
Code of Good Practice for PhD candidates and Supervisors of TU Delft Graduate School

1. Introduction

This Code of Good Practice serves as a practical guideline for PhD candidates as well as their supervisors at TU Delft Graduate School. The goal is to optimise PhD education and research to provide an inspiring working environment.

TU Delft Graduate Schoolⁱ aims to stimulate the personal and professional development of PhD candidates at Delft University of Technology, to streamline PhD studies and to prevent drop outs. It does so by providing high-quality doctoral education, supervision and monitoring. This Code of Good Practice lays out practical guidelines for all PhD candidates and their supervisors allied to TU Delft Graduate School. Its central aim is to optimise the relation between PhD candidates and their supervisors. It establishes a general vision of excellent PhD supervision and provides practical information on the formal and informal arrangements that may guide the PhD candidate and the supervisory team during the various stages of the PhD trajectory.

The Code is part of our response to the Bologna third cycle in education and has been drawn up in consultation with our university's academic community. It builds on existing rules and regulations at Delft University of Technology, notably the Doctorate Regulationsⁱⁱ and the Code of Ethics.ⁱⁱⁱ

2. Doctoral supervision

Appropriate supervision is vital to the successful completion of a PhD degree. Excellent doctoral supervision implies a partnership based on scientific integrity and mutual respect that benefits both PhD candidates and their supervisors in their research and careers. TU Delft Graduate School therefore strongly supports a culture of cooperation between PhD candidates and their supervisors.

There are different kinds of supervisors. Every PhD candidate has at least one promotor, a full Professor who is the responsible supervisor. A PhD candidate usually has a daily supervisor as well (an Assistant or Associate Professor or postdoc). Supervisors have to fulfil the UFO requirements as listed in the UFO job profiles.^{iv} The supervisors should combine junior and senior research experience with PhD coaching expertise. The promotor should select the other supervisors in joint agreement with the PhD candidate and on the basis of matching expertise and skills. Supervisors from organisations other than Delft University of Technology may also be involved (supervision training is available at our university).

Successful collaboration requires both PhD candidates and their supervisors to fulfil certain roles and responsibilities. The PhD candidate is the most important actor in the PhD process, and is expected to take ownership of the design, organisation and execution of the work; to deliver agreed work packages on time; to conduct the research with care and to check for errors; to ensure that reporting is complete and transparent.^v

The promotor and daily supervisor are the PhD candidate's main contact person with regard to content or process-related questions. The role of the supervisors is to supervise the PhD candidate with the appropriate intensity and respect, to assist in research design, to provide day-to-day guidance and feedback, to monitor research progress and to assure research quality. With regard to their research work, PhD candidates can expect regular help, advice and support from their supervisors. PhD candidates should be given room to develop their own ideas and plans. Supervisors should provide alternative ideas and plans if their PhD candidate reaches an impasse. The PhD candidate's progress should be discussed regularly (at least twice a month). These consultations should result in specific agreements on short- and medium-term goals.

As of the introduction of the Graduate School every new PhD candidate is appointed a mentor. The mentor is a Dr and a scientific staff member from a different section (and preferably from a different department) of Delft University of Technology.^{vi} The PhD mentor supports and advises the PhD candidate in relation to the process-related aspects of the PhD programme. He functions as a sounding board, anticipates possible bottlenecks, and, if necessary, refers the PhD candidate to relevant persons in the organisation. PhD candidates can contact their mentor if they experience serious problems with the progress of their PhD programme that cannot be solved in discussion with their supervisors. The mentor will inquire into the relations with the promotor and daily supervisor, will encourage the PhD candidate to take ownership of the problem and will provide additional support. Since the mentor is meant to be objective, he may never be involved with the PhD candidate's research work. The PhD candidate and mentor meet as frequently as necessary, at least twice during the first year, and at least once a year in the following years.

Finally, as members of Delft University of Technology's research community, both PhD candidates and their supervisors are expected to adhere to the University's core values of Expertise, Involvement, Integrity and Respect^{vii} as well as the generally agreed norms and principles of research conduct.^{viii}



3. Project planning and arrangements

 PhD candidate  Daily Supervisor  Promotor

3.1 The introductory phase of the PhD programme focuses on a good start, the formal framework, the PhD agreement and the Doctoral Education Programme.

