

Handbook of the
PhD School at
IT University of Copenhagen
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The legal scope for this Handbook

The legal framework for PhD education in Denmark and for awarding the PhD Degree, is defined by the Danish University Act (*Universitetsloven*)¹ and the Ministerial Order for the PhD Programme² issued by the Danish Ministry of Science, Innovation and Higher Education. In addition, other Danish legislation such as the Danish Public Administration Act (*Forvaltningsloven*) and the Personal Data Protection Act (*Persondataloven*) are also applicable.

The Ministerial Order for the PhD Programme requests according to Chapter 10, §25, 1-5 that the University define a set of supplementary internal rules setting the framework for specific areas of PhD education such as enrolment, the content of the PhD Programme, supervision, etc.

The following Handbook provides the internal rules for PhD education at the IT University of Copenhagen (ITU) and in so doing lays out the rules, guidelines and procedures for applicants, PhD students and PhD supervisors at ITU..

Following the introduction, the structure of this Handbook is intended to reflect the issues that arise during the process of being a PhD student at ITU.

This document is a companion to the “Supervisor Handbook of the PhD School at IT University of Copenhagen” (currently in draft form).

¹ Ministerial Order No. 960 as of 14/8-2014.

² Ministerial Order on the PhD Programme at the Universities and Certain Higher Artistic Educational Institutions No. 1039 as of 27/8-2013.

Chapter 1 – Introduction

1.1 PhD students in the vision and mission of ITU

The mission of the PhD School at ITU is to enrol and graduate PhD students who are able to conduct excellent research by international standards and address challenges relevant for the understanding, use, and development of Information Technology (IT). PhD students naturally play an important role in the research output of the ITU and therefore the University's research strategy. Their research should hence align to the mission of ITU to create economic or social value with IT in Denmark.

It is among ITUs internal goals to provide PhD students to the Danish labour market as well as to enrol a broader spectrum of PhD students. In an effort to achieve these goals, attention and resources are focused by the PhD School on increasing the amount of external funding while maintaining continuous, quality assurance.

1.2 The expectations of ITU to the PhD student and supervisor

Every PhD student enters a formal advisor/advisee relationship with a faculty member at Associate Professor or Professor level. For the day-to-day work of the PhD School, this means that the PhD School interacts primarily with PhD students and their Academic Supervisors (hereafter supervisors).

ITU expects that there is a feeling of shared responsibility between the PhD students and the supervisor(s) to maintain this synergy.

The PhD school expects that:

- The supervisor(s) is responsible for the scientific development of the PhD student. The goals of the PhD project must be determined in such a way that they will guarantee an impact within the research community at ITU and beyond.
- The PhD student is responsible for achieving the goals of the PhD project, including compliance with deadlines and other rules set by the PhD School. The PhD student is responsible for carrying out the research, informing the supervisor(s) about progress and problems, and responding to the administrative and reporting requirements of the PhD School.

For those PhD students who are not employed by ITU, or by the nature of their enrolment have supervision outside the University, such as Industrial PhD Students and/or Joint/Double Degree PhD students, the formal advisor/advisee relationship forms a committee; also including one (or several) internal and external supervisor(s). An internal ITU supervisor that is a full-time employee of the ITU is however a mandatory feature of an ITU PhD. In such cases, the ITU emphasises the need for a synergy between these parties to prevent the PhD student being caught between conflicting advice or research directions.

1.3 Responsibility of the PhD School

The PhD School is responsible for recruiting talented individuals, evaluating their research applications and enrolling them as PhD students. It is among the PhD School's main responsibilities to provide quality assurance and to monitor the PhD students throughout their enrolment at ITU, with the intent of insuring that the PhD student/supervisor relationship is working satisfactorily. With this purpose, the PhD School defines a set of control obligations on the PhD student and supervisor, e.g., study plans, half-yearly reports, and midway evaluations (see chapter 5.) Furthermore, the PhD School aims to ensure that internal courses of relevance to IT University PhD students are offered on a regular basis.

Chapter 2 - Organizational Structure

The PhD School is led by the Head of the PhD School, who is assisted in his or her decision making by the PhD School Council and PhD Support. The PhD School is a part of the 'Department', the academic unit at ITU to which all Faculty (and therefore all supervisors and PhD students) belong. The PhD School works closely with other Departments at ITU, such as the Department of Finance and Personnel.

2.1 The Head of the PhD School

The Head of the PhD School is appointed by the Vice Chancellor. The obligations of the Head of the PhD School are defined in ITU regulations³. The Head of the PhD School has the overall responsibility for the PhD Programme at ITU and is responsible for planning the PhD education by considering recommendations made by the PhD School Council. The Head of the PhD School reports to the Head of the Department.

