



Utrecht University

Faculty of Geosciences

Quality assurance plan for PhD research, training and supervision

Graduate School of Geosciences

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1. Introduction

This document constitutes the quality assurance plan for PhD research, training and supervision at the Graduate School of Geosciences (GSG). Utrecht University has an internal quality assurance system for research and education. One of the principles underlying this system is that the responsibility for the quality of research and education, and the related quality assurance system, lies primarily with the deans of the faculties. The deans have assigned the care for training and supervising PhD candidates to the Board of Studies of the Graduate Schools.

This PhD quality assurance plan is an elaboration of the document ‘Graduate School of Geosciences Profile 2017–2021’ [1] with regard to the topic of quality assurance for PhD research, training and supervision. It is further based on the Utrecht University framework as formulated in the paper ‘Minimum requirements for the quality assurance system for doctoral programmes’ [2] and the University’s Doctoral Degree Regulations [3], and is in line with the Collective Labour Agreement of Dutch Universities (CAO-NU) [4]. In matters not covered by this quality assurance plan, the CAO-NU and the University’s Doctoral Degree Regulations apply. The Young Geoscientists’ Council (formerly known as the Geosciences PhD Council) was regularly consulted on the development of this plan.

1.1. Graduate School of Geosciences: mission and profile

The mission of the GSG is to deliver outstanding independent professionals in the field of geosciences. These professionals will be familiar with the latest developments in their scientific field and they will be able to develop this field further, based on scientific and socially relevant knowledge and questions. The profile of the GSG, including its mission and strategic aims, is further detailed in the document ‘Graduate School of Geosciences Profile 2017–2021’ [1].

1.2. Quality process and focus of plan

The PhD quality assurance plan of the GSG is based on the notion that evaluation of the quality of teaching and supervision in the PhD programmes is a cyclical process (see figure 1). In the first stage of the process, the Board of Studies of the GSG defines a set of key quality objectives; in the second stage, assessment and progress are monitored; and in the third stage, the findings are reviewed and recommendations for improvement are developed. Finally, in the last stage of the process, improvements are implemented prior to the start of a new cycle. The role of the Board of Studies is to provide a framework for and to monitor the programmes; the implementation task is delegated to the research institutes, except for the Graduate School courses (Board of Studies). Each year, the Board of Studies will evaluate this quality assurance plan and its implementation, and adapt the plan if deemed necessary and appropriate.

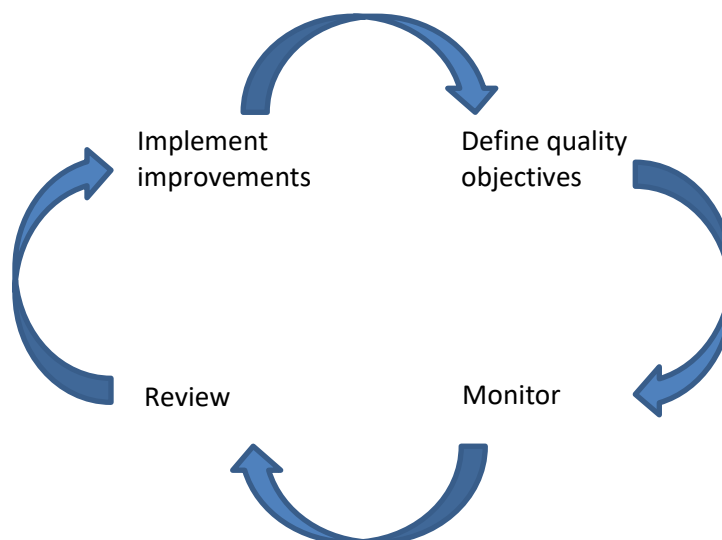


Figure 1. Quality process

The PhD programmes are also externally evaluated using the Strategy Evaluation Protocol 2015–2021 (SEP) [5], according to which the evaluation committee considers the supervision and instruction of PhD candidates. This includes such topics as the institutional context of the PhD programmes, the selection and admission procedures, the programme content and structure, supervision and the effectiveness of the programme plans and supervision plans, quality assurance, guidance of PhD candidates to prepare them for the job market, duration, success rate, exit numbers and career prospects. These and other topics are also discussed in this document. Please note that in this quality assurance plan, topics like selection and admission procedures, supervision and monitoring are considered to be part of quality assurance, rather than distinct topics. The PhD quality assurance plan focusses on:

- The key elements of the PhD programme (including programme structure - a typical GSG PhD candidate's track is presented in the Appendix);
- Organisational embedding;
- The selection, admission and enrolment of PhD candidates;
- Supervising PhDs, counselling/career counselling, training of supervisors;
- Monitoring progress of PhDs at an individual PhD level and at sub-programme level;
- Evaluation of courses.

