

CHARTER FOR ENGD CANDIDATES

Applies to all EngD candidates who started on or after September 1st 2024

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UNIVERSITY OF TWENTE.

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Preamble Validity of the regulations

- 1. This Charter applies to all types of Engineering Doctoral candidates at the University of Twente.
- 2. In case of any discrepancy between the Dutch text of the Charter and the English translation, the Dutch text will prevail.

Chapter 1 General

Article 1.1 Engineering Doctorate

- 1. Engineering Doctorate (abbreviated as 'EngD' and placed immediately after the surname) is a post-master degree.
- 2. Holders of the degree EngD will be registered as a technological designer in the Dutch register kept by the Royal Institution of Engineers in the Netherlands (KIVI).
- 3. The Universiteit Twente offers EngD programmes in the field of Business & IT, Civil Engineering, Energy & Process Technology, Maintenance and Robotics.

Article 1.2 Definition of terms

1.	Act	The Dutch Higher Education and Research Act (WHW),		
2.	Assessment	Assessment of the manner in which the employed EngD or employee		
		obtaining an EngD performed their duties and their conduct during the		
		performance of these duties, in accordance with article 6.8 of the		
		collective labour agreement,		
3.	CCTO ¹	Dutch Certification Committee for Technological Design Programmes		
		('Nederlandse Certificatie Commissie voor Opleidingen tot		
		Technologisch Ontwerper'),		
4.	Collective labour agreement	Collective labour Agreement of Dutch Universities (cao NU),		
5.	Dean TGS	Dean of the Twente Graduate School,		
6.	Defence EngD thesis	The moment at which it is determined whether the degree of EngD is		
		awarded,		
7.	Design supervisor	Doctoral graduate or EngD graduate, employed by the University of		
		Twente; member of the supervisory team who supervises		
		the EngD candidate on a daily basis,		
8.	Doctorate Board ²	Board which acts on matters concerning the conferral of doctoral		
		degrees (Art. 9.10 of the Dutch Higher Education and Research Act),		
		('College voor Promoties'),		
9.	EC	European Credit, a credit which equals 28 hours of study, as provided in		
		the Act,		
10.	Employee	A person employed by the University,		

¹ CCTO is the current certifying body. It is possible that in the future, other (international) organizations will be engaged in the certification or accreditation of the EngD degree.

² Duties and powers of the Doctorate Board can be found in the Administrative and Management Regulations of the University of Twente.

11. EngD agreement	Agreement between a non-employee and the University concerning an EngD programme,
12. EngD Board of Examiners	Board of Examiners for the EngD educational programmes installed and mandated by the Doctorate Board consisting of the Dean TGS, EngD coordinator, EngD programme directors and TGS EngD support officer,
13. EngD candidate	A person who has been admitted by the faculty dean to an Engineering Doctorate programme and has an agreement with a scientific supervisor to conduct an Engineering Doctorate programme, which may result in a EngD degree,
14. EngD coordinator	Coordinator with final responsibility for the content of all technological designer programmes at the University,
15. EngD programme	One of the certified Designer-programmes (certification by CCTO ¹) at the University of Twente. The individual programme of an EngD candidate consists of a technological design project which may in an EngD thesis and an education programme with a minimum of 48 EC,
16. EngD Programme Director	Programme director of one of the Technological Design programmes at the University,
17. Engineering Doctorate (EngD)	Academic degree Engineering Doctorate (EngD),
18. Executive Board ³	Highest managing body of the University of Twente, responsible for management and administration of the University,
19. Faculty dean	Dean of a faculty of the University of Twente,
20. HR	Service department Human Resources,
21. IND	Immigratie- en Naturalisatiedienst, the Dutch Immigration and Naturalisation Service,
22. KIVI	Koninklijk Instituut Van Ingenieurs (KIVI), The Royal Netherlands Society of Engineers,
23. Progress interview	Interview during which the scientific supervisor discusses the progress of the EngD programme with the EngD candidate,
24. Qualifier	A meeting during which the technological design proposal of the EngD candidate is assessed and it is decided whether it is meets the required standards and whether it is likely that the EngD candidate will complete the EngD programme within the remaining time,
25. Scientific supervisor	Member of the supervisory team with final responsibility for the supervision of the EngD candidate. The technological design project is carried out under the supervision of a specific professor or scientific staff member with the right to confer doctorates <i>(ius promovendi)</i> employed by the University of Twente,
26. T&SP	Training and Supervision Plan,

³ Duties and powers of the Executive Board can be found in the <u>Administrative and Management Regulations</u> of the University of Twente.

27.	TGS	Twente Graduate School. The University unit that registers doctoral		
		research, teaching and supervision of EngD candidates, monitors		
		progress and quality, gives administrative support at registration and		
		defence of the thesis and organises the graduation ceremony. The \ensuremath{TGS}		
		is led by the Dean TGS who is accountable to the Doctorate Board,		
28.	University	University of Twente,		
29.	UNL	Universiteiten van Nederland, association of universities of the		
		Netherlands.		

Article 1.3 Types of doctoral candidates

The University of Twente has the following types of Engineering Doctoral candidates, based on the classification used by the UNL (2011, revised in 2019):

- a. Employed EngD candidate
 An EngD candidate who is temporarily employed by the University and holds a paid EngD position (with UFO profile 'TOIO', see article 2.4 lid 4 sub c of the collective labour agreement).
- Employee obtaining an EngD
 University employee (with a UFO profile other than 'TOIO') who has been admitted to an EngD programme and has an agreement with a scientific supervisor to conduct a technological design.
- c. External EngD candidate
 EngD candidate who is not employed by the University and to whom funding and/or time is provided to develop a technological design, for example, by their employer⁴.

