

## **Position of the Graduate Council regarding the supervision of doctoral candidates**

The introduction of the structured doctorate at the Technical University of Munich, which requires a supervision agreement to be signed at the beginning of doctoral studies, marks a significant step towards providing doctoral candidates with better supervision and guidance. The supervision agreement specifies the intervals at which the doctoral candidate can expect feedback from his or her supervisor. The supervision agreement also provides provisions for incorporating the doctoral candidate into the University community. This creates greater transparency for all concerned – supervisors, the doctoral candidates and the academic department.

However, feedback received by the doctoral representatives in the TUM Graduate Council (GC) from the doctoral candidates at their graduate centers shows that the supervision agreement can only be considered a first step toward more intense supervision.

In view of these issues, the task force (TF) for supervision was set up within the TUM-GC. The goal of this TF is to highlight existing shortfalls in the supervision of doctoral candidates, to work on suggestions for improvement, to revise the current supervision agreement, and to make proposals for refinement of the Regulations for the Awarding of Doctoral Degrees (Promotionsordnung).

*The following results were ratified by the members of the Graduate Council during the meeting of 19.4.2016, thus comprising the Council's official position.*

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### **1. Development of the research question**

In the first phase of the doctorate, intensive and continuous support in the development of the research question is expected. This applies to:

- Identifying and defining sub-goals and milestones.
- Establishing a realistic timeframe within which these are to be achieved.
- Developing sub-projects that can be completed under the direction of the doctoral candidate in the context of student research projects (conducted by bachelor's or master's students, interns, etc.).
- Introducing the specialist discipline and pointing to relevant literature.

### **2. Publication strategy**

Part of the role of the supervisor lies in providing doctoral candidates with an overview of the various publication opportunities (journals, conferences, etc.). The supervisor discusses with doctoral candidates the relevance of their results as regards publication, with a view to producing an appropriate end product. In general terms, active supervision is expected on questions of when, how and where to publish. An additional discussion then follows as to the final form the dissertation should take (monograph or cumulative, see the Regulations for the Awarding of Doctoral Degrees §6 Art. 2).

### **3. Feedback concerning publications**

During the preparation of publications relevant to the dissertation (journal articles, posters, conference contributions, lectures, etc.) the supervisor is encouraged to give doctoral candidates prompt feedback, as a rule within twelve working days. In addition to detailed advice from supervisors relating to the overall concept of the publication, candidates require detailed subject-related and stylistic feedback.

### **4. Consistency of supervision**

In order to train and educate young scientific talent at TUM, the Graduate Council recommends, as a rule, that a professor (primary supervisor) should not supervise more than ten doctoral candidates at the same time. If this level of personal supervision cannot be guaranteed, the supervisory function should be handed over to a correspondingly experienced scientist with the necessary academic and supervisory credentials. (adapted from the position paper of the Graduate Council regarding the quality of the scientific education received by doctoral candidates of 29.04.2015)

### **5. Availability of supervisors**

The supervisor should be available to doctoral candidates at least once every 4 weeks for 30 minutes in order to discuss their research. This may take the form of a face-to-face meeting, a (video-) call or an email exchange. If required (prior to the doctoral candidate submitting a publication or delivering an external lecture), there should be a guarantee of receiving feedback at short notice.

## **6. Discussion of feedback during an annual review**

Regarding the doctoral candidate's professionalization and qualification, the supervisor should be available once a year for a performance appraisal – if desired by the doctoral candidate. This conversation should assess the doctoral candidate's work over the past year, and identify potential areas for improvement. The following topics may be discussed:

- The doctoral candidate's technical work in the context of the doctoral project. The intention here is not to deal with technical details (these are discussed during the sessions described in point 5). Rather the status of the entire project should be firmly established (achievement of the milestones mentioned in point 1).
- Evaluation of the candidate's scientific writing, work and presentation skills.
- Evaluation of the candidate's commitment to teaching. This may be carried out as appropriate, whether in a discussion of the EvaSys course evaluation or through the evaluation of bachelor's or master's theses supervised by the candidate.
- Evaluation of the candidate's level of engagement in his/her academic unit and ability to work in teams.

## **7. International orientation**

The doctoral candidate's international orientation is an important goal and should be encouraged in the form of conferences or research studies at universities abroad. At the request of the doctoral candidate, their supervisor should advise and support him or her accordingly.

## **8. Correction and assessment of the doctoral dissertation**

In the final phase of doctoral study, doctoral candidates, doctoral advisors and supervisors should gather as appropriate to discuss in detail the content and presentation of the main findings. Before submitting the doctoral dissertation to the faculty, the supervisor should copy-edit the first draft within a maximum of two months. After submitting the doctoral dissertation to the faculty, the doctoral advisor and second examiner are expected to complete their assessment promptly. Every effort should be made to limit to one year the duration between the submission of the first version of the doctoral dissertation to the supervisor until the conclusion of the doctorate.