1.3. Types of PhD candidates at the Graduate School of Geosciences

Geosciences PhD candidates perform research in the realm of the research topics at the Faculty of Geosciences with the aim of writing and defending a doctoral thesis under the supervision of a supervisor (a professor or an associate professor holding the *Ius Promovendi*) at the Faculty. Many candidates work full time at the Faculty of Geosciences, whereas others may, for example, primarily work on their thesis in their own time. Below is an overview of the five most common types of PhD candidates, based on the types distinguished by the VSNU [6]:

1. PhD candidates employed by Utrecht University (CAO-NU applicable):
 - a. *Standard PhD candidates*. These candidates typically have appointments of 0.8–1.0 FTE as PhD candidates at Utrecht University.
 - b. *Utrecht University employees who do not have appointments as PhD candidates*, but do have an agreement to work towards a PhD degree, financed with time and/or money.
2. *Scholarship PhD candidates* (not employed by Utrecht University). They have their PhD track financed by a scholarship from, for example, a foreign government, an international organisation or a funding agency. Utrecht University does not provide scholarships to PhD candidates.
3. *Externally funded PhD candidates* (not employed by Utrecht University). They have their PhD track financed with time or money other than scholarships. An example is a PhD candidate whose employer provides her with time within her appointment to work towards her PhD degree.
4. *External PhD candidates* (not employed by Utrecht University). These candidates do not have appointments at Utrecht University and do not have any external funding. They work towards their degree in their own time and with their own funds.

The registration procedure for all five types of PhD candidates (1a, 1b, 2, 3, 4) is described in section 3.1.1.

2. Key elements of the PhD track

2.1. Objective of the track

The objective of the PhD programme is to train PhD candidates to become independent academic researchers. PhD candidates undertake a programme of study in addition to conducting supervised

PhD research. A PhD track within the GSG starts with the submission of the request for admission to the doctoral programme to the Board for the Conferral of Doctoral Degrees, the registration with the GSG and the establishment of the Training and Supervision Agreement (see section 3.1.1). The track ends with the thesis defence and subsequent conferral of a doctoral degree, or with the premature ending of the unfinished research project.

2.2. Learning outcomes

Upon successful completion of the PhD programme, GSG PhD candidates should meet at least the requirements formulated in the Doctoral Degree Regulations of Utrecht University [3]. More specifically, within the GSG they should demonstrate their achievement of the following learning outcomes related to discipline-specific, academic and career orientation knowledge and skills. These learning outcomes are based on the document 'Graduate School of Geosciences Profile 2017–2021' [1] and are in line with the 'Dublin' descriptors third cycle awards [7].

Discipline-specific knowledge and skills

- The candidate is able to make a contribution through original research that extends the frontier of knowledge in one of the fields covered by the Faculty of Geosciences, by developing a substantial body of work meriting international publication that can withstand the scrutiny of national and international peer review.
- The candidate has demonstrated a systematic understanding of a field of study in geosciences and is able to apply independently the scientific methods of the discipline to the development, interpretation and application of new knowledge in that field.
- The candidate has acquired and worked with a substantial body of knowledge which, at the very least, embraces the principles and methods of international academic practice and of theorisation, methodology and study in the discipline concerned.
- The candidate is capable of the critical analysis, evaluation and synthesis of new and complex ideas in one of the fields of geosciences.
- The candidate is able to look beyond his/her own field of expertise and to link the knowledge of his/her own field to other disciplines.

Academic skills and attitude

- The candidate can demonstrate the ability to conceive, design, implement and adapt a process of research with scholarly integrity.
- The candidate is able to adequately communicate with peers, the larger academic community and society in general about his/her areas of expertise.
- The candidate is able to carry the social responsibility for the conduct, application and use of his/her own research.
- The candidate is able to indicate the societal relevance of the results of his/her scientific work and, where applicable, to translate these results into practical recommendations and/or applications.
- The candidate can demonstrate skills in project management and coordination. He/she is able to take responsibility for the direction of his/her project.

Career orientation skills

- The candidate has insight into his/her own competences and ambitions and is able to reflect on his/her own functioning.

The extent to which the PhD candidate has achieved the learning outcomes is evaluated by the supervisor(s) during the project and when assessing the final thesis (see section 3.1.6).