Article 1.4 Miscellaneous

- 1. The <u>UT Codes of Conduct</u> sets out provisions on the conduct that is expected of anyone using University buildings and sites.
- 2. The University endorses the guidelines for <u>scientific integrity</u>, as laid down in the <u>Netherlands Code of Conduct for Academic Practice. The European Code of Conduct</u> and the <u>Singapore statement</u> on research integrity are also relevant. An introduction to scientific integrity forms part of the education programme of Engineering Doctoral candidates. <u>Chapter 7</u> of this Charter outlines the programme specific regulations concerning fraud and plagiarism. The University expects the EngD candidate, the supervisory team, the Dean TGS, the members of the Graduation Committee, the members of the qualifier committee, the EngD Board of Examiners, the EngD programme director, the EngD coordinator, and the members of the Doctorate Board to adhere to these guidelines and codes of conduct. An introduction to scientific integrity

⁴ EngD candidates in this category are not employees of the University and are considered as students.

is part of the EngD educational programme.

- 3. Those present at deliberations, such as the green light meeting (<u>article 5.5</u>) or the EngD ceremony (<u>article 5.6</u>), and at the non-public meetings of the <u>Graduation Committee</u> are required to keep the discussions confidential.
- Requests to the Rector Magnificus or the Doctorate Board as described in these regulations have to be addressed to <u>doctorateboard@utwente.nl</u>. Requests addressed to the support office of the doctorate board have to be addressed to engd@utwente.nl.

Chapter 2 Admission, progress and termination EngD programme

Article 2.1 Admission requirements

- 1. In order to be admitted to a Engineering Doctorate programme, an applicant or person who has registered must meet the following requirements:
 - a. EngD candidates will only be admitted if their Master's degree(s) and further academic record are approved after evaluation;
 - b. EngD candidates with a non-Dutch qualification and who have not completed their secondary and tertiary education in English will only be admitted if they demonstrate sufficient command of the English language. Official documents with test results are required for this, showing a total band score of 6.5 for an academic IELTS-test (International English Language Testing System) or TOEFL (Test of English as a Foreign Language) via the internet (TOEFL-iBT) of at least 90 or Cambridge CAE-C (CPE). Test results from the past two years are accepted;
 - c. sufficient funds must be guaranteed for the full Engineering Doctorate programme, to be assessed by the faculty dean. This funding must cover:
 - salary and employer's contributions (in the case of employed EngD candidates or employees obtaining an EngD);
 - grants/sponsorship (in case of external EngD candidates, see article 2.5.1);
 - technological-design related expenses;
 - the education budget;
 - d. external Engineering Doctoral candidates are obliged to pay tuition fees.
- 2. In exceptional cases, the Doctorate Board may grant admission to the EngD programme to persons who do not comply with 2.1 paragraph 1a. To this effect a professor or scientific supervisor with the right to confer doctorates, should submit a motivated request to the Doctorate Board. The request must include the following documents:
 - a. curriculum vitae of the prospective EngD candidate;
 - b. motivation based on the curriculum vitae that demonstrates that the prospective EngD candidate meets these master requirements on other grounds.

 In exceptional cases, the Doctorate Board may admit persons who already obtained an Engineering Doctorate to an EngD programme. To this effect, a professor or scientific staff member with the right to confer doctorates, should submit a motivated request to the Doctorate Board.

Article 2.2 Application or expression of interest

- 1. The University website offers interested prospective Engineering Doctoral candidates the opportunity to apply for vacant Engineering Doctoral candidate positions or to express their interest by sending an open application.
- 2. Applicants for a vacant Engineering Doctoral candidate position are referred to the application procedure for employees⁵. In the case of an unsolicited application, a professor or scientific staff member with the right to confer doctorates who is interested in the applicant and the proposed technological design may consider admitting the interested party as an external EngD candidate. In such a case, the faculty dean may issue a conditional admission letter to allow the potential candidate to apply for funding.
- The proposed technological design project should fit in one of the existing Technological Design programmes at the University. The EngD programme director advises the faculty dean on the suitability of the project for the relevant EngD programme.
- 4. Before an EngD candidate can be admitted, the faculty dean must approve the project plan, including the proposed supervisory team and total budget. However, final approval by the faculty dean will only be granted after the programme director has advised on the suitability of the project.

Article 2.3 Selection

- 1. The intended scientific supervisor makes a first selection from the applications for positions for employed EngD candidates or the applications for an external EngD. Selected applications are submitted to a selection committee. The selection committee consists of the relevant EngD programme director, the intended scientific supervisor, the intended design supervisor and is, if necessary, supplemented with other experts, chosen by the scientific supervisor. The selection committee is obliged to seek advice from the HR department5. The selection committee checks, among other things, whether the applicant meets the admission requirements (article 2.1.1). It is highly advisable to invite the selected individual for an interview at the University, so they become familiar with the UT environment and the potential research group (and vice versa).
- 2. Arrangements for an Engineering Doctorate programme for employees obtaining an EngD are documented in the annual review report and submitted to the faculty dean for approval.

⁵ For pragmatic reasons, the choice was made to request this advice from the HR department for both employees and non-employees.

Article 2.4 Admission to the EngD programme

- 1. The decision to admit an applicant to an EngD programme is made by the intended scientific supervisor, after approval by the faculty dean.
- 2. An employment contract with employed EngD candidates is established in accordance with the collective labour agreement (cao) and this Charter.
- In the case of employed EngD candidates or employees obtaining an EngD, the faculty dean makes the admission decision. HR will then notify the TGS of the candidate's starting date and the agreed EngD programme, after which the TGS will initiate the registration process.
- 4. In the case of external EngD candidates, the scientific supervisor provides the faculty dean with an EngD agreement between the EngD candidate and the University, which sets out the financing⁶, the time schedule, logistics and the facilities necessary for the entire EngD programme. The faculty dean gives final approval to this formal agreement only after consulting with HR about the legal/fiscal status. HR will then notify the TGS of the candidate's starting date and the agreed EngD programme, after which the TGS will initiate the registration process.
- 5. In all cases, including part-time EngD programmes, the agreement must specify the intended start and end dates of the EngD programme.
- 6. All admitted EngD candidates must be registered in the EngD monitoring system as soon as possible, and no later than one month after the start of their employment or EngD agreement, through an intake meeting with the TGS. New candidates will receive an invitation for this intake. EngD candidates are required to promptly submit the necessary documents.

