

Non-official translation in English; the Regulations in Dutch are official and decisive.

# **TU Delft Regulation on Engineering Doctorate**

Delft University of Technology

The Regulation was coordinated with the Board for Doctorates and adopted by the Executive Board on 19 October 2021; it enters into force on 1 November 2021.

The Regulation will be published on the TU Delft website.

Notification of the Regulation and its publication on the website shall be made in *TU News*, TU Delft's digital newsletter.

## §1 General provisions

### Article 1 Definition of terms

1. The following definitions apply in this Regulation:

CCTO	Dutch Certification Committee for Technological Design Programmes;
Assessment Committee	The assessment committee, comprising a minimum of four and a maximum of seven members, and containing in any case the design supervisor, the academic supervisor, the supervisor on behalf of the client and one or more external experts, is appointed by or on behalf of the Board for Doctorates and is tasked with examining the EngD trainee. The members have a relevant academic background and should have both knowledge and experience of design, and at least one of the members must have been granted Ius Promovendi;
Board for Doctorates	The Board for Doctorates of the university, as referred to in Section 9.10 of the WHW;
External expert	A member of the Assessment Committee who has not been involved in the design project;
Faculty Graduate School	The Graduate School of a faculty as referred to in Article 18a of the Executive and Management Regulations;
Ius Promovendi	The right to be appointed as a promotor on the grounds of Section 7.18 of the WHW;
KIVI	Royal Institution of Engineers in the Netherlands;
EngD	Engineering Doctorate
EngD programme	The technological designer degree programme as referred to in Section 1.3, paragraph 1 of the WHW which is assessed and certified by the CCTO as a two-year Post-Master's degree programme;
EngD trainee	Candidate who is admitted to a EngD programme;
Credit	Credit point according to the European Credit Transfer System (ECTS); one credit represents 28 hours of study;
TU Delft Graduate School	The Graduate School of the university as referred to in Article 18a of the TU Delft Executive and Management

Regulations, comprising the Faculty Graduate Schools and a board;

WHW the Dutch Higher Education and Research Act.

The remaining terms that occur in this Regulation shall have the meaning ascribed to them by the WHW.

2. Where personal identifiers are used in these regulations, they should be read in gender-neutral form.

## **Article 2 Engineering Doctorate degree and certificate**

1. The Engineering Doctorate degree (abbreviated to 'EngD' and placed after the surname) is a post-graduate degree that may be awarded upon successful completion of a EngD programme. As proof of this, a certificate is given: a designer's certificate as defined in Article 4.21 of the WHW Implementation Decree 2008.
2. Degree holders are entered into the CCTO central register of technological designers, which is maintained by KIVI.

## **§2 EngD programme**

### **Article 3 Admission**

1. For admission to a EngD programme, candidates must hold a Master's degree as referred to in Section 7.10a, first or second paragraph of the WHW. In exceptional cases, the Board for Doctorates may decide to admit a candidate who does not hold a Master's degree to the EngD programme if the Board for Doctorates is of the opinion that the candidate has shown that they have sufficient knowledge.
2. In addition to the requirement in the previous paragraph, candidates must meet the admission requirements for the EngD programme, which include relevant knowledge and skills and a good command of spoken and written English.<sup>1</sup>
3. The Board for Doctorates may set further rules regarding admission requirements.
4. If admitted to the EngD programme, the EngD trainee will be registered in the TU Delft Graduate School.

### **Article 4 Content and duration of the EngD programme**

1. In principle, a EngD programme starts once or twice a year.

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<sup>1</sup> Good command of spoken and written English can be demonstrated by successfully passing one of the following tests: 1. a TOEFL iBT (Test of English as a Foreign Language internet-Based Test) with an overall band score of 100 with scores of at least 21 for each section. TU Delft does not accept TOEFL MyBest scores; the scores must have been achieved in a single test; 2. IELTS (International English Language Testing System, academic version) with an overall band score of at least 7.0 with scores of at least 6.5 for each section. The following are exempted from taking an English language test: EngD trainees with a nationality from one of the following countries: USA, United Kingdom, Ireland, Australia, New Zealand or Canada. Also exempted from the English language test are: EngD trainees who have successfully completed a Master's degree programme in the Netherlands or one of the abovementioned countries.