2.3. Training programme preconditions

PhD candidates undertake a research project and a programme of study. They follow specific courses to deepen and broaden their knowledge and expertise in a particular scientific area, and to acquire the academic and career orientation skills necessary to become independent scientists and, depending on their choice of future career, to prepare for a career outside academia.

To this end, PhD candidates are encouraged to attend a variety of lectures and courses, to gain experience in a more practical manner and to acquire knowledge and skills in interaction with other scientists. They are the drivers of their own scientific and personal development, and are expected to take the initiative, to look for solutions and to be proactive.

In principle, PhD candidates spend at least 80% of their time within the PhD track on research and at most 20% on the training component, such as training on the job in teaching and following courses. The time to be spent on training depends on the candidate's prior learning and experiences. The right to follow courses applies to time, not to financial resources. The supervisor should be asked for permission and advice.

The full-time PhD programme takes a maximum of four years up to the submission of the thesis to the Assessment Committee¹. In special circumstances, exceptions may be made for *standard PhD candidates* on a case-by-case basis, respecting the CAO-NU.

2.4. PhD programmes and their structure

The GSG offers the following PhD sub-programmes, all of which are run by Faculty of Geosciences institutes:

- Earth Sciences (Institute for Earth Sciences Utrecht)
- Human Geography and Spatial Planning (Research Institute Urban Futures)
- Physical Geography (Physical Geography Research Institute)
- Sustainable Development (Copernicus Institute of Sustainable Development)

Because the programme of study is geared towards the research project, the future career, and the prior knowledge and skills of the individual candidate, there is no one-size-fits-all programme. However, the programme structure is the same for all PhD candidates at the GSG. It consists of a number of components, each serving one or more of the learning outcomes from section 2.2:

- I. Discipline-specific knowledge and skills
 - Primary research project and final thesis
 - Training activities for discipline-specific knowledge and skills
- II. Academic skills and attitude
 - Work experience and training activities for academic skills and attitude
 - Learning to play an active role in research communities
- III. Career orientation skills

2.4.1. Discipline-specific knowledge and skills

Primary research project and thesis

During the PhD programme, candidates conduct **supervised PhD research**. This is the most important component of the programme. It is carried out in the context of the defined PhD sub-programmes of the Faculty of Geosciences. The PhD candidate's supervisors will commit themselves to providing proper supervision (see section 3.1.3). Part of the research project is the acquisition of discipline-specific knowledge (through reading and discussing) and the contribution to the scientific literature in the domain of the research project. Candidates must adhere to the rules set out in the Netherlands

¹ Adapted requirements apply to part-time programmes.

Code of Conduct for Research Integrity [8]. When working on their research projects, the development of academic skills, such as project management and coordination, also play a role.

The track ends either with the thesis defence and subsequent conferral of a doctoral degree, or with a premature ending of the unfinished research project. A **doctoral thesis defence** takes place in public, according to the rules and regulations laid down in the University's Doctoral Degree Regulations [3]. If the project is ended prematurely, the candidate delivers a final report on his/her work, if possible, in consideration of the possible continuation of the project by another researcher.

Training activities for discipline-specific knowledge and skills

PhD candidates may **follow specific courses and attend workshops** to acquire discipline-specific knowledge. Discipline-specific courses may be offered by Utrecht University or other universities (such as summer schools or other courses), the national research schools, national and international research networks or the research institutes. Discipline-specific knowledge can also be acquired by **engaging with other researchers** by, for example, attending conferences (see section 2.4.2).

2.4.2. Academic skills and attitude

Work experience and training activities for academic skills and attitude

PhD candidates **follow courses and attend workshops** designed to help them to develop academic skills and attitude, which are essential in our knowledge-based society. The nature of the activities a PhD candidate engages in depends on the candidate's needs, ambition and prior learning. Examples of skill topics are: communication with academic and non-academic audiences, research methods (including data storage), teaching, research integrity and ethics, societal impact, writing grant proposals, and project management and coordination. Courses for enhancing academic skills and attitude are offered by the GSG and other institutes within and outside Utrecht University.

Academic skills and attitude can also be acquired by **learning on the job**. For example, part of the research project involves writing articles and presenting work to peers. Some candidates may choose to communicate with the general public by, for example, writing press articles or using social media. Another example is secondment to societal sectors, which often involves learning academic skills.