Article 2.5 Finances

- 1. The EngD candidate's total budget (in accordance with the requirements set by the IND, if applicable) must be approved by the faculty dean, according to the applicable procedure.
- 2. External EngD candidates are obliged to pay tuition fees. At the request of the scientific supervisor, the faculty dean may waive the tuition fees.
- 3. The education budget, i.e. the financial resources required for the (external) education activities, must be recorded in the faculty. The scientific supervisor is responsible for the proper use of this budget.
- 4. The technological design budget, i.e. the financial resources required for carrying out the Engineering Doctorate programme (for laboratories, fieldwork, etc.), must be recorded in the faculty. The scientific supervisor is responsible for the proper use of this budget.

⁶ The financing may be arranged through a sponsorship agreement with a third party, such as a grant-provider. This agreement is considered part of the EngD agreement.

Article 2.6 Duration of the agreement

- The duration of a nominal EngD programme is in principle two years in the event of fulltime availability of the EngD candidate. In the event of part-time availability of the EngD candidate, the duration of the nominal EngD programme will in principle be extended proportionally.
- 2. The terms and conditions of employment for employed EngD candidates and employees obtaining an EngD as University employees are outlined in the collective labour agreement and the employment contract.
- Employed EngD candidates enter into an employment contract (with a 2-month probation period in accordance with Article 2.2(2) of the collective labour agreement) for the duration of their EngD programme.
 - a. Two years if the EngD candidate is employed full time (38 hours per week).
 - b. Two years and six months if the EngD candidate is employed 32 hours per week.
- 4. An EngD Agreement is established with external EngD candidates and employees obtaining an EngD for the duration of their EngD programme.
- 5. The procedures outlined in <u>article 2.8</u> and <u>2.9a or 2.9b</u> may lead to the conclusion that the employment contract as referred to in paragraph 3 or the EngD Agreement as referred to in paragraph 4 is terminated prematurely.
- 6. The possibilities and regulations for extending the employment contract or EngD Agreement are outlined in article 2.7.

Article 2.7 Possibilities for extension

- 1. In a limited number of situations, the maximum duration of the agreement may be extended at the request of the EngD candidate. The scientific supervisor must submit a substantiated proposal for this purpose to the faculty dean.
- 2. Any extension depends on the availability of the necessary resources.
- 3. For employed EngD candidates and employees obtaining an EngD, the provisions in the collective labour agreement regarding the duration of the employment and number of extensions apply. In other (force majeure) situations, the faculty dean determines, based on a consideration of the interests of the candidate and those of the University, whether and to what extent an extension is warranted.
- 4. For external EngD candidates, an extension is only possible if their sponsor provides additional funds for the extension or if another form of financing is available and fiscally permitted, and provided it complies with the requirements of the IND in the case of non-EU residents.
- 5. The faculty dean decides on the extension after consulting with the HR advisor and will inform the TGS of the decision.

Article 2.8 Qualifier

1. The qualifier is a meeting organised by the scientific supervisor to provide the EngD candidate with subject-specific feedback on the technological design and on the progress of the planned education programme, from the perspective of

those who are active in this field. During this meeting, the EngD candidate presents the progress and the activities for the remaining period of the programme. The presentation is followed by a discussion.

- 2. The main goal of the qualifier is to assess whether the technological design proposal meets the required standards and whether it is likely that the EngD candidate will complete the EngD programme within the remaining time.
- 3. The qualifier is attended by the qualifier committee, consisting of at least the scientific supervisor, the design supervisor, the external supervisor on behalf of the client (if applicable), one independent EngD programme director, and at least one scientific staff member with the right to confer doctorates from outside the Chair. In principle, the qualifier is an open scientific meeting for employees and students.
- 4. The qualifier is held between 6 and 9 months after the start of the employment or the EngD agreement.
- 5. The scientific supervisor is responsible for organising the qualifier and must inform the EngD candidate about the meeting at least four weeks in advance.
- 6. As input for the qualifier, the EngD candidate must prepare a progress report of five to ten pages, containing the results and (adjusted) planning, using the provided form. This report must be submitted to the qualifier committee members through the EngD monitoring system at least one week before the qualifier meeting.
- 7. The qualifier committee assesses the EngD candidate based on the evaluation of the technological design results achieved so far, the assessment of planned future technological design activities, the progress of the education programme, the candidate's performance, and their behaviour in performing their duties. In addition, the independent EngD programme director, who is also a member of the qualifier committee, evaluates whether the current progress report meets the design skills requirements (article 3.3) of the EngD programme. The assessment will be substantiated and documented in writing in the qualifier report following the meeting, and recorded by the scientific supervisor in the EngD monitoring system:
 - 'SUFFICIENT' means that the committee believes that the technological design proposal is of sufficient quality and that the EngD candidate is likely to complete the Engineering Doctorate programme within the remaining time,
 - 'INSUFFICIENT' means that the committee believes that the technological design proposal is of insufficient quality and/or it is unlikely that the EngD candidate will complete the Engineering Doctorate programme within the remaining time. The committee will specify explicit targets for improvement that should be addressed within three months.
- 8. In all cases, the qualifier committee's report will be recorded in the EngD monitoring system within ten working days. If the qualifier committee's assessment is negative, the dean of the faculty will be informed as soon as possible. If the qualifier committee is unable to reach a consensus, the dean of the faculty will decide.

Article 2.9a Assessment of employed EngD candidates and employees obtaining an EngD

This article only applies to employed EngD candidates and employees obtaining an EngD (article 1.3 paragraphs a and b).

