

Position of the Graduate Council regarding the quality of the scientific education received by doctoral candidates

In the summer of 2014, the Graduate Council surveyed all TUM doctoral students with the goal of evaluating the quality of the scientific education they are receiving through TUM.

The Graduate Council agreed that the following issues represent the most important results of the survey. This decision enjoys the support of all graduate center doctoral student representatives and is thus the official position of the Graduate Council regarding the scientific education being provided to doctoral students at TUM.

1. Doctoral Student Supervision

The Graduate Council recommends centralizing the issue of doctoral student supervision at the TUM Graduate School and involving the graduate centers of the TUM schools and departments in critical discussions related to the following points:

- **What does doctoral student supervision mean at TUM and is there a common understanding among the TUM schools and departments on this issue?**
- **What is the function of the primary supervisor at TUM? Is it a model preferred by TUM in which primary supervisors only meet on a limited basis with their doctoral students? (41 percent of the survey respondents indicated they meet with their primary supervisor less than once a quarter.)**
- **Is it a model preferred by TUM in which the meeting is often handled not by the primary supervisor, but by another person who is not qualified to examine doctoral theses (including other doctoral students)?**

In order to train and educate young scientific talent at TUM, the Graduate Council recommends, as a rule, a professor (primary supervisor) to doctoral student ratio of not more than 1 to 10. 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.

2. Academic Practice

Results of the survey clearly indicated a serious knowledge deficit at TUM with regard to the **Code of Conduct for Safeguarding Good Academic Practice and Procedures in Cases of Academic Misconduct**. Nearly half of the doctoral candidates are unfamiliar with this code of conduct or have little knowledge of it. The fact that the survey revealed discrepancies such as authorship sequence changes or frequent authorship additions in publications, even if the number of cited instances was small, also indicates that a lack of knowledge regarding these guidelines is not uncommon among the supervisors.

The Graduate Council urges everyone - professors and students - to communicate effectively and carry out and adhere to the TUM Code of Conduct, which raises the following question:

How will TUM handle violations of its own guidelines for scientific practices now and in the future?

3. Job and Employment Contracts

In the area of so-called half-time teaching positions, there are currently a large number of 50 percent E13 positions and an increasing number of 65 percent E13 positions. The Graduate Council views this as a positive development. There are, nevertheless, many TUM Chairs that do not take advantage of the opportunity to increase half-time positions from 50 to 65 percent through available funding. For many of the external scientific organizations with whom TUM is competing for the best talent, such increases are already the norm.

Furthermore, doctoral students view the situation with the extension of employment contracts as a very critical issue.

The Graduate Council recommends, as a rule, increasing 50 percent positions to 65 percent posts, with any exceptions to this rule requiring justification. In addition, doctoral students should be informed about contract extensions at least four months prior to the expiration of their current agreement, not only out of respect for and courtesy to the doctoral students themselves but also to enable timely reporting to the unemployment office, which must be informed three months in advance.

4. Workplace Safety

The survey exposed a sizable deficit in the area of workplace safety for doctoral students at TUM and identified a significant demand for:

- **Liability insurance to cover doctoral students in the lab.**
- **Access to medical examinations performed by occupational physicians.**

The Graduate Council recommends that the TUM Graduate School initiate discussion of these issues with the graduate centers of the TUM schools and departments, implement corresponding solutions and thoroughly inform TUM doctoral students of the outcomes of these discussions.

5. Mobbing and Discrimination

The survey revealed a moderate rise in the number of mobbing and discrimination cases experienced by doctoral students. However, it does not provide enough detailed information about the individual situations due to privacy protection concerns.

For this reason the Graduate Council recommends increasing mobbing and discrimination awareness at all levels of the university.

6. Mentors

There is a noticeable lack of clarity among doctoral students regarding the responsibilities and benefits of mentors. While the Graduate Council believes mentoring is a worthwhile effort, the concept is not being sufficiently communicated by the TUM Graduate School, particularly regarding the potential and desired forms of mentoring. It must also be made clear that the selection of the mentor is a decision of the doctoral student with the support of the supervisor and is not to be stipulated by the later.

The Graduate Council recommends that mentors be named *after* doctor students have attended the kick-off seminar, since these events provide all doctoral students an introduction to the mentoring concept here at TUM.

The points enumerated above were unanimously adopted as official positions by the members of the TUM Graduate Council, i.e. by the elected representatives of the doctoral candidates, at the meeting of 29.04.2015 under the chair of Felix Dietrich and Jochen Scholtes.