Teaching is an academic skill for which specific arrangements are made. In principle, *Standard PhD candidates* are involved in teaching, in order to gain teaching experience and acquire qualifications for a future academic position. Specific teaching tasks may differ per department. Training on the job in teaching should not be at the expense of the progress of the thesis. To ensure that PhD candidates can spend enough time and effort on their PhD research, the total time of the training component (including training on the job in teaching and following courses) is at most 20% of the PhD candidate's total employment time. PhD candidates cannot be asked to spend time on teaching in the final year of their track. Teaching in the final year is allowed only on a voluntary basis. Following a PhD programme is generally insufficient for obtaining a Basic Teaching Qualification (*Basiskwalificatie Onderwijs* or *BKO*), although teaching experience can be part of an educational portfolio that can later be incorporated in a BKO. A list of teaching tasks performed during the PhD track can be provided by the Director of Education at the PhD candidate's request. Utrecht University and the Faculty offer teaching courses for staff members who have little or no teaching experience.

The following two courses are mandatory. A training in the field of **scientific integrity** is mandatory for all PhD candidates. Exemptions may be granted only in exceptional cases, to be decided upon by the vice-dean of research. Second, all PhD candidates whose PhD tracks start from 1 September 2020 onwards and that have education tasks, should enroll in **education training**. Exemptions may be granted if the candidate has sufficient experience in teaching, for example, as a junior teacher. The vice-dean of research and the vice-dean of education decide upon this together.

Learning to play an active role in research communities

PhD candidates participate in activities designed to help them to play an **active role in national and/or international research communities**. Candidates are encouraged to attend meetings and seminars organised by the research institutes or national and/or international research networks and schools, to attend guest lectures, and to participate in national and international conferences, collaborative research, international exchange programmes, short research visits or longer stays abroad. The last-mentioned are excellent opportunities for candidates to gain additional experience and knowledge, feedback and ideas, to improve their CVs and to broaden their networks.

Special attention is given to community building within the GSG by, for example, facilitating collaboration between PhD candidates and Master's students, or by organising PhD introduction events. A strong community encourages mutual learning and the mutual development of ideas, thus bringing knowledge and skills within the community to a higher level. Moreover, after graduation, alumni are likely to maintain their connections with their fellow community members and the GSG. This provides a valuable link to societal partners.

2.4.3. Career orientation skills

People follow a PhD programme to acquire the competences demanded by knowledge-intensive jobs in society. These may be jobs inside or outside academia. PhD candidates should take charge of their own career development.

Candidates may want to attend career orientation **courses and workshops**. For example, Utrecht University organises the annual PhD Activating Career Event (PhACE). Alternatively, **more interaction with societal sectors**, for example through secondment and collaboration, may help candidates to learn about opportunities and requested capabilities in societal sectors, and also help them to broaden their networks. This also applies to the attendance of events at which employees in societal sectors, including alumni, make presentations.

PhD candidates are expected to start exploring career options inside or outside academia at the beginning of their third year at the latest. The candidates' own initiative is important in this process, but they may need some extra help. Candidates are encouraged to contact the Faculty's Career Officer, who offers support in this process. The Geosciences Career Services offer **coaching in career orientation** in order to improve the employability of the graduates.

3. Quality assurance

3.1. Quality assurance at the level of the individual PhD candidate

3.1.1. Selection and enrolment

The Board of Studies of the GSG has overall responsibility for the recruitment and selection of all PhD candidates. In practice, these candidates will be recruited and selected by the research institutes and the project leaders (and proposed supervisors and co-supervisors). The faculty actively strives for the diversification (gender and cultural) and internationalisation of its research staff, while attracting talent.

To get admission to a GSG PhD programme, candidates must adhere to the conditions as described in chapter 1, section 2 of the Doctoral Degree Regulations of Utrecht University [3], describing the criteria for admission to the doctoral degree (article 4, including articles 7.18 and 17a.18 WHW). In most cases, this means that candidates must have earned the degree of Master. If the candidate does not have a Master's degree, the Board for the Conferral of Doctoral Degrees will decide on admission on a case by case basis. It is assessed whether the combination of prior education and work experience corresponds to a Master's degree. Further criteria that play a role in the recruitment and selection of PhD candidates are discussed below.

Many PhD candidates in the Netherlands are *standard PhD candidates*, namely university employees with appointments as PhD candidates. Interested parties may apply for advertised positions as standard PhD candidate. In the selection procedure, the quality of the applicant is of primary importance². The research focus and scientific curiosity of candidates are taken into account, for example, as is the scientific quality as shown by earlier study results such as a (Research) Master's thesis and possible publications. The research institute establishes a selection committee³ made up of the proposed supervisor(s) and, if applicable, the project leader. The invited applicants are given the opportunity to share their vision on the project they applied for through the job opening.