Qualifier committee's assessment is "sufficient":

1. The qualifier report is recorded in the EngD monitoring system.

Qualifier committee's assessment is "insufficient:

- 1. In the case of an insufficient assessment, the qualifier report is recorded in the EngD monitoring system and the relevant HR staff member is notified immediately.
- 2. Within two weeks after the publication of the qualifier report, a meeting will be held between the scientific supervisor and the EngD candidate to discuss the report. During this meeting, agreements regarding the improvement period as outlined in paragraph 8 will be made. The EngD candidate has the opportunity to respond to the assessment, both before and during the meeting. The scientific supervisor will prepare a report of the meeting. The EngD candidate may be accompanied by another person during the meeting.
- 3. If necessary, the scientific supervisor may revise the assessment following the meeting. In such cases, the scientific supervisor will inform the EngD candidate in writing. The EngD candidate must acknowledge receipt of the assessment in writing, even if they disagree with the content.
- 4. The assessment and any written response from the EngD candidate are recorded in the EngD monitoring system.

Second-year assessment:

- 1. In the second year (and if applicable, the following year(s)) the EngD candidate and the supervisory team will hold a progress meeting. The primary objective of this meeting is to assess if the technological design proposal is of sufficient quality and whether it is likely that the EngD candidate will complete the EngD programme within the remaining time.
- 2. The EngD candidate prepares a progress report of five to ten pages, including the results and (adjusted) planning as input for the assessment. The assessment is substantively justified and documented in writing by the scientific supervisor in the annual interview form, which is recorded within ten working days in the EngD monitoring system. In the case of a negative assessment, an improvement period is granted.

Improvement period:

- If the evaluation by the qualifier committee (in the first year) is negative, the EngD candidate is given one opportunity to address the specific points of improvement and required results within an improvement period of no more than 3 months. At the end of the improvement period, a second qualifier meeting with the same committee, if possible, is held, to assess the EngD candidate. The scientific supervisor subsequently discusses the assessment with the EngD candidate.
- 2. If the assessment in the subsequent year(s) is negative, the EngD candidate will be given the opportunity to address the specific points of improvement and required results within an improvement period of no more than 3 months, provided that this is feasible within the remaining duration of the employment contract. At the end of the improvement period, the scientific supervisor will conduct an assessment and discuss it with the Engineering Doctoral candidate.
- 3. If the assessment conducted after the improvement period is insufficient, the faculty dean may propose to the Executive Board the termination of employment contract of the employed EngD candidate. If the Executive Board decides that the employed Engineering Doctoral candidate will be dismissed, the employment will be terminated early, and the candidate is deregistered by the TGS. The employed EngD candidate may be required to temporarily perform different duties, provided that such duties can reasonably be assigned to them, taking their personality and circumstances into consideration.
- 4. For employees obtaining an EngD (article 1.3 paragraph b), termination of the EngD activities and any labour law-related consequences depend on prior agreements made regarding the EngD programme.

5. In the case of termination of an EngD programme of an EngD candidate, the scientific supervisor will inform the TGS as soon as possible, and the candidate will be deregistered from the TGS.

Article 2.9b Progress review of other EngD candidates

This article only applies to external EngD candidates (article 1.3 paragraph c).

- The result of the qualifier serves as input for the first progress meeting between the scientific supervisor and the EngD candidate, held after the qualifier. The result of the qualifier and the progress interview are recorded in the EngD monitoring system.
- 2. After the first progress meeting following the qualifier and, in case of a positive result, an annual progress interview will take place.
- 3. The EngD candidate prepares a progress report of five to ten pages, containing the results and the (adjusted) planning, as input for the annual progress meeting and as part of the T&SP.
- 4. If the result of a progress meeting is negative, the EngD candidate is given the opportunity to address the specific points for improvement (if applicable, based on the advice of the qualifier) and to meet the required results within an improvement period of no more than 3 months. As a result of a negative progress meeting and subsequent improvement period, the EngD Agreement may be terminated, and the candidate will be deregistered from the TGS. In that case, agreements will also be made regarding the termination of the EngD programme.

Article 2.10 Premature termination EngD programme

- 1. The EngD programme ends prematurely:
 - a. due to the death of the EngD candidate during the EngD programme;
 - b. by termination initiated by the EngD candidate;
 - c. by termination initiated by the Doctorate Board.
- If an EngD candidate wishes to terminate the EngD programme, the candidate must notify the TGS and the Doctorate Board in writing, stating the reasons. In this case, the Doctorate Board may request further clarification from the EngD candidate, the Dean TGS, and/or the scientific supervisor.
- 3. All EngD candidates who terminate their EngD programme prematurely are offered the opportunity for an exit interview with the TGS.

Chapter 3 Educational programme

Article 3.1 EngD coordinator en EngD Programme Director

- 1. The EngD coordinator has final responsibility for the content of all EngD programmes at the University and consults the EngD Programme Director and the Doctorate Board if needed.
- 2. The organisation and coordination of the EngD programmes Civil Engineering, Robotics, Maintenance and Energy & Process Technology and Business & IT is managed by the EngD Programme Directors.
- 3. The EngD Programme Directors are responsible for the self-assessment and site-visit of the accreditation bodies.

Article 3.2 Graduate School

- 1. The Twente Graduate School registers the research, education and supervision of EngD candidates, monitors the progress and quality of the programme, provides administrative support for programme registration and the EngD thesis defence, and organises the thesis defence.
- For quality assurance of the EngD educational programmes, the specific EngD courses mentioned in <u>article 3.3</u> are evaluated under the supervision of the Dean TGS. The course evaluations are discussed with the EngD Board of Examiners. If necessary, actions are taken to improve quality.

Article 3.3 Intended learning outcomes

Table 1 shows the intended learning outcomes of the EngD programme. The study guide (which is available only in English) provides further details, outlining three development levels for each intended learning outcome. By the end of the EngD programme, the EngD candidate is expected to be at least at the second level (sufficient) for all intended learning outcomes. The generic intended learning outcomes mentioned in table 1 apply to all EngD programmes.