The Head of the PhD School is obliged to consult the PhD School Council in the planning and development of the PhD Programme. It is a matter for the Head of the PhD School and Head of the Department to what extent practical as well as strategic suggestions from the Department are incorporated in the planning and management of the PhD Programme.

2.2 The PhD School Council

The PhD School Council consists of up to eight members. Four members are elected among the faculty employed at the level of at least associate professor and serve for a period of four years. Four members are elected among the enrolled PhD students who serve one year.

All members of the PhD School Council are elected.

The Chair of the PhD School Council and the Vice Chair is appointed by the Vice Chancellor following the nominations by the PhD School Council. The Chair of the Council is appointed among the faculty members of the council, while the Vice Chair is elected among the PhD students of the council. The Chair of the PhD School Council and the Vice Chair form the PhD Schools' Executive Committee, who can act on behalf of the PhD School Council.

The PhD School Council is quorate when at least half of the faculty members and half of the student members are present.⁴

2.2.1 The mandate of the PhD School Council

The PhD School Council makes recommendations to the Head of the PhD School. While there is a reciprocal accountability between members of the PhD School Council, particularly on scientific matters and where the budget is concerned, the Head of the PhD School has the ultimate authority.

³ Articles of associations for the IT University, see <https://intranet.itu.dk/~media/EN/AboutITU/Organisation-facts-and-figures/ARTICLES-OF-ASSOCIATION-of-ITUv2 -November-2015-pdf.pdf>

⁴ This is also the case with decisions taken by e-mail.

The mandate of the PhD School Council is defined in the University Act and in ITU Regulations. Among the Councils tasks are:

- Propose general and ongoing quality development of the PhD School and the PhD Programme;
- Conduct principle discussions about the academic quality of the PhD School and Programme;
- Propose development of processes and procedures to enhance and monitor educational delivery within the PhD School and Programme;
- Manage and quality control the recruitment of new PhD students;
- Provide other strategic recommendations regarding the delivery and performance of the PhD Programme;
- Comment on matters of importance to the PhD education and Programme at ITU;
- Recommend and quality assure PhD defence Examination committees to the Vice Chancellor;
- Approve and quality assure proposals for PhD courses;
- Approval and quality assurance of long term stay abroad applications;
- Recommend applications regarding credit transfer and dispensations;
- Recommend expenses related to the PhD School budget.

2.2.2 Delegation of task

It is possible for the PhD School Council to delegate certain tasks to an Executive Committee such as quality assurance and minor budget issues (approval of ECTS⁵ points, approval of Study Plans, budgetary matters etc.). Decisions made by the Executive Committee can be referred on appeal to the PhD School Council. The Executive Committee is elected democratically by the PhD School Council and consists of the Head of the PhD School and a PhD student representative, usually the Vice Chair of the PhD School Council.

Applications of a private and confidential nature and marked as such, can be sent directly to the Head of the PhD School, who will then determine the involvement (if any) of the PhD School Council or Executive Committee.

2.3 PhD Support

PhD Support is the administrative unit assisting the PhD School, the Head of the PhD School and the PhD School Council in all administrative matters. PhD Support is in close contact with all stakeholders and can be contacted with questions from both supervisors and PhD students. PhD Support contacts the PhD students and their supervisors in advance with requests to adhere to approaching deadlines.

Applications to the PhD School Council are sent to PhD Support (phdsupport@itu.dk). All documents must be submitted electronically.

⁵ ECTS stands for the European Credit Transfer and Accumulation System.

2.4 Budget

The PhD School has its own operating budget including line items for PhD students DIMS (gadget accounts), attending and arranging PhD courses, research stay abroad, travel and PhD defences. If PhD students lack sufficient economic means to participate in a scientific event, they can apply for further funding from the PhD School. The PhD School encourages PhD students to check if any other funds are available prior to applying the PhD School Council (project funding, PhD stipends, etc.).

The PhD School does not have direct control over the salary budget of PhD employees and no decision on matters of salary, or paid extensions, can be made by either the Head of the PhD School or PhD School Council. The Head of the PhD School presents the budget requests every year to the Head of the Department and is responsible for the PhD School's budget.

2.5 Personnel Development Interviews (MUS)

The Head of the PhD School will normally conduct MUS (staff development interviews) annually with all enrolled PhD students. Alternatively, the PhD students can have the MUS with their Head of Section.