If a research institute offers a PhD position to a candidate, a process for admission and registration must be adhered to. At Utrecht University, the PhD monitoring system MyPhD is used for this purpose. MyPhD supports the processes related to the registration and the monitoring of the progress of (individual) PhD candidates, and provides management information to be used for quality assurance and reporting.

The process of admission and registration, using MyPhD, must be initiated directly at the start⁴ of the research leading to a doctoral degree. The PhD candidate submits to the Board for the Conferral of Doctoral Degrees a request for admission to the doctoral programme. Submitting this request is mandatory. The request, which is subject to prior approval by the supervisors/co-supervisors, the research director and the Dean of the Faculty of Geosciences, is officially registered in MyPhD. At least the following data is provided: (1) starting date; (2) type of PhD candidate according to the VSNU; (3) faculty and graduate school; (4) supervision team. The Board for the Conferral of Doctoral Degrees checks the quality of the PhD candidate (i.e. his/her qualifications) and of the supervisor(s) and co-supervisor(s). If accepted, the PhD candidate is also accepted as a PhD candidate by the GSG. As a consequence of admission and registration, the PhD candidate has certain rights, as well as certain obligations, such as to take the initiative, have a proactive attitude and be self-organised.

3.1.2. Training and Supervision Agreement

Within three months after the start of the research leading to the doctoral degree (see 3.1.1), the PhD supervisor and the PhD candidate establish and submit an individual Training and Supervision Agreement (TSA). The TSA sets out the rights and obligations of the PhD candidate and his/her supervisors during the PhD programme. Its purpose is to ensure the quality of the training and supervision of the PhD candidate. The TSA is mandatory for all PhD candidates.

The candidate takes the initiative in preparing the TSA, for which a template is available. After completion of the TSA, it is confirmed by the PhD candidate and his/her supervisor(s), supported by MyPhD. The TSA serves as the basis for the first annual Progress Review (section 3.1.5). The first supervisor is the final responsible person.

The Board of Studies of the Graduate School determines the format of the TSA for the PhD sub-programmes. It has at least the following components:

- Project title and brief project description;

² For *non-standard PhD candidates* (types 1b, 2, 3, 4), a selection procedure is in place in which the quality of the applicant and the fit of the proposed project in the research themes of the group and GSG are important.

³ *Other UU employees* (type 1b) are selected through a selection committee upon being hired for their specific job, which may not include a PhD track from the start. They may enter a PhD track at a later stage, to be decided upon by the envisaged supervisor, after having discussed this with the research director. *Other candidates* (2, 3, 4) seek a supervisor for their PhD proposal themselves. The envisaged supervisor decides whether he/she will supervise the candidate, after having discussed this with the research director.

⁴ In the case of an employment contract or other contract with the university, the start date is the commencement date of the contract or agreement. If there is no agreement or contract with the university, the PhD candidate must register at the actual start of the programme and at least three years before the expected PhD defence date, i.e. at the start of supervision (supervision meetings), the start of data collection and ethics review (if relevant).

- Supervision (supervisors and co-supervisors, mode, time, distribution of tasks between supervisors and co-supervisors);
- Proposed training programme/specific modules (time spent, topics, mandatory elements):
 - Domain-specific knowledge and skills;
 - Academic skills and attitude – including teaching tasks;
 - Career orientation skills;
- Research community activities (e.g. conferences);
- Reporting obligations and evaluation;
- Access to facilities and services;
- Schedule for the final year (to be set by the (co)supervisor(s) and the PhD candidate at the start of the planned final year).

The TSA may contain additional information depending on the research focus of the PhD candidate and whether or not he/she is enrolled in a full-time or part-time PhD programme.

3.1.3. Supervision

The promotor (supervisor) bears the ultimate responsibility for supervision. Supervisors are professors or other employees of Utrecht University holding the *Ius Promovendi*. Responsibilities of the supervisor(s) may be delegated to a daily supervisor (co-promotor). At most two promotors and two co-promotors may be involved. The minimum is one promotor and one (co-)promotor.

During the project and evaluation of the doctoral thesis, the supervisor regularly assesses the extent to which the PhD candidate has achieved the learning outcomes. The candidate and the supervisors together determine the most efficient and adequate supervision style, depending on the subject, methods, required and available skills, progress shown and personal preferences. Supervisors and *standard* and *scholarship PhD candidates* are expected to meet frequently (e.g. a few times a month) to discuss progress and expectations. For other types of candidates, other agreements can be made. The meetings have an informal character and are focused on coaching and guiding. Candidates are expected to be proactive and to meticulously prepare for the meeting; this includes preparing and sending the agenda and relevant documents to their supervisors in time. As part of their professional development, supervisors are encouraged to follow a course on supervising PhD candidates.