Intended learning outcomes
Disciplinary design skills:
1. Formulate problem statements, design objectives and requirements
2. Demonstrate creative-thinking and originality
3. Refine designs through analysis and evaluation, ensuring alignment with user requirements
4. Employ validation methods to substantiate the effectiveness and viability of designs and architectures

Table 1 Intended learning outcomes EngD programme

Disciplinary technical knowledge:

5. Apply disciplinary technical knowledge to analyze a design problem

6. Explore, identify and select technologies via literature searches and expert consultations

7. Apply methods, tools, and techniques for design outcomes

Reporting and presentation skills:

8. Write a report which is complete, relevant, to the point and well written, detailing the design, implementation, technical documentation and validation of solutions

9. Deliver oral presentations to technical experts, non-technical stakeholders, and the general public

10. Respond to questions and feedback during oral presentations

Professional (transferable) skills:

11. Independently execute a design project

12. Collaborate in diverse teams to achieve common objectives

13. Demonstrate commitment to uphold academic integrity principles

Article 3.4 Programme content

- 1. An individual EngD programme has a nominal duration of two years and consists of:
 - a. a technological design project resulting in an EngD thesis;
 - b. an educational programme of in principle 48 EC;
 - c. additional requirements and guidelines for technological design projects and educational programmes specific to each EngD programme at the University of Twente as outlined in the study guide.
- 2. The educational programme mentioned in paragraph 1 consists of broadening and deepening discipline-specific courses and activities in the areas of academic skills, design skills, and career orientation. The requirements and guidelines of the EngD programme are outlined in the study guide. Based on these requirements, the supervisory team and the EngD candidate jointly determine the individual educational programme. The educational activities are intended to support the EngD programme and help the EngD candidate achieve the intended learning outcomes. The TGS verifies whether the educational portfolio meets the criteria specified in the study guide and the T&SP.
- 3. The training and supervision plan (T&SP) includes a list of courses that the EngD candidate must complete as part of the educational programme.
- 4. ECs can be earned by taking courses offered by the University of Twente (post-master level) and the UT <u>Centre for</u> <u>Training & Development</u>. ECs can also be earned by attending (inter)national conferences and summer schools, participating in activities organised by national research schools or local graduate schools, and taking courses at other universities.
- 5. In principle EngD candidates do not teach. For these candidates, teaching and supervision (and other relevant activities) can only be part of the educational programme if these activities are described in their T&SP, contribute to the

development of the candidate's skills or career orientation, are carried out under the supervision of a PhD-qualified staff member, and are credited with ECs on the TGS educational certificate, up to a maximum of 5 EC.

6. Exemption requests for parts of the educational programme, such as those based on previously acquired competences, can be submitted by the scientific supervisor to the Dean TGS (exemptions-tgs@utwente.nl), who will decide on them (if necessary, after consultation with the EngD programme director). Exemptions exceeding 20 EC are submitted to the Doctorate Board (doctorateboard@utwente.nl) for approval.

Article 3.5 Scientific supervisor and supervision

- 1. The technological design project is conducted under the supervision of a professor or scientific staff member with the right to confer doctorates employed by the University of Twente. This professor or scientific staff member with the right to confer doctorates will, as a rule, be appointed as the scientific supervisor.
- 2. The supervisory team must consist of at least two and no more than three internal supervisors, employed by the University of Twente, including at least one scientific supervisor with the right to confer a doctorate (*ius promovendi*) and at least one design supervisor (PhD or EngD graduate) who provides daily guidance to the EngD candidate. At least one of the internal supervisors must have demonstrable experience with design projects. This is assessed by the programme director. In addition, a maximum of one external supervisor may be appointed on behalf of the client.
- 3. The scientific supervisor has final responsibility for supervising the EngD candidate.
- 4. Periodic meetings must take place between the EngD candidate and members of, or the entire, supervisory team. The frequency of these periodic meetings is to be determined by mutual agreement between the candidate and the supervisory team and must be documented in the T&SP. A frequency of at least once every two weeks is strongly recommended.
- 5. The scientific supervisor is responsible for the approval of the thesis (article 5.3) and must ensure that the thesis meets the generally accepted standards.

Article 3.6 Training and Supervision Plan (T&SP)

- A training and supervision plan (T&SP) must be drawn up for each EngD candidate. The EngD candidate prepares a T&SP in consultation with the scientific supervisor, considering the requirements of this Charter, the study guide, the relevant Technological Design programme, and, if applicable, the client and other stakeholders. Within three months of the programme's start, the candidate must enter the T&SP into the EngD monitoring system for approval by the scientific supervisor.
- 2. The T&SP includes the following:
 - a. which knowledge and skills need to be acquired and how this should be done;
 - b. the relevant Technological Design programme at the University;
 - c. the names of the scientific supervisor and design supervisor of the EngD candidate;

- d. the number of hours per month of personal supervision by the supervisory team to which the EngD candidate is entitled;
- e. a data management plan in line with the data management policy of the faculty, indicating in which trusted repository the underlying data of the research will be deposited at the end of the EngD programme. If this does not apply, it will be explicitly stated in the T&SP;
- f. an overall plan for the total number of working hours for employed EngD candidates whose EngD programme is financed by an external financing institution requiring such planning.
- 3. The T&SP is a working document. During the first year, at the time of the qualifier, the T&SP may be adjusted for the remaining period. Afterward, it may be adjusted as deemed necessary by the candidate and scientific supervisor.