Chapter 3 - PhD Programmes

The PhD School currently offers two PhD Programmes. One of three years duration and one of four years duration. The PhD ministerial Order states:

§4 in the PhD Order: The PhD Programme is equivalent to 180 ECTS points and normally takes the form of full-time studies; however, the institutions may lay down internal rules providing for part-time studies.

(2) 60 ECTS points correspond to one year of full-time studies.

§5 in the PhD Order: Admission to the PhD Programme is based on a successfully completed Master's degree or equivalent.

(2) The University may decide to let the PhD Programme start in connection with a Master's Programme; however, it must be ensured that the entire study Programme has the scope and level described in §§ 1 and 4. The University lays down internal rules thereon.

(3) Students admitted under subsection **(2)** must have the opportunity to complete the Master's Programme.

3.1 The 3-year PhD Programme

To qualify for enrolment as a PhD student in the 3-year programme, the prerequisite is a Master's degree equivalent to three years of Bachelor level studies plus two years of Master level studies, including final exams (a total of 300 ECTS).

During the 3-year Programme, the PhD student is required to:

- Carry out independent research work under supervision (the PhD project);
- Complete PhD courses totalling approximately 30 ECTS points;
- Participate in active research environments, including staying at other research institutions, preferably abroad, private and or public companies, enterprises etc.;
- Gain experience of teaching or other forms of knowledge dissemination related to the students PhD project and expertise;
- Complete a PhD thesis on the basis of the PhD project.

3.2 The 4-year PhD Programme

To qualify for enrolment as a PhD student in the 4-year Programme the prerequisite is a Bachelor degree of 180 ECTS plus one year of Master level studies of 60 ECTS (a total of 180 + 60 ECTS).

The 4-year Programme consists of two parts (A and B), each of two years duration. Part A is composed of equal portions of Masters and PhD studies. Part B consists exclusively of PhD level study.

If a PhD student withdraws from the PhD Programme during part A before completing his or her Master's Programme, the PhD student will have the opportunity to complete his or her Master's Programme. If a

PhD student is transferred to ITU from another University using credit and is enrolled as a 4-year PhD student but does not finish part B (for example if the thesis is not recommended for defence), it is not possible to withdraw from the PhD programme and transform the scientific work into a Master's thesis.

3.2.1 Part A

Part A consists of equal portions of Masters and PhD studies:

- Original research work with academic supervision (the PhD project);
- Master's level coursework or project work (or both), corresponding to 30 ECTS, plus the fulfilment of the Master's level curriculum requirements for measurable depth and breadth of study;
- Acquisition of teaching experience, or an equivalent form of knowledge dissemination, as it directly relates (insofar as is possible) to the PhD project;
- Preparation of a formal research report, equal or equivalent to the Master's thesis;
- Qualification examination, which formally completes Part A. Continuation in the 4-year PhD Programme is contingent upon passing this exam.

The qualification examination takes place in accordance with the Master of Science Programme's regulations for examinations. When the qualification examination is passed the PhD student is transferred to part B provided all the requirements for part A are fulfilled.

The qualifying exam can have one of three outcomes:

- Passed Master's degree and the recommendation to the PhD School from the supervisor and censor that the Study Plan should be approved;
- Passed Master degree, but no recommendation to the PhD School from the supervisor and censor regarding approval of the Study Plan. The student will subsequently have three months to obtain approval of his or her Study Plan;
- Failed Master thesis and thereby the Master degree. Cf. the examination order, the student has two more attempts to pass the Master's thesis. The student will subsequently have three months to obtain recommendation from the supervisor regarding approval of the Study Plan.

3.2.2 Part B

Part B consists exclusively of PhD level studies:

- Independent research work under supervision (the PhD project).
- Completion of PhD courses earning approximately 30 ECTS Participation in active research environments, including stays at other, preferred foreign research institutions, private and or public enterprises, companies etc.

- Gaining experience of teaching or other forms of knowledge dissemination related to the students PhD project.
- Completion a PhD thesis on the basis of the PhD project.

The PhD student must present a PhD Study Plan for the second half of the PhD enrolment approved by the PhD School Council.

3.2.3 Types of PhDs: equal qualifications and requirements

The PhD School enrolls and employs different types of PhDs.

Independently of the type of PhD, the same level of academic qualifications must be reflected prior to the enrolment. All the students also equally have to comply with the requirements for obtaining a PhD as described in the PhD Ministerial Order 2013.

The responsibility of the PhD School towards all types of PhD students are as described in Section 1.3.

Chapter 4 - Enrolment and employment

§5 in the PhD Order: Admission to the PhD Programme is based on a successfully completed Master's degree or equivalent.

(2) The University may decide to let the PhD Programme start in connection with a Master's Programme; however, it must be ensured that the entire study Programme has the scope and level described in sections 1 and 4. The university lays down rules thereon.