3.1.4. Counselling

Each research institute within the Faculty of Geosciences has at least one PhD mentor. PhD candidates may contact the PhD mentor at any point during their programme with personal issues and/or issues that they do not want to discuss with their supervisor(s). A faculty confidential PhD advisor is available as first point of contact for PhD candidates that have problems in the relation with other PhD candidates, supervisor or manager. The role of the PhD mentors and advisor is to advise and support PhD candidates and to act in their interest. They are independent, to maintain the respect of their peers when taking on the role of mediator. They are responsible for their own actions. PhD mentors and advisor are bound to confidentiality and do not act without the consent of the PhD candidate. If necessary, they report to the dean, taking into account privacy (with the consent of the PhD candidate).

If the nature of the problem is such that it is beyond the remit of the mentor or advisor, his/her formal role will end; if possible, the PhD advisor or mentor will refer the candidate to other counsellors or services, such as the staff welfare service, the confidential advisor for inappropriate behaviour or the confidential advisor for staff (university ombudsperson)⁵. PhD candidates can also contact these counsellors and services directly, for example, if they feel more comfortable discussing their problem with someone further away from their workplace. If the problematic issue relates to academic integrity, the PhD advisor or mentor is obliged to refer the issue to the Faculty's Academic Integrity Counsellor or to the University's Academic Integrity Counsellor. If a problem, or a dispute between a

⁵ Some counsellors are available for all PhD candidates, where others are available for specific types only (for example, UU employees and/or scholarship candidates). An overview is available via the GSG website.

PhD candidate and his/her supervisor, cannot be solved by the PhD advisor or mentor, he or she may refer the candidate to the Dean of the Faculty of Geosciences, according to the Doctoral Degree Regulations of Utrecht University [3] (see also section 3.4 on Disputes).

3.1.5. Annual Progress Review

During the project, the supervisor regularly assesses the extent to which the candidate has achieved the learning outcomes. At least once a year the PhD candidate has a Progress Review: a meeting⁶ with the supervisor to discuss the progress made by the PhD candidate, and the supervision. The supervisor is responsible for the planning and conduct of the meeting. Both the supervisor and the PhD may each bring someone else along, if desired, in consultation with each other. An example is a daily supervisor.

The PhD candidate provides a written progress report⁷, to be discussed with the supervisors. The report contains a standardised evaluation of all aspects of the work of the past period, insight into the progress of the project, and a re-evaluation by the PhD candidate and supervisor(s) concerning the expectations of the PhD project. The progress report obliges the PhD candidate to:

- Look back: did he/she meet the goals set for the past period? How does the progress relate to the overall goal of the project? For example, is the project on schedule, did the candidate publish enough, did the candidate attend enough courses?
- Look ahead: which goals does he/she want to reach in the period to come, and how does he/she plan to do so?

This applies to all aspects of the training, including the research project, other activities of learning on the job, specific courses, and career development. Being the driver of his/her own development, the PhD candidate is expected to take a proactive role in the meeting and its preparation.

The candidate sends the progress report to the supervisor(s) at least one week prior to the meeting. The supervisor records the assessment and the agreements made in the meeting. The PhD candidate confirms this written, confidential report. The supervisor then sends it to the Human Resources department of the Faculty⁸. The agreements made during the meeting are then addressed during the preparations for the next annual Progress Review.

Unsatisfactory progress on the learning outcomes may have consequences. These consequences and relevant procedures are as follows⁹. At six and nine months after their appointment, PhD candidates' progress and performance is reviewed by their supervisors in a Progress Review. If progress is not satisfactory in the first six months, candidates are given three months to improve their performance. The interview at nine months is known as the 'go/no-go' review. A negative review after the first nine months may lead to dismissal from the PhD programme. As with regular annual progress reviews, both the supervisor and the PhD may each bring someone else along. The second (co-)promotor will be present at go/no-go reviews in any case. The Human Resources department is involved in the go/no-go process in cases where the progress is not satisfactory¹⁰.

3.1.6. Final review of the thesis and defence

Admission to the doctoral degree is granted to any person who satisfies all the requirements laid down in chapter 1, section 2 of the Doctoral Degree Regulations of Utrecht University [3]. In practice, this

⁶ For *UU employees* (types 1a and 1b), this is the Assessment and Development Interview (A&D, or B&O).

⁷ *UU employees* (types 1a and 1b) use the A&D form as a template for the progress and meeting report. Other PhD candidates use the Progress Review form for non-employees.