Article 3.7 TGS education certificate

- 1. The scientific supervisor evaluates the performance of the EngD candidate in the education programme. After positive assessment, the scientific supervisor submits the completed T&SP to the TGS, along with a statement confirming that the EngD candidate has completed the education programme in accordance with the T&SP.
- 2. The Dean TGS is responsible for the quality assurance of the submitted EngD education programmes and consults the EngD programme director if needed.
- 3. The TGS issues a TGS education certificate for the approved education programmes, stating that the EngD candidate has met the requirements of the EngD programme's education programme in accordance with the T&SP. The TGS education certificate is signed by the Dean TGS and the scientific supervisor.
- 4. The TGS education certificate includes a supplement with an overview of the education programme.
- 5. The TGS education certificate is issued during the EngD defence.

Article 3.8 Support for EngD candidates

- 1. Information for and about the TGS, courses and administrative procedures is provided through the TGS website and the study guide.
- 2. The University has access to plagiarism detection software, which can be used by the EngD candidate and the supervisors.
- 3. All EngD candidates receive training on scientific integrity and are expected to apply these standards in their own work.
- 4. All EngD candidates have access to a PhD/EngD counsellor through Student Affairs Coaching & Counselling.
- 5. In principle, all EngD candidates can make use of the same general University facilities. However, this may depend on the type of EngD candidate.

Chapter 4 EngD Board of Examiners

Article 4.1 EngD Board of Examiners

The Doctorate Board annually appoints the EngD Board of Examiners for the EngD programmes at UT for each academic year. The Doctorate Board has mandated its duties and powers to the EngD Board of Examiners. This means that the Doctorate Board remains responsible for and retains oversight over the mandated tasks and duties. The EngD Board of Examiners has the authority to act only as a representative of the Doctorate Board. The EngD Board of Examiners consists of at least the following members:

- Chair (Dean TGS)
- Vice Chair (EngD coordinator)
- One member per EngD programme (or deputy authorized by the EngD programme director), who is an expert in the field
 of that programme
- TGS EngD Support Officer

The Chair and Vice Chair are independent and do not have a role in the management of any of the EngD programmes. Each programme director proposes a deputy for a one-year term, who must be approved by the dean of the faculty responsible for the programme.

Article 4.2 Duties of the EngD Board of Examiners

- 1. The EngD Board of Examiners approves changes to the internal and external requirements of the EngD programmes' curricula.
- 2. The EngD Board of Examiners determines the entrance and exit qualifications for the EngD programmes in general.
- 3. The EngD Board of Examiners monitors the entrance and exit qualifications for each EngD programme and oversees the internal quality assurance of each programme.
- 4. The EngD Board of Examiners reports annually to the Doctorate Board and the EngD programmes on its activities.
- 5. The EngD Board of Examiners decides on both substantive and procedural requests from candidates, the supervisory team, and other parties involved.

Article 4.3 Procedure of the EngD Board of Examiners for individual cases

- 1. The EngD Board of Examiners meets at least six times a year.
- 2. Meetings are not open to the public. Minutes of meetings are available upon request from the EngD Support Office.
- 3. The EngD Board of Examiners makes decisions by a simple majority vote. In the event of a tie, the Chair's vote is decisive.

- 4. Members of the EngD Board of Examiners abstain from involvement in decisions concerning EngD candidates from their own programme.
- 5. The EngD Board of Examiners informs the relevant parties (EngD candidate, supervisory team, EngD programme director) in writing (or by email) of its decisions within two weeks after the meeting.
- 6. The EngD Board of Examiners decides within the response time but may delay the decision by up to two weeks after the EngD candidate has been informed.
- 7. The EngD Board of Examiners gives the EngD candidate the opportunity to be heard.
- 8. If an EngD candidate submits a complaint or request to the EngD Board of Examiners regarding a supervisor or EngD programme director who is a member of the EngD Board of Examiners, the EngD programme director involved may be heard but does not participate in the deliberations on the request or complaint.
- 9. If an EngD candidate submits a complaint or request to the EngD Board of Examiners regarding an issue in a course or exam within a specific EngD programme, the EngD programme director involved may be heard but does not participate in the deliberations.
- In the case of (suspected) fraud or plagiarism, the Board of Examiners is notified using the <u>Notification of Fraud and</u> <u>Irregularities</u> form. The Board of Examiners may decide on potential consequences. Further details can be found in the study guide.

Chapter 5 Thesis and EngD defence

Article 5.1 Thesis

- The EngD candidate must have independently conducted the work described in the thesis or have made a substantial, specified contribution in the case of collaborative work. In the latter case, the thesis must specify the contribution of each author (or other contributors not listed as author) to the completion of the work.
- 2. The thesis may be written in Dutch or English (with a strong preference for English). A template of the title page and additional information can be found in the study guide.
- 3. The thesis is in principle public unless an embargo period was agreed upon at the start of the EngD programme. Such agreements are included in the contract with the company and recorded in the EngD monitoring system. Up until the submission of the thesis to the Graduation Committee for the green light meeting, there is an option to request that the Doctorate Board deviate from previously made agreements about the public accessibility of the thesis.
- 4. The EngD candidate provides a number of printed copies of the thesis, free of charge, namely:
 - a. one copy for each member of the Graduation Committee;
 - b. two copies for the University library.
- 5. The University library widely publicizes the existence of the thesis and information about the availability of the underlying data. To this end, the EngD candidate provides the following items, no later than two weeks before the defence of the EngD thesis:
 - a. a printed copy of the EngD thesis, to be handed in at the desk of the University library;

- b. the complete EngD thesis in digital form, including the cover, to be submitted through the EngD Support Office (engd@utwente.nl). The EngD candidate also provides an English summary of 250 to 350 words and if applicable, information on the location and availability of the underlying data related to the EngD project in a trusted repository, in compliance with laws and regulations and possible conditions in agreements with third parties;
- c. permission for the University to distribute the thesis and related information as described in paragraph 6.
- 6. The University library ensures:
 - a. the inclusion of the printed copy of the EngD thesis in the University library collection;
 - b. the public accessibility of the digital EngD thesis via the University of Twente Research Information, whereby the EngD candidate, as a copyright holder, has granted the University library permission to make this version of the EngD thesis public. If the copyright of this version has been transferred to a third party, an embargo on the public release of the digital thesis may be applied;
 - c. the inclusion and thus the sustainable availability of the digital EngD thesis in the archive of the National Library of the Netherlands.

