IGSSE Qualification Program Guide

The elements of the IGSSE Qualification Program complement the Qualification Program of TUM Graduate School. They reflect and support the characteristics of IGSSE regarding its interdisciplinary, international and intersectoral orientation.

Doctoral researchers benefit from

- international experience and exchange
- interdisciplinary scientific networks
- training on optimizing collaboration within project teams
- networks beyond the academic system, including science communication in society

For IGSSE members, the qualification program of the TUM Graduate School as well as the qualification program of the IGSSE is mandatory for a doctorate at TUM. The qualification elements of the TUM Graduate School program are described in the TUM Regulations for the Award of Doctoral Degrees and the Statutes of TUM Graduate School. The qualification elements of IGSSE are described below.

**Seven IGSSE training elements complement the doctoral research project.**

All elements must be accomplished before submitting the doctoral thesis. There is no specific order or timeline required.

**External research phase & program specific elements (Table 1).** At IGSSE, every doctoral researcher is assigned to one of IGSSE’s funding programs, i.e. IPT, INW, JADS and EIT-UM. Depending on the funding program, the external research phase and the program specific elements differ more or less.

**Table 1: External research phase & program specific elements**

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<tr>
<th>International Project Teams (IPT)</th>
<th>Innovation Networks (INW)</th>
<th>Joint Academy of Doctoral Studies (JADS)</th>
<th>EIT Urban Mobility (EIT-UM)</th>
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<td><strong>External research phase</strong></td>
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<td>3 months international</td>
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<td>12 months international research phase</td>
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**Cross-program elements (Table 2)** are the same for all IGSSE doctoral members, no matter which program they are assigned to.

**Table 2: Cross-program elements**

- **Workshop**
  - 1 participation in concise seminar reflecting the interdisciplinary, international and intersectoral concept of IGSSE. Focus on ethical foundation of science, good scientific practice and responsible leadership.

- **Science communication**
  - 1 research presentation to an audience other than the scientific community.

- **IGSSE Forum**
  - 2 participations (minimum) in annual meeting of all members, enhancing cross-disciplinary networks and perspectives.

- **Project Team Toolbox**
  - ½ day training on efficient work and communication strategies, facilitating project team’s internal collaboration across international/interdisciplinary boundaries to achieve scientific goal, to be taken within the first 12 months of the project.

- **Doctoral Research**
  - Scientific work within IGSSE project team, under supervision of PIs and in collaboration with post-docs and fellow doctoral candidates.

The IGSSE management team is happy to help with any questions about the qualification program. Please contact us:

| International Project Teams (IPT) | ipt.igsse@tum.de |
| Innovation Networks (INW)         | inw.iggse@tum.de |
| Joint Academy of Doctoral Studies (JADS) | jads.igsse@tum.de |
| EIT Urban Mobility (EIT-UM)       | eit-um.igsse@tum.de |
Explanatory notes

International research phase

**JADS:** This element is covered within the 12-month research stay at the Imperial College London.

**Innovation Networks:** International, intersectoral, interdisciplinary exchange at a network specific research organization.

International research phase - report

Please upload your report to DocGS/International experience after your trip to get your stay acknowledged. IGSSE uploads all reports to the IGSSE SharePoint server (for members only). This will provide your fellow doctoral researchers with peer-to-peer, helpful information to prepare their stay abroad.

The report needs to be written in English, consist of at least one DIN A4 page, and contains:

1. Host institution and name of academic host
2. Dates and length of stay
3. First contact to host
4. Scientific aims, and, if applicable:
   - scientific achievements (e.g. joint publications)
   - formation of solid contacts (e.g. future projects)
5. Administrative aspects (e.g. visa, accommodation)
6. Cultural and social aspects (e.g. integration into research group)

Of course, you may add any information to this list. We especially appreciate pictures of your stay (e.g. lab, campus) but this is not an essential part of the report.

Program specific elements

**International Project Teams (IPT)**

*What:* Organize a small international event using TUM international projects and initiatives as a starting point

*Goal:* Learn and reflect about internationalization, virtual collaboration, sustainable mobility and modern communication

**Innovation Networks (INW)**

*What:* Training in Grant writing, science management, team collaboration, presentation skills

*Goal:* Forming long-term collaborations capable of attracting third-party funding, successfully disseminate research findings

*What:* Midterm evaluation. Project presentation at IGSSE Forum, followed up by network-specific break-out sessions with experts

*Goal:* Learn to convincingly present network research, receive feedback and advice for second half of network duration and grant application

**Joint Academy of Doctoral Studies (JADS)**

*What:* Subject-specific course work

*Goal:* Enhance interdisciplinary and international scientific exchange in cohort

**EIT Urban Mobility (EIT-UM)**

*What:* Subject-specific course work

*Goal:* Enhance interdisciplinary, international and intersectoral scientific exchange, as well as entrepreneurship in the context of urban mobility