⁸ A report is sent to Human Resources in the case of *UU employees* (types 1a and b) or guests that are registered as such with Human Resources. In other cases, the PhD candidate and supervisor keep a copy themselves.

⁹ This applies to standard PhD candidates (type 1a). For *Other UU employees* (type 1b) a similar procedure is followed, but the timing is adapted to the situation at hand. For other candidates (types 2, 3 and 4), a negative review can lead to dismissal from the PhD programme. The procedure depends on the specific agreements.

¹⁰ The Human Resources department is involved in the case of *standard PhD candidates* (type 1a) only.

means that the pursuit of a doctoral degree is open to anyone who:

- a) Has earned the degree of Master pursuant to article 7.10a WHW, first or second paragraphs, and
- b) Has written a doctoral thesis to prove his/her competence for the independent pursuit of science or, as the case may be, has manufactured a doctoral design, and
- c) Has satisfied the requirements set out in the regulations pertaining to the conferral of doctorates as referred to in Article 7.19 WHW.

The procedure for final review of the thesis and defence is as follows. Before the end of the appointment or contract (or otherwise agreed duration of the PhD track), the PhD candidate submits his/her thesis manuscript to the supervisor. The supervisor is responsible for checking the quality of the manuscript and verifying whether the candidate has achieved the learning outcomes of the PhD programme offered. When the supervisor has approved the thesis manuscript, it can be presented to an independent Assessment Committee. The procedures and assessment criteria for reviewing a doctoral thesis are laid down in the Doctoral Degree Regulations of Utrecht University. These Regulations also describe the procedures and conditions related to the appointment of members of the Assessment Committee. In addition to these conditions, the GSG requires the Assessment Committee to have at least one female member.

Before admitting the candidate to the doctoral thesis defence, the Board for the Conferral of Doctoral Degrees checks both the supervisor's and the Assessment Committee's approval of the candidate's manuscript; both approvals must be officially registered in MyPhD, the University's system designated for that purpose. A doctoral thesis defence takes place in public, again following the Doctoral Degree Regulations. The GSG requires the Doctoral Examination Committee to have at least one female member - if possible, at least one of the female members of the Assessment Committee has her seat in the Doctoral Examination Committee.

By default, no extension of an appointment/contract is granted if the appointment/contract ends before the thesis is ready for review and defence. Any provisions are considered on a case-by-case basis.

3.2. Quality assurance at the level of PhD programme and Graduate School

3.2.1. Review of courses

The GSG is responsible for monitoring the quality of the courses it offers and aims to maintain and improve the quality and quantity of its course offerings. Once a year, courses are evaluated using standardised evaluation forms. The Graduate School submits the course evaluation results to the course coordinator for comment. The Board of Studies reviews the evaluation results and makes suggestions for changes or improvements. Every year, the Board of Studies also evaluates the curriculum the School offers as a whole.

3.2.2. Review of PhD programmes

Each year the departmental Research Director provides a report consisting of information on the duration and success rate of the PhD programme (table E4 as specified in the Strategy Evaluation Protocol 2021-2027 [5]) and a brief narrative explaining these figures. The Young Geoscientists' Council (section 3.3) and GSG collaborate in performing a survey among the PhD candidates every two years.

The reports and the results of the survey are discussed by the Board of Studies and used in its periodic evaluation of the PhD programmes, with the aim of improving the PhD programmes and the quality assurance mechanisms.

The dean or a delegate of the dean has an annual discussion with all (co)promotors about the progress, duration and success rate of the PhD trajectories that he or she supervises. This is done through

individual discussion in A&D meetings with promotor and co-promotor, in addition to the annual monitoring by the faculty and the department.

3.2.3. Review of quality assurance plan for PhD research, training and supervision

Each year, the GSG Board of Studies evaluates the quality assurance plan (the current document) and its implementation, and adapts the plan if deemed necessary and appropriate.

3.3. PhD representatives

The **Young Geoscientists' Council** is a platform consisting of PhD representatives from the four departments within the Faculty of Geosciences. The Council represents the PhD candidates at the GSG level, by discussing PhD-related issues with the board. The Council also serves as a signpost, showing PhD candidates where they might find answers to their PhD-related questions. It also organises PhD career events, as well as community building activities and workshops.

Likewise, **Promovendi Overleg Utrecht (Prout)** – an association formed by volunteer PhD candidates from all graduate schools within the University – represents the interests of all PhD candidates at Utrecht University. It also provides information on many topics (e.g. income taxes for PhD candidates) and a PhD guide with information on, for example, the rights and regulations for PhD candidates (simplified version), finances and finishing a PhD.