Article 5.2 Intellectual property

- Employed EngD candidates and employees obtaining an EngD are referred to articles 1.21 to 1.23 of the collective labour agreement and the <u>'Implementing rules on intellectual property; Rules on inventions and copyright-protected works of UT</u> <u>employees'</u>. Conditions may be laid down in the EngD Agreement (for example, with respect to confidentiality and collaborative research).
- 2. Intellectual property rights to the results generated by external EngD candidates, who are not employed by the University of Twente, during their EngD programme generally belong to the EngD candidate or their employer.

Article 5.3 Registration for the defence

- After the scientific supervisor has approved the draft thesis and the EngD candidate has successfully completed the EngD educational programme (or has been granted an exemption), the candidate may apply for a green light meeting with the Graduation Committee and request a provisional date for the EngD defence. To this end, the EngD candidate must submit the following to the TGS EngD Support Office at least six weeks before the end of the EngD programme:
 - a. the final title of the thesis and a digital copy of the draft thesis;
 - b. the written statement from the scientific supervisor confirming that the draft thesis has been approved and is free of plagiarism;
 - c. a list of the members of the Graduation Committee, including their affiliations and roles within the committee.

Article 5.4 Composition of the Graduation Committee

- 1. As soon as possible after receiving approval from the scientific supervisor, the Doctorate Board will proceed to establish a Graduation Committee.
- 2. The Graduation Committee is formed based on the proposal of the scientific supervisor, after approval by the Dean of the relevant faculty. The scientific supervisor ensures that the candidates are willing to accept membership on the Committee and are committed to attending the EngD defence.
- 3. The Graduation Committee will always consist of the following members:
 - a. Chair
 - b. Secretary
 - c. Scientific supervisor
 - d. Design supervisor
 - e. An independent (external committee member) professor or academic staff member, employed by the University of Twente with the right to confer doctorates, from a different group than the scientific supervisor.
 - f. An independent EngD programme director, the same person as for the qualifier, who assesses whether the thesis meets the design criteria (article 3.3) of the EngD programme. This role is only fulfilled only during the green light meeting; thereafter, the evaluative role of the independent EngD programme director ends, and they will serve as Chair during the defence.

The committee may consist of up to eight members, with a minimum of four. The additional committee members should come from one or more of the following categories:

- a. external supervisor representing the client;
- independent academic staff member (holding at least a (professional) doctorate) employed by the University of Twente, another Dutch University, the Open University, a foreign academic institution, or experts outside academia.

It is recommended to include a representative of the client on the Graduation Committee. Members of the Graduation Committee must have no relationship with the EngD candidate.

- 4. All committee members are responsible for evaluating the thesis and participating in the opposition during the defence. Independent members are not directly involved in the development of the thesis. They must be able to independently assess the quality of the EngD thesis and the EngD candidate without having a vested interest in the thesis or in their own judgement or that of other members of the Graduation Committee.
- 5. An independent EngD programme director or designated deputy will serve as the Chair.
- 6. The Dean of the relevant faculty will serve as the secretary of the Graduation Committee. The roles of Chair and secretary may be combined in one person.
- 7. All members of the Graduation Committee evaluate the thesis and have voting rights.
- 8. Committee members may not except due to illness or force majeure.

Article 5.5 Green light meeting

- 1. The green light meeting is a session with the Graduation Committee (article 5.4) to discuss whether each of the aspects to be assessed is sufficient at this stage, or what improvements need to be made for the candidate to be admitted to the defence.
- The green light meeting is scheduled by the scientific supervisor, four weeks before the intended defence date. During
 this meeting, the committee members discuss their feedback with the EngD candidate. Prior to this discussion, the EngD
 candidate gives a presentation on the design project to the committee. This presentation forms an integral part of the
 assessment.
- 3. All committee members are present at the green light meeting, either physically or remotely via audiovisual means. The scientific supervisor ensures that the required committee members are present at the green light meeting.
- 4. In preparation for the green light meeting, all committee members assess the thesis in the EngD monitoring system. This should be done as soon as possible, but in any case within two weeks of receiving the thesis. They provide feedback on their assessment if there are identifiable areas for improvement.
- 5. The scientific supervisor is the Chair of the green light meeting.
- There are three possible outcomes of the green light meeting: (a) admission to the defence without changes to the thesis;
 (b) admission to the defence with adjustments to the thesis that can be implemented within two weeks, and (c) no admission to the defence. The outcome of the green light meeting is entered by the scientific supervisor into the EngD monitoring system.
- If the Graduation Committee does not grant the EngD candidate admission to the defence based on the green light meeting, the candidate my revise the thesis significantly once before submitting a new version to the Graduation Committee for another green light meeting.
- 8. Only if, after the green light meeting, all present committee members expect that the EngD candidate will achieve a sufficient score on content, execution and reporting by the intended defence date, can the planned defence proceed. The EngD candidate will be informed the same day via the EngD monitoring system whether they are admitted to the defence.
- 9. EngD candidates who have been admitted to the defence are asked to complete a questionnaire. They are also given the opportunity for an exit interview with the TGS.

Article 5.6 EngD defence

- 1. The EngD defence is held in public in the presence of the Graduation Committee appointed by the Doctorate Board, at a location, date, and time to be determined by the Chair of the Doctorate Board.
- 2. The defence may only be held behind closed doors with the approval of the Chair of the Doctorate Board. A motivated request for a closed-door defence should be submitted at the start of the EngD programme, accompanied by the approval of the faculty dean.
- 3. The EngD defence takes place on the campus of the University, unless the Chair of the Doctorate Board has decided upon request that the defence will take place elsewhere or online.