(3) Students admitted under subsection (2) must have the opportunity to complete the Master's Programme.

§6 in the PhD Order: The institution decides who is to be admitted as PhD students. The institution's rules must stipulate the criteria on which admission is based.

(2) The PhD student is enrolled administratively in the PhD Programme.

4.1 Call for PhD applications

The PhD School organizes two types of calls. Open calls and project calls.

4.1.1 Open calls

There is at least one open PhD call each year. Here the candidates can apply with their own project proposals to be funded by ITU. The annual open call will normally be published in the spring.

4.1.2 Project calls

Project calls are calls that can be submitted by ITU researchers on an ongoing basis and advertised in a timeframe suited to the project. The PhD School and Personnel Section may choose to bundle calls for several projects to the most effective processes. The project calls may be published alongside the open call.

4.1.3 Possibilities for call without announcing

For Industrial PhD students, self-financed PhD students and PhD students who have obtained a Tuition Fee Free stipend,⁶ it is possible to enrol the student without announcing a call.⁷

4.1.4 General requirements of PhD applications

To become a PhD student at ITU, it is a requirement that an application is submitted before the deadline specified in the call and is assessed positively.

Where the PhD student applicant responds to a project call, he/she should include a statement addressing

⁶ A self-financed PhD student is a student 100% financed by own funds (salary and tuition fee). A PhD student who has obtained a Tuition Fee Free stipend is a student where the salary is 100% self-financed, but where the tuition fee is paid by ITU.

⁷ A prerequisite for this procedure is that any other formalities are in place, for example mutual signing of a collaboration agreement, (incl. IPR) or an enrolment letter.

his/her potential contribution to the project.

ITU only accepts PhD students in areas where there is currently active research. The decision on enrolment is therefore based on the applicants' documented academic qualifications, the suitability of the research project as a PhD project, and how the project fits into the faculty's academic profile and priorities. The decision is also based on whether the necessary academic (finding a relevant supervisor) and financial resources can be made available for an academically sound completion of the programme.

4.2 PhD Assessment Committee

4.2.1 Mandate of the Committee

The mandate of the PhD Assessment Committee is to evaluate the academic qualifications and the research profile of the applications and if relevant, recommend them further to the Hiring committee.

4.2.2 Composition of the Assessment Committee

An Assessment committee must be constituted immediately after the publication of the call or submission of an application and is approved by the Academic Council of ITU. The Head of the PhD School is responsible for forming the Assessment committee and would normally be a member of the committee.

In relation to project calls, the Head of the PhD School or a member from the PhD School Council will normally act as Chair of the Assessment Committee. Availability, expertise or conflict of interest might lead to the Head of PhD School to appoint another member of faculty as Chair of the Assessment Committee.

The Assessment Committee is further composed of faculty members from the relevant sections and research disciplines, and will be identified among a standing pool of faculty members from the various Sections at ITU. In each open call, different research traditions should be represented in the Assessment committee.

Any member of the Assessment Committee must be employed by ITU at the level of at least Associate Professor.

4.3 PhD Hiring Committee

4.3.1 Mandate of the Committee

The mandate of the PhD Hiring Committee is to consider the pool of candidates recommended by the PhD Assessment Committee and by personal interview decide which candidate(s) best meets the criteria for enrolment as a PhD student at ITU.

4.3.2 Composition and tasks of the PhD Hiring Committee

A PhD Hiring Committee is normally composed of the budget holder responsible for the stipend (e.g. project owner and/or Head of Department), the personal responsible (relevant Section Head or delegate

with relevant scientific expertise), and the Head of the PhD School. In case the Section Head does not have the relevant academic competences, the task must be delegated to another member of the relevant section, usually the prospective supervisor. Any of the members of the Hiring Committee can chair the committee except where that member has served as Chair of the Assessment committee.

In some cases there may be more than one budget holder, when financing is shared. Should this occur it will be determined on a case-by-case basis whether it serves any meaningful purpose to have all budget holders participating in the Hiring committee.

The PhD Hiring Committee is also responsible for making PhD position offers to prospective candidates, including contacting the qualified candidates, organize the interviews and informing PhD Support about the recruitment process and its outcomes. Once interviews with potential candidates have been held, the Chair of the Hiring Committee will inform the Head of PhD School and HR department whether the application was successful.

Prior to any enrolment and/or employment offer being made, financing of the entire PhD Programme for each PhD student must be secured.