Although neither of these platforms has a formal status within the GSG, the GSG is very glad that they exist and makes grateful use of their activities and the results thereof.

3.4. Disputes

Section 7 on the 'Settlement of Disputes' of the Doctoral Degree Regulations of Utrecht University [3] applies in disputes concerning doctoral theses. However, in the case of a dispute or a controversy, PhD candidates are advised to first contact the PhD mentor of their institute or the faculty confidential PhD advisor (see section 3.1.4).

In the case of issues that cannot be handled according to the Doctoral Degree Regulations, all stakeholders may consult the Board of Studies through the administrative secretary of the GSG. The Board of Studies will react within four weeks and propose a procedure to resolve the dispute. PhD candidates may also seek mediation from the University's confidential advisor for staff (university ombudsperson).

Reference list

- [1] 'Graduate School of Geosciences Profile 2017 – 2021', Faculty of Geosciences, Utrecht University, July 2017, amended version March 2020, <https://www.uu.nl/en/education/graduate-school-of-geosciences/about-us/profile> (2021.08.12).
- [2] 'Minimum requirements for the quality assurance system for doctoral programmes', Utrecht University, 2020, via <https://www.uu.nl/en/organisation/phd-programmes/practical-matters/regulations-and-forms> (2021.08.12).
- [3] 'Doctoral Degree Regulations Utrecht', Utrecht University, 2020, via <https://www.uu.nl/en/organisation/phd-programmes/practical-matters/regulations-and-forms> (2021.08.12).
- [4] 'Collective Labour Agreement of Dutch Universities 1 January 2020 – 31 December 2020', https://vsnu.nl/files/documenten/CAO/2020/CLA_Universities_Netherlands_2020.pdf (2021.08.12).
- [5] 'Strategy Evaluation Protocol 2021-2027', VSNU, KNAW, now, 2020, <https://www.vsnunl.nl/sep> (2021.08.12).
- [6] 'Typen promovendi', VSNU, 2019, https://www.vsnunl.nl/files/documenten/Feiten_en_Cijfers/Typering_promovendi_2019.pdf (2021.08.12).
- [7] 'Shared 'Dublin' descriptors for Short Cycle, First Cycle, Second Cycle and Third Cycle Awards', report from a Joint Quality Initiative informal group, 2004, https://tauu.uu.nl/wp-content/uploads/2015/01/Dublin_Descriptoren.pdf (2021.08.12).
- [8] 'Netherlands Code of Conduct for Research Integrity', KNAW, NFU, NWO, TO2, VH, VSNU, 2018, <http://www.vsnunl.nl/files/documents/Netherlands%20Code%20of%20Conduct%20for%20Research%20Integrity%202018.pdf> (2021.08.12)

Appendix: Time schedule for GSG PhD candidates

The scheme below shows a typical time schedule for GSG PhD candidates. It applies to a four-year track for *standard PhD candidates* and *scholarship PhD candidates* (types 1a and 2). The time schedule may deviate for other types of candidates.

YEAR 1
At the start of the doctoral programme
Submission of the request for admission to the doctoral programme to the Board for the Conferral of Doctoral Degrees and registration with Graduate School of Geosciences.
Within three months from the start of the programme
Submission of Training & Supervision Agreement
In the sixth month
PhD candidate submits progress report to supervisors.
First evaluation via 'light' Progress Review meeting (Assessment & Development interview, if employee). <i>In the case of unsatisfying results, SMART agreements for next three months are made.</i>
Supervisor sends report to HR (if employee or formally registered as a guest).
In the ninth month
PhD candidate submits progress report to supervisors.
Second evaluation via Progress Review meeting (Assessment & Development interview, if employee). <i>Including decision on continuation after first year.</i>
Supervisor sends signed report to HR (if employee or formally registered as a guest).
YEAR 2
End of second year
PhD candidate submits progress report to supervisors.
Third evaluation via Progress Review meeting (Assessment & Development interview, if employee).
Supervisor sends signed report to HR (if employee or formally registered as a guest).
YEAR 3
End of third year
PhD candidate submits progress report to supervisors.
Fourth evaluation via Progress Review meeting (Assessment & Development interview, if employee). Set planning for fourth year.
Supervisor sends signed report to HR (if employee or formally registered as a guest).
YEAR 4
Before starting the required actions upon completion PhD latest)
Have the course certificate of mandatory course 'Responsible Conduct of Research' available (in MyPhD when available)
At least four months before the date of the doctoral thesis defence ceremony
Required actions to complete a PhD programme, see actions on UU-website , under 'PhD candidate'.