Doctoral Researchers** [↗](#)

Further literature

UniWiND (2014). *Betreuung Promovierender – Empfehlungen und Good Practice für Universitäten und Betreuende* ↗ (German only). In: UniWiND-Publikationen, Bd. 4 / 2014.

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eua cde (2022). *Doctoral education in Europe: current developments and trends* ↗

Questions?

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