Month 0 - 3

3.1.1 It pays to get off to a good start

-  • The **supervisors** ensure careful selection of PhD candidates.
-  • When the appropriate candidate is found, the **supervisors**:

- Notify the Human Resources department and the Faculty Graduate School so practical arrangements can be made;
- Welcome the first-year PhD candidate, taking his cultural background into account;
- Have a meeting with the first-year PhD candidate and provide him with a comprehensive and specific project description including the assignment and funding.
- Take the cultural background of the PhD candidate into account.



• The **first-year PhD candidate**:

- Initiates the formal intake procedure with his supervisor and the faculty Human Resources department;
- Ensures that all personal formalities (visa, permits, etc.) are in order (international PhD candidates can contact the International Office^x for support);
- Has a formal intake with TU Delft Graduate School, an introductory welcome at the Faculty Graduate School;
- Studies the information received during the intake;^x
- Gains access to the Doctoral Monitoring Application (DMA) and completes the PhD agreement, see 3.1.3;
- Participates in the introduction program for PhD candidates: the PhD Start-Up.^{xi}

3.1.2 The formal framework: Delft University of Technology's Doctorate Regulations



- The **supervisors** ensure that the first-year PhD candidate complies with the formal requirements for registration with the University Graduate School, and inform the first-year PhD candidate of the Doctorate Regulations.



- The **first-year PhD candidate** should study the Doctorate Regulations closely, and become familiar with the different aspects and stages of the PhD programme.

3.1.3 The PhD Agreement: A comprehensive project plan and framework for supervision

- For each first-year PhD candidate of TU Delft Graduate School, the PhD Agreement is a prerequisite.^{xii} The PhD Agreement describes:

- The working title of the thesis;
- Ways to achieve the expected output;
- Aims for publication;
- The amount of time spent on teaching and other non-research activities;
- The supervisors;
- The frequency and nature of supervision;
- Possible courses to be followed in order to complete the Doctoral Education Programme.



- The **first-year PhD candidate** finds out who the members of his supervisory team are (the promotor, daily supervisor). Partners from other academic institutions or from industry may be involved in supervision.



- The **supervisors**, the **first-year PhD candidate** and TU Delft Graduate School agree on a reasonable and acceptable project plan and framework for supervision. Timeframes and milestones help create a useful structure for the four-year horizon: The first-year PhD candidate and the supervisors clearly describe the research subject, progress criteria and the responsibilities of all those involved in the PhD Agreement.




- The **supervisors** agree to the division of specific responsibilities. They ensure that the project's aims, content and planning for the next 1 + 3 years are in realistic balance. They establish the right organisational and logistical working conditions for the PhD candidate.



- Teaching activities are part of the PhD candidate's work. The **supervisors** will inform the PhD candidate of the amount of time he is expected to spend on teaching and other activities. As a rule, a PhD candidate can expect to spend about 12% of his time on teaching or educational activities.






3.1.4 PhD Agreement and the Doctoral Education Programme^{xii}

- The PhD candidate is a 'student' of TU Delft Graduate School: the Doctoral Education Programme supports the candidate's development of competences. PhD candidates are trained in Transferable skills (15 GS credits) and Discipline-related and Research skills (30 GS credits). The latter include the so-called Learning on-the-Job activities (maximum of 15 GS credits).
 -  • The **first-year PhD candidate** should investigate which courses are available and sketch out a plan that spreads the Doctoral Education activities over the course of the following years. They should explore the kind of certificate and the number of GS credits earned by each activity (45 in total), study the validation procedures and make agreements regarding available budgets with their supervisors.
 - DMA, the Doctoral Monitoring Application, is a web-based tool used by the PhD candidate, PhD supervisors and the Graduate School organisation. The PhD candidate uses DMA to record his PhD Agreement, DE programme planning and his overall progress by uploading DE course certificates. The supervisors use DMA to check and confirm the PhD Agreement and to monitor the progress of their PhD candidate(s).
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3.2 The research phase