4.4 Decisions regarding 3- or 4-year Programme

After a positive assessment, the applicants may be admitted into the 3-year or the 4-year Programme. This decision is initiated by the Personnel Department in close cooperation with the Student Affairs and Programmes at ITU. If necessary, an evaluation of foreign academic degrees is obtained by the Personnel Department (see section 3.1 and 3.2).

4.5 Full-time or Part-time Enrolment

4.5.1 Full-time enrolment at several institutions

A PhD student enrolled full-time at ITU may not be enrolled as a PhD student with any other institution unless a mutual agreement of a Joint or Double degree with another international institution is signed. In such cases, a signed agreement with the second institution must be approved by the Head of the PhD School prior to the start of the double enrolment. The PhD Programme may be partially carried out at other institutions or businesses where approved by the PhD School Council.

4.5.2 Part-time enrolment

A PhD student may be permitted part-time enrolment for only part of their enrolment if he/she can supply the appropriate reasons for doing so.⁸ The total time to be spent in part-time enrolment may equal a corresponding 3-year full-time enrolment. In order to be granted a part-time enrolment with effect at the beginning of the enrolment, a motivated application must be submitted to the Assessment Committee along with the formal application to the PhD School Council. If the wish for part-time studies occurs during

⁸ The appropriateness of a period of part-time study is decided on a case-by-case basis but in general a Danish PhD is full-time study.

the enrolment, the PhD student must submit an application to the PhD Council, including a statement of support from his/her supervisor.

It is a prerequisite for granting part-time enrolment that the financial authority sponsoring the PhD student is in full agreement with such enrolment and that the planned enrolment period does not exceed a total duration of five years.⁹ The time spent on the PhD studies must, when enrolled as a part-time PhD student, always count for at least 50 percent of the overall time spent.

Following any kind of request for part-time enrolment the PhD Plan must be adjusted accordingly.

4.5.3 Transfer of credit and work experience

When applying for enrolment, it is possible to apply for approval of well documented, previously acquired competences (credit transfer) such that these can be considered part of the applicants PhD studies.

The PhD student can apply for the transfer of credit for former coursework. It is a condition that performed coursework is neither included in the admission prerequisites when applying for enrolment nor that it has been counted towards another degree qualification.

Applications for credit transfer are normally submitted in connection with the application for enrolment and handled by the PhD School Council.

4.5.4 Cooperation agreement

If there is an external cooperation partner, as with an Industrial PhD student or a Joint/Double Degree student, a written cooperation agreement, covering financial aspects, agreements on intellectual property rights and publication, must be prepared. The cooperation agreement must be approved by the Head of the PhD School and the Head of the Department prior to enrolment.

⁹ This is exclusive any kind of leave.

Chapter 5 - The PhD Programme: Contents and Completion

§ 1 in the PhD Order: The PhD Programme is a research Programme aiming to train PhD students at an international level to undertake research, development and teaching assignments in the private and public sectors, for which a broad knowledge of research is required.

5.1 Supervision

The Head of the PhD School ensures that a suitable principal supervisor is appointed to each PhD student at the start of their Programme. The principal supervisor must be a recognized researcher within the relevant research field and must be employed by ITU as Associate Professor or Professor. The PhD student has the *right* as well as the *obligation* to be supervised.

PhD students with a part scholarship from the Innovation Foundation (Industrial PhD students) must have a principal supervisor and a co-supervisor, who are both affiliated with the company in which the PhD student is employed. These two supervisors are in addition to his/her principle ITU supervisor. The Head of the PhD School must approve the supervisor in the company. The formal requirement of the supervisors is qualifications within the areas of the PhD project.¹⁰

The principal supervisor has the following responsibilities:

- Advise the PhD student on all matters related to the preparation of their individual PhD Study Plan
- Advise the PhD student on all matters related to the research project¹¹
- Advise the PhD student about research stay abroad and participation in relevant conferences
- Serve as intermediary between the PhD student and contacts at other research institutions
- Evaluate and sign half-yearly reports, midway reports, approve travel requests and other requests for financial support
- Discuss structure and content of the PhD thesis with the PhD student
- At the completion of the PhD Programme, write a formal statement (the supervisor's statement) about the extent to which the PhD Programme has been completed satisfactorily
- Ensure the PhD thesis is submitted in time
- Ensure that the thesis submitted is comprehensible, that is readable in terms of language and spelling (see section 6.1.3)
- Be present at the PhD defence¹²
- Chair the PhD defence or find a suitable replacement

In addition to the principal supervisor, one or more co-supervisors may be assigned. A co-supervisor might

¹⁰ See guidelines from the Innovations Foundation; <http://innovationsfonden.dk/>.