2. A EngD programme is full-time and takes two years. Individual extension of the programme is only permitted on the grounds of exceptional circumstances and must be approved by or on behalf of the Board for Doctorates.
3. The total study load of the EngD programme is 120 credits. The programme is made up of different modules, including in principle both an individual and a group design assignment which involve producing a technological design with the associated description. The group assignment is also aimed at further developing soft skills. Concerning the content of the EngD programme, the EngD trainee makes individual agreements as referred to in Article 7 of this Regulation.
4. The courses passed by the EngD trainee during the Bachelor's or Master's degree programme on the basis of which they were admitted to the EngD programme do not constitute a part of the EngD programme of the EngD trainee.
5. Further information and details of the content of the EngD programme are included in the implementation regulation of the programme in question.

## **Article 5      Learning objectives of the EngD programme**

1. During the EngD programme, the EngD-trainee is trained to develop and use the following qualities:
  - a. an independent attitude that is conducive to achieving innovation;
  - b. a critical approach to the information and opinions provided, with regard for the societal context;
  - c. the ability to translate creativity into concrete results;
  - d. the ability to achieve usable innovations;
  - e. to direct innovation projects with regard for time, budget and quality;
  - f. soft skills that support optimum functioning in professional teams.
  
2. In order to satisfactorily complete the EngD programme, the EngD trainee is expected to:
  - a. possess thorough knowledge of the courses (for the chosen programme) and mastery of the methods for designing, academic research and modelling in the field of the EngD programme in question;
  - b. make a contribution to the field of the EngD programme by creating innovative technical solutions in a multidisciplinary setting, based on functional and market requirements and via a significantly sized individual design project;
  - c. possess the ability to translate vision and ideas into a clearly defined design project with a final result that optimally fulfils the design requirements;
  - d. conceive several design solutions and evaluate the various options for application and feasibility;
  - e. be able to function as part of or lead a multidisciplinary team and use their own personal (communication) skills and knowledge, and those of others, to achieve an optimum result;
  - f. approach a project from a total picture by combining technical requirements, environmental aspects, safety requirements and aspects of user-friendliness, health, quality and sustainability;
  - g. guide development projects with regard to technological feasibility, economical feasibility, regulations and reliability. The EngD trainee manages development projects within the available (financial) budgets for people, resources and systems. Decisions and design choices are substantiated;
  - h. carry out a study and evaluate a design or result using a range of research skills and scientific methods and techniques;
  - i. be able to understand, order and summarise academic publications, research reports and patents and use these as a basis to make recommendations or substantiate design choices;
  - j. have the necessary skills to introduce a new product or process to target groups of diverse natures and levels, using presentations and demonstrations.

## **Article 6      Supervision**

The EngD trainee is supervised by at least three supervisors assigned by the director of the programme, of which at least one is a scientific supervisor, one a design supervisor and one a supervisor representing the client.

## **Article 7      Programme and supervision plan**

1. At the start of and during the PDE programme, the EngD trainee makes agreements with the programme coordinator or the trainee's supervisors concerning the content of the programme. These agreements are recorded in writing and contain (among other things) information and agreements about:
  - a. the courses to be taken;
  - b. a schedule of the programme components to be completed;
  - c. the final assignment;
  - d. evaluation times;
  - e. composition of the supervision team;
  - f. results to be attained by the Go/No Go assessment;
  - g. facilities required by the EngD trainee;
  - h. if applicable, a data management plan;
  - i. if applicable, intellectual property rights, and
  - j. confidentiality.
2. The items mentioned in paragraph 1, under a and b, including any revisions to them, must be presented to and approved by or on behalf of the Board for Doctorates within three months of the start of the programme. The other items mentioned in paragraph 1 are recorded in the design assignment agreement with the client and approved by the team of supervisors and the Board for Doctorates.

## **Article 8      The Go/No Go assessment**

1. Well before the end of the first year, an assessment of the EngD trainee's progress should take place which serves as a basis for the Board of Doctorate's decision on whether the EngD trainee may continue the programme (Go) or not (No Go). In the event of the latter, the programme terminates for the EngD trainee and they are unenrolled from the TU Delft Graduate School. One aspect of this assessment is whether the EngD trainee can be realistically expected to successfully complete the programme within the allotted time.
2. With regard to the assessment referred to in the previous paragraph, the Board for Doctorates may set further rules.