Month 4 - 42

3.2.1 Monitoring and review

-  • Good supervision is a critical success factor. The **supervisors** and PhD candidate will hold a performance appraisal interview at least once a year in order to review and assess the performance of both parties (the Result and Development Cycle^{xiv} guarantees a minimum standard for yearly evaluation and assessment).
-  • In addition, the **supervisors** and **first-year PhD candidate** should have a progress meeting at least twice a month, discussing progress of the research, the educational programme and the overall PhD process. It is important that supervisors and PhD candidates come to these meetings well-prepared and that supervisors reserve ample time for guidance and supervision.
-  • The **supervisors** strive to challenge and inspire the PhD candidate, both by the content of their work and in terms of their personal development.
-  • The **PhD candidate** is given the opportunity to discuss his research at seminars or PhD colloquia in the research group or Graduate School, to prepare optimally for publicly communicating research findings. Quality awareness is shared: All contributions are open to discussion and everyone takes responsibility for their work.
-  • The **supervisors** ensure that reviews take place within a wider circle of peers and supervisors. They will encourage exposure outside Delft University of Technology (e.g. through presentations at conferences).

3.2.2 The PhD community

- The research group and the fellow PhD candidates in the Faculty Graduate School create the PhD candidate's peer-environment. A number of Faculties have a Faculty PhD Board listed on their website which may help and represent the PhD candidate at Faculty Graduate School level.
 - The PhD events of Delft University of Technology and Promood provide an excellent opportunity for contacts outside the daily environment.
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- The **supervisors** encourage contacts with fellow PhD candidates and active participation in PhD activities inside Delft University of Technology (Promood and the Graduate School) and elsewhere.

3.2.3 Go/No go decision

- After 9 to 15 months (preferably 12), a formal go/no-go decision is made based on the progress and quality of the developed research proposal. At this occasion, the PhD Agreement is discussed (again) and changed or updated if necessary.
- PhD candidates who fail to pass this milestone will have to leave the Graduate School. For more information about this side of the process contact your local HR department.

3.2.4 Discovering the world outside Delft

- Dutch national research schools may provide contacts and education within the specific discipline of the PhD candidate.
- Contacts within the funding agency or company of the PhD candidate can serve as a networking platform.
- Exposure to the international arena is essential to the PhD candidate's development and future career opportunities: he should aim to present papers or posters at international conferences.
- PhD candidates should reflect on their future careers and discuss the possibilities with their supervisors well before the end of their PhD programme. There may be career opportunities within the university or outside it. If necessary, Delft University of Technology may provide further training.

3.3 The graduation phase. This final phase of the PhD programme concerns preparations for thesis defence, the actual defence of this thesis and the outlook thereafter.

Month 42 - 48

3.3.1 Preparing a defensible thesis

- **The PhD candidate:**
 - Studies the Doctorate Regulations closely to ensure the right procedure is followed regarding the (draft) thesis and propositions;
 - Has successfully completed the Doctoral Education programme and submits it via DMA;
 - Applies for a date reservation for the Doctorate Defence Ceremony at the Office of the Beadle (in consultation with the supervisor);
 - Ensures all the required forms are submitted to the Office of the Beadle in time;
 - Consults the promotor about the intended composition of the Doctoral Committee and the way in which they will evaluate the thesis.
- The **supervisors** monitor the PhD candidates timeline for graduation as set out in the Doctorate Regulations.
- The **promotor** approves the PhD thesis if the research is of high quality.
- The **promotor** finally approves the propositions. In exceptional cases, the promotor may propose the accolade of Cum Laude (With Distinction), along with detailed supporting arguments.

3.3.2 Thesis defence

- Conscientious hospitality is vital to the success of Doctorate Defence ceremonies:
 - The **promotor** should make advance checks to verify whether the full doctoral committee will be able to attend at the designated date and time;
 - The **promotor** should pay attention to detail in the organisation of the ceremony, e.g. to adherence to the dress code, the information and welcome provided to committee members and other guests etc.;
 - The **promotor** ensures that the quality of the committee is exemplary, and that the laudation is strikingly apt.
- Well in advance, the **PhD candidate** makes an appointment with the Chair of the Doctoral Committee and with the Office of the Beadle in order to discuss the ceremony (and its practical arrangements) in detail.
- A mock-defence with supervisors and colleagues may help prepare the PhD candidate for the defence.
- Although the thesis has already been approved, the doctorate has not yet been awarded. A strong Doctoral Defence is important. Its quality influences the committee members' final decision.