¹¹ This includes advice with regards to the scientific level and regular guidance with respect to the project's depth; quality advice about course offerings, participation in courses, and opportunities for relevant teaching activities or other forms of knowledge dissemination, including approval of course participation.

¹² The supervisor may seek funding from the PhD Council to cover half the cost of attending a defence where he/she is on approved leave abroad.

be a faculty member from ITU or might be external, coming from another university or the business community. The PhD School Council must approve any application for an external co-supervisor. The formal requirement of a co-supervisor is that they themselves are PhD qualified. Co-supervisors may have a subset of responsibilities as for the principal supervisor and are usually appointed to give the PhD student access to additional advice and/or expertise.

No later than one month after enrolment, the principal supervisor must hold a planning meeting with the PhD student and any co-supervisors. The intention of such a meeting is to address mutual expectations regarding the supervision.

5.1.1 Change of supervisor

The PhD student may apply for a change of supervisor during the enrolment. The supervisor must be heard in connection with a change of supervisor. Under special circumstances, the Head of the PhD School can set a limit to how many times a PhD student can change the supervisor.

In the event the appointed principal supervisor is hindered in his or her duties as supervisor, or if other extenuating circumstances prevail, the Head of the PhD School, after discussions with the PhD student, appoints another principal supervisor from among professors, associate professors, or others with equivalent qualifications employed at ITU.

5.1.2 Change of supervisor for Industrial PhD students

If the Industrial PhD student wants to change their supervisor(s) from the company where they are hired, it is strictly a matter between the PhD student and the company. The PhD School does not apply any guidance in this regard, but the Industrial PhD students can seek advice from the Head of the PhD School. It is the obligation of the PhD student to inform the PhD support when such a change occurs.

5.1.3 Temporary change of supervisor in case of leave

If the main supervisor is prevented in carrying out supervisory duties due to leave of absence on the grounds of parental leave or sick leave for a period longer than one month, it is the joint responsibility of the supervisor and PhD student to secure a temporary replacement of the supervisor. It is also a joint responsibility to notify the PhD support of this replacement. The temporary supervisor is responsible for carrying out the main supervisor's duties (cf. section 5.1) during the replacement period.

5.2 PhD Study Plan

The PhD Study Plan must be approved no later than three months after the beginning of the enrolment.

§9 in the PhD Order: Within three months of the start of the PhD Programme, the institution approves a research and study plan (the PhD plan) for the individual PhD student.

(2) The plan must, as a minimum, contain the following:

- 1) A schedule
- 2) An agreement on the type of supervision provided
- 3) A plan for the PhD project
- 4) A plan for PhD courses etc.
- 5) A plan for participation in active research environments
- 6) A plan for teaching activities or other types of knowledge dissemination
- 7) Any agreements on intellectual property rights
- 8) A financing plan (budget)¹³

In connection with the conclusion of the agreement on the type and scope of the supervision provided, the mutual expectations of the PhD student and his or her supervisor(s) must be discussed and agreed upon.

The PhD Study Plan is dynamic and should be updated continually by the PhD student or at initiative of the supervisor, for example in connection with major changes to the project, changes in relation to research stay abroad, leave of absence etc. The PhD School Council approves revisions to the PhD Study Plan. The PhD Study Plan forms the basis for the half-yearly reports at ITU. Where progress varies from the plan it should be highlighted in the half-yearly report.

5.2.1 PhD Study Plan for students in the 4-year Programme

For PhD students enrolled in the 4-year Programme, the PhD Study Plan is divided into part A and part B. The PhD plan in regard to part B does not necessarily have to include details dealing with part A, but it is an option. No later than one month after completion of part A and the qualifying examination (Master's degree), a PhD Study Plan for part B of the PhD Programme must be submitted to - and be approved by - the PhD School Council.

¹³ At ITU this is manifested in a statement of where the funding is coming from.

5.2.2 Approval of PhD Study Plan

The PhD Study Plan is submitted to the PhD Support within the first three months of enrolment for approval by the PhD School Council. The PhD Study Plan is prepared in cooperation between the PhD student and the principal supervisor. Each PhD student is expected to fulfil the institution's requirements regarding the satisfactory completion of the PhD Programme according to the PhD Study Plan. The Study plan can either be:

- "Approved", in which case the PhD student continues his or her enrolment
- "Not approved", in which case the PhD student has two weeks to address the point(s) raised by the PhD School Council

The revised Study Plan is resubmitted within two weeks after the feedback from the PhD School Council.

If the PhD student fails to adequately address the issues raised by the PhD School Council, the Head of the PhD School may recommend to the PhD School Council that ITU terminate the PhD student's enrolment. The PhD student may appeal this outcome to the Vice Chancellor within two weeks of notification of the termination from the Programme.