## **§3 Technological design**

### **Article 9      Creation of the technological design**

1. The EngD trainee creates a technological design with associated description independently and ensures that this is:

- a. in accordance with the current ethical and professional code for professional behaviour in the scientific field in question;
  - b. in accordance with statutory legislative requirements and university regulations, including the Code of Conduct;
  - c. without restrictions that are in conflict with academic freedom, and
  - d. in accordance with the current guidelines and rules within TU Delft, such as (but not limited to) the TU Delft Research Framework Policy. Where applicable, academic publications will be published on Open Access Publishing in accordance with the TU Delft Policy on Open Access Publishing.
2. In the event of a publication that falls under an embargo agreement, the supervisors, the members of the Assessment Committee and, where applicable, the members of the visitation committee shall have unrestricted access to the design and research data in order to perform their tasks.

#### **Article 10 Defence of the design/final presentation**

Once the final report of the technological design has been made available to the Assessment Committee and all other components of the programme plan have been successfully completed, the EngD trainee must give a final presentation and defence of the design to the Assessment Committee.

#### **Article 11 Awarding the EngD degree with designation cum laude**

1. If a EngD trainee has shown exceptional competence in independently creating a technological design, the Board for Doctorates may award the EngD degree with designation cum laude.
2. The proposal for awarding the EngD degree with designation cum laude may be made by a member of the Assessment Committee during the defence and report of the final design.
3. The criteria for awarding the designation cum laude are described in the implementation regulation of the programme in question.
4. After deliberating the matter, the members of the Board for Doctorates cast their votes anonymously and in writing on the proposal to award the EngD degree with designation cum laude and the decision on the award is subsequently made. The following voting protocol applies. The proposal is rejected if at least:
  - a. two members vote against it;
  - b. one member votes against it and two members abstain from voting;
  - c. three members abstain from voting.

### **§4 Tasks and powers**

#### **Article 12 Tasks and powers of the Board for Doctorates**

1. The Board for Doctorates has the following tasks and powers:
  - a. safeguarding the quality of the EngD programme;
  - b. establishing further rules and guidelines;
  - c. appointing the Assessment Committee;
  - d. granting exemption for one or more of the admission requirements in exceptional circumstances;
  - e. granting exemption for a component of a EngD programme;
  - f. approving the programme and supervision plan;
  - g. ruling on a request for individual extension of the EngD programme;
  - h. issuing the degree certificate and awarding the EngD degree – with designation cum laude as appropriate – once it has been established that the EngD trainee has fulfilled the requirements for successfully completing the EngD programme;
  - i. ruling on objections or disputes.
2. The Board for Doctorates may appoint a committee with a mandate for one or more of the powers stated in paragraph 1.

## §5 Other provisions

### **Article 13 Dispute settlement procedure**

1. A dispute, whether a complaint or an objection to a ruling from or on behalf of the Board for Doctorates based on this Regulation, may be submitted to the Board for Doctorates by the EngD trainee or any other affected party within six weeks of the start of the dispute or the date of the ruling.
2. The Board for Doctorates will first investigate whether an amicable settlement is possible and submit the dispute for mediation to the director of the Faculty Graduate School of the faculty to which the EngD programme belongs.
3. If mediation does not produce a satisfactory result, the Board for Doctorates will rule on the complaint or objection, having taken advice from an arbitration committee, the TU Delft Doctoral Arbitration Committee. Article 7:13, paragraphs one to six, of the General Administrative Law Act applies equally to the arbitration committee.

### **Article 14 Amendments**

1. Amendments to this Regulation may be determined in a separate decision.
2. Amendments to this Regulation during the course of the programme year may only come into force if they do not reasonably damage the interests of the EngD trainee.
3. Amendments to this Regulation may not lead to an unfavourable change to a decision that has already been made with respect to the EngD trainee.

### **Article 15 Final provisions**

1. In cases which are not provided for in this Regulation, or if an article turns out to be open to various interpretations, the Board for Doctorates decides.
2. In special cases, the Board for Doctorates may depart from the provisions in this Regulation, giving its reasons.

#### **Article 16 Transitional measures**

Decisions regarding EngD issues that were taken prior to this Regulation entering into force will remain in full force.

#### **Article 17 Entry into force**

This Regulation enters into force on 1 November 2021.