3.3.3 After the defence

- Supervisors are ambassadors of Delft University of Technology. Relations with funding parties and with university partners from outside the Netherlands are actively maintained.
- PhD graduates are very special alumni indeed - each one represents a new, long-term extension of Delft University of Technology's academic network.
- An evaluation with the PhD candidate takes place in order to assess the quality of the PhD programme (e.g. by means of an interview by the PhD mentor or through an online evaluation).
- The Doctoral Education certificate provides a clear overview of the PhD candidate's competences and transferable skills and should also facilitate access to career paths outside the university.
- Supervisors' continued concern for the post-graduation career paths of PhD graduates reflects well on Delft University of Technology.

4. Concluding remarks

TU Delft Graduate School strongly encourages all its affiliated PhD candidates and supervisors to follow this Code of Good Practice. Compliance with this Code is encouraged in various ways: All PhD candidates and supervisors within Delft Graduate School will receive the Code, which will also be placed on the Graduate School website. The Code will be used as a reminder during the annual Result & Development Cycle and will play a role in master classes for supervisors organised by the Graduate School. Additionally, the Board of TU Delft Graduate School will maintain active feedback with its community. The Code will be updated regularly in response to new developments at Delft University of Technology and feedback from members of the TU Delft Graduate School. For further questions related to the rules and principles of PhD supervision, please consult any of the following references:

- For questions related directly to the doctorate regulations, please see the Doctorate Regulations of Delft University of Technologyⁱⁱ or contact the Office of the Beadle at pedel@tudelft.nl, +31 (0)15 278 6456 or +31 (0)15 278 9162

- For questions on the norms and principles of research and supervision, please see the Code of Ethicsⁱⁱⁱ or visit Delft University of Technology's website on integrity at <http://www.integrity.tudelft.nl>
- For process-related questions, contact your PhD mentor.^{iv}
- For support in relation to issues of a personal or psychological nature, please consult the psychological advisors at <http://www.psychologen.tudelft.nl>
- For support in relation to undesirable or unethical behaviour of others, please contact the confidential advisors at Delft University of Technology at
<http://www.tudelft.nl/live/pagina.jsp?id=982c04b3-11cb-43ce-925c-4fbb8891c17c&lang=en>
- For more information about future career paths, contact your career counsellor at
<http://www.tudelft.nl/live/pagina.jsp?id=5cac3f31-2251-46ef-827bec5d948f0313&lang=en>
- For any other information related to this Code or Delft Graduate School, please contact Delft Graduate School directly at graduateschool@tudelft.nl or <http://tudelft.nl/en/research/graduate-school>

5. References

- i. See also the Delft Graduate School website: <http://tudelft.nl/en/research/graduate-school/>
- ii. Doctorate Regulations of Delft University of Technology: <http://home.tudelft.nl/index.php?id=6911&L=1>
- iii. See the Delft University of Technology Code of Ethics at <http://integrity.tudelft.nl>
- iv. Please see the UFO job profiles:
<http://www.tudelft.nl/live/pagina.jsp?id=105b085e-ae6f-4118-a973-945c3d03f166&lang=en>
- v. This section draws on the Research Code of the Academic Medical Centre in Amsterdam (with minor adaptations):
<http://www.amc.nl/upload/teksten/research%20institutes/amc%20research%20code%20def.pdf>
- vi. For a detailed description of the role of the PhD mentor, see
<http://home.tudelft.nl/en/research/graduate-school/support-and-supervision/>
- vii. For more information on these core values, please see the Code of Ethics
- viii. See Delft University of Technology's website on integrity
- ix. See the International Office website:
<https://intranet.tudelft.nl/live/pagina.jsp?id=2a1d790b-31d5-4bf9-8d13-2631802b84ae&lang=en>
- x. The booklets 'Prologue' and 'Mastering your PhD' are available for download at
<http://www.promood.tudelft.nl/index.php/publications/prologue> and at
<http://home.tudelft.nl/en/research/phd-research/workshops-and-courses/mastering-your-phd/mastering-your-phd/>
- xi. More information on the PhD Startup programme can be found at:
<http://home.tudelft.nl/index.php?id=13398&L=1>
- xii. The PhD Agreement may not be required for internal or external PhD candidates
- xiii. For more information on the Doctoral Education Programme, see:
<http://tudelft.nl/en/research/graduate-school/doctoral-education-programme>
- xiv. For the Result & Development Cycle, see:
<https://intranet.tudelft.nl/live/pagina.jsp?id=a3804b16-d9a4-47d4-b60a-bc8f6dfda8a3&lang=en>