5.2.3 Consequences of not submitting

If the first deadline for submitting the PhD plan is not met within the first three months of enrolment, PhD Support will remind the PhD student once. If the reminder does not result in submission, the Head of the PhD School may decide to issue a warning to the PhD student. Following a non-response after a warning, the Head of the PhD School may recommend to the PhD School Council that the enrolment of the PhD student be terminated. The PhD student may appeal this outcome to the Vice Chancellor within two weeks of notification of the termination from the Programme.

5.3 Half-yearly Reports

§ 10 in the PhD Order: At regular points in time during the PhD Programme, the institution must assess whether the PhD student is following the PhD plan and, if necessary, adjust the plan.

At ITU this is done through half-yearly reports, which are submitted no later than the deadline stated by the PhD School Council, normally 1 April and 1 October via planIT, the PhD management system at ITU.

In the half-yearly report, all relevant activities and achievements are laid out:

- What were the milestones for the prior half-year and were those met?
- A list of research activities in the prior half-year, such as papers and other academic outputs are provided.
- What are the milestones for the next half-year?
- An account of all coursework activities, i.e. ECTS points earned or planned.
- Comments from the supervisor.
- An account of duty work, including teaching activities.

The report should be the formal basis for a dialogue between the PhD student and the supervisor about the progress of the research project and its viability, where it is the supervisor's responsibility to give the PhD student constructive feedback on issues raised in the half-yearly report.

The half-yearly report is split into two parts, one for the PhD student and one for the supervisor. The reports should be filled separately by each party and submitted to the PhD Support.

5.3.1 Approval of the half-yearly report

Based on the half-yearly report, the PhD School Council evaluates whether the stated objectives and milestones are achieved, and whether the PhD student is progressing according to plan. The half-yearly report can either be:

- "Approved", in which case the PhD student continues the enrolment;
- "Not approved", in which case the PhD student has three months to correct the situation.

The decision not to approve a half-yearly report is made by the PhD School Council in agreement with the principal supervisor and will be based on the perception that the PhD student is not meeting the objectives of the PhD Study Plan. If the half-yearly report is not approved, the PhD student will be given the option to correct the situation. This opportunity is granted once only for the entire enrolment on the PhD Programme and the period of enrolment will not be extended due to a three-month period of correction.

5.3.2 Following correction of a half-yearly report

If the PhD student addresses the situation, the results are evaluated at the end of the three-month period by the PhD School Council following a new submission of the report by the PhD student. If this assessment is positive, and the revised half-yearly report is approved, the enrolment continues unchanged.

If the assessment is negative after a resubmission (incl. if the PhD student chooses not to address the suggested changes), the PhD School Council in conjunction with the supervisor, may recommend to the Head of the PhD School that the enrolment of the PhD student is terminated. The PhD student may appeal this outcome to the Vice Chancellor within two weeks of notification of their termination from the Programme.

5.3.3 Consequences of not submitting and possibilities for extension

If the PhD student fails to submit half-yearly reports, this will result in the PhD student's enrolment being terminated automatically within three months of the half-yearly report falling due. If a PhD student is terminated by virtue of his/her failure to submit a half-yearly report, the PhD student may appeal this outcome to the Vice Chancellor within two weeks of the notification of their termination from the Programme.

To avoid this situation, the PhD student may apply for an extension of the submission of their half-yearly report to the PhD School Council. Approval can be granted for a maximum of three months.

Any documentation regarding illness and/or parental leave will be taken into consideration.

5.3.4 Submission for PhD students on leave or close to submission of thesis

PhD students on any kind of leave have no obligation to submit half-yearly reports. If the leave is longer than three months, the PhD student must however submit a half-yearly report within one month after the leave ends.

When there is less than six months to the submission date, there is no obligation for the PhD student to submit a half-yearly report in full detail. The PhD student and the supervisor are however, both requested to submit a statement confirming that the thesis will be submitted on time.

5.4 Midway evaluation

All PhD students at ITU are obligated to pass a midway evaluation. The midway evaluation is an oral presentation, where a thesis proposal is defended before an Evaluation Committee. The midway evaluation must take place no later than in the third semester for PhD students in the 3-year Programme and no later than the fourth semester for PhD students enrolled in the 4-year Programme.¹⁴

For Industrial PhD students the supervisors from the company in which the PhD student is employed to participate in the midway evaluation.