- 4. The Doctorate Board may grant permission for the members of the Graduation Committee not to attend the defence in person, but to question the EngD candidate and participate in the deliberations remotely via audiovisual means.
- 5. Requests as referred to in paragraphs 3 and 4 should be submitted in writing to the TGS EngD Support Office (engd@utwente.nl).
- 6. The defence will take place in Dutch or English.
- 7. Candidates with specific support needs that could affect the smooth conduct of the defence will have the opportunity to carry out the defence in a manner adapted as much as possible to their individual needs. If changes to the defence protocol are necessary, the decision rests with the Doctorate Board, upon request by the EngD candidate and with advice from the Dean TGS. The Chair, scientific supervisor and members of the Graduation Committee will be informed of this decision.
- Before the defence of the thesis, the EngD candidate must provide a public introduction to the project lasting up to 12 minutes, in the presence of the Graduation Committee, to help the audience understand the context. This introduction is not part of the defence and is not included in the assessment.
- 9. The thesis is defended by the EngD candidate for exactly 45 minutes against the objections of the Graduation Committee, appointed by the Doctorate Board.
- 10. After the public defence, the Graduation Committee makes the decision on awarding the Engineering Doctorate in a closed session, by unanimous vote. This means that abstaining from voting or casting a blank vote is not permitted. All members of the Graduation Committee have voting rights.
- 11. After the session is reopened, the Chair of the Graduation Committee announces the result of the deliberations and invites the scientific supervisor to speak.
- 12. If the Graduation Committee gives a negative judgement on awarding the Engineering Doctorate, the procedure is suspended after consultation between the Chair of the Graduation Committee and the scientific supervisor. After a significant revision of the thesis, the procedure of establishing the Graduation Committee can be restarted. An EngD candidate may be given one opportunity to significantly revise the thesis after a negative judgement.
- 13. As evidence of the award of the Engineering Doctorate, the successful EngD candidate receives a certificate in English, signed by the Rector Magnificus and the supervisory team, and validated by the seal of the University of Twente.

Chapter 6 Complaints and appeals

Article 6.1 Complaints

1. EngD candidates may lodge complaints about certain behaviour to the secretary of the Complaints Committee.

Article 6.2 Appeals

1. An interested party may appeal decisions made by or on behalf of the Doctorate Board by submitting a written and substantiated objection to the Doctorate Board within six weeks of the decision being communicated.

Chapter 7 Discrepancies, changes, and implementation

Article 7.1 Discrepanties

- 1. In case of any discrepancies between guidelines, the study guide or other regulations concerning the EngD programme and this Charter, this Charter shall prevail.
- 2. In case of any discrepancies between the Dutch text of the Charter and the English translation, the Dutch text will prevail.
- 3. In cases not covered by these Regulations or where any article can be interpreted in multiple ways, the Doctorate Board has the final say.
- 4. In exceptional cases, the Doctorate Board may allow deviations from the provisions in these Regulations. A request for this purpose must be submitted in writing and always include the reasons.

Article 7.2 Changes to the regulations

- 1. Changes to the content of the Charter will be determined by the Doctorate Board of the University.
- 2. Changes to employment-related and terms of employment provisions in this Charter will be determined by the Executive Board.

Article 7.3 Final and transitional provisions

- 1. This Charter for EngD candidates was introduced on January 1, 2016 for all EngD candidates at the University.
- 2. This Charter applies to all types of 'Engineering Doctorate' or EngD candidates at the University of Twente (formally known as PDEng candidates).

Article 7.4 Publication

1. This Charter will be published on the TGS website of the University.

Article 7.5 Starting date

1. This Charter, approved by the Doctorate Board on March 20, 2024, will come into effect on September 1, 2024, with the simultaneously withdrawal of the Charter for EngD candidates from January 2020.

Annex 1: Protocol EngD defence ceremony

Clothing

The clothing of the members of the Graduation Committee and the EngD candidate should reflect the importance the University places on the defence ceremony. Preferably, this includes a dark suit, dark formal dress or white blouse with formal dark pants or dark skirt. EngD candidates may wear appropriate traditional clothing from their country of origin during the defence ceremony.

Meeting of the Graduation Committee

At 10:00; 12:00, 14:00 and 16:00, the Chair will convene the session of the Graduation Committee in the meeting room and will arrange who will oppose and in what order.

Defence ceremony

A maximum of four ceremonies may be held on one day. Each ceremony starts with a brief introduction lasting twelve minutes and is given in the presence of the committee.

	EngD defence schedule			
	1st defence	2nd defence	3rd defence	4th defence
Introductory talk	10:30	12:30	14:30	16:30
Start of the defence	10:45	12:45	14:45	16:45
End of the defence	11:30	13:30	15:30	17:30
End of the ceremony	12:00	14:00	16:00	18:00

The Graduation Committee proceeds to the hall, preceded by the Beadle (through the central aisle towards the podium).

The Chair opens the public session once the committee has taken their seats. The Chair then invites the EngD candidate to take their place behind the lectern and grants them the floor for the introductory talk.

After the introductory talk, the Chair gives the floor to the first opponent. The EngD candidate then responds. The Chair continues to give the floor to the other opponents in the agreed-upon order.

The Beadle announces that the time has elapsed ("Geachte voorzitter, de tijd is verstreken").

The Chair invites the EngD candidate to return to their seat in the hall and says: "the committee will proceed to the Chamber". The Chair then adjourns the meeting. The committee members exit the hall, preceded by the Beadle.

Meeting of the Graduation Committee

After the Graduation Committee has decided to award the Engineering Doctorate, the certificate will be prepared by the Beadle and signed by the Chair and the supervisory team. The Beadle will then make a copy of the signed diploma.

Hall

The committee then returns to the hall, preceded by the Beadle. After reopening the session, the Chair of the Graduation Committee announces the results of the deliberations and gives the floor to the scientific supervisor.