5.4.1 Evaluation Committee

An Evaluation Committee is formed consisting of three faculty members at the level of assistant, associate or full professor. At most one member of the Evaluation Committee can be at assistant professor level.¹⁵

5.4.2 Thesis proposal

The thesis proposal document describes the prospective thesis. The thesis proposal is discussed at the midway evaluation in the presence of the Evaluation Committee. During this meeting, a presentation is given by the PhD student and the supervisor.

5.4.3 Approval of the Midway Evaluation

The possible outcomes of the midway evaluation are;

- “Pass”, in which case the PhD student continues their enrolment.
- “Try again”, in which case the proposal is revised and a new approval is needed.
- “Fail”, in which case the enrolment of the PhD student is terminated.

The Evaluation Committee will forward the outcome in writing to the PhD student.

In case of “pass”, the recommendation is submitted to the PhD Support and enrolment continues unchanged.

In case of “try again”, the proposal is revised according to the recommendations, redistributed to the same committee, and discussed again, within three months of the first attempt. The revised proposal must be accompanied by a separate document explaining what the changes from the previous version are and how the previous feedback has been addressed in the new version. If this assessment is positive and a new midway evaluation is approved, the enrolment continues unchanged.

The opportunity to try again on a midway evaluation is only granted once for the entire enrolment of the PhD Programme and the period of enrolment is not be extended due to a three months period of

¹⁴ The midway evaluation is not the same as the qualifying exam for the Master Degree (end of part A as a 4+4 student, but is a separate event). However, in practice the two events often take place immediately after each other (the same day).

¹⁵ In case external members are relevant as members of the Evaluation Committee, the PhD School Council can pay a minor fee as well to cover transportation costs.

correction at the midterm evaluation point.

In the case of “fail”, of the first try-again attempt, enrolment as a PhD student is terminated. This decision is taken in joint responsibility between the supervisor and the Head of the PhD School. The PhD student can appeal this outcome to the Vice Chancellor within two weeks of the notification of the termination from the Programme.

5.4.4 Consequences of not having a Midway evaluation and possibilities for extension

A Midway evaluation that is not held will result in the PhD student’s enrolment being terminated automatically within three months of the date from when the Midway evaluation is due. If a PhD student is terminated by virtue of his/her failure to undertake a Midway evaluation, the PhD student may appeal this outcome to the Vice Chancellor within two weeks of the notification of their termination from the Programme.

To avoid this situation, the PhD student may apply for an extension of the submission of their Midway evaluation to the PhD School Council. Approval can be granted for an extension to a maximum of two months.

5.5 Research Stays Abroad

§ 7(2) 3) in the PhD Order: During the Programme, the student is required to: participate in active research environments, including stays at other, mainly foreign, research institutions, private enterprises etc.

ITU encourages all PhD students to become acquainted with and participate in research environments other than that at ITU, preferably with a recognized research institution abroad. The period and place for such a research stay is not prescribed, but it is recommended to visit a foreign research institution for a period of three to six months. It is vital for the PhD School Council to ensure that the research institution chosen fits the students PhD Study project and research, and that PhD student is well taken care of.

A research stay abroad is not mandatory and it is acknowledged that not all PhD students are in a position to relocate for several months at a time. Accordingly, a research stay abroad can be customized to fit the PhD plan and the life circumstances of the individual PhD student.

PhD Students from countries other than Denmark may choose a research stay at another Danish University or Research institute.

5.5.1 Financial support

The PhD School Council normally grants financial support for research stays abroad, provided the PhD student applies for it in advance. If relevant and possible, the PhD students are encouraged to seek funding for their research stay abroad from other grant holders and other funding sources.

5.6 PhD Courses

§ 7(2) 2) in the PhD Order: During the Programme, the student is required to: Complete PhD courses, or similar study elements, totalling approx. 30 ECTS points.

The requirement of completing PhD courses totalling approximately 30 ECTS is mainly fulfilled through participation in courses approved by the PhD School Council or those approved by other at cognate Danish and international universities.

The requirement can also be partially fulfilled through other activities, such as summer schools, seminars, workshops, study groups, or individual study with research institutions in Denmark or abroad, provided the PhD student applies for approval in advance, and the PhD School Council approves the application.

5.6.1 Specific requirements and encouragements

The PhD School Council can set specific composite requirements with respect to the courses followed by the PhD student, in order to ensure a certain measure of depth and breadth is attained.

A research ethics course is encouraged for the PhD students to either organise themselves or join during the enrolment, preferably in the beginning of the enrolment.

ITU will offer all enrolled PhD students a 2 ECTS interdisciplinary course as well as 3 ECTS pedagogical training. The later is mandated for PhD students who will convene a course but optional for those who are teaching assistants.

The PhD School also encourages all enrolled PhD students at ITU to attend as many PhD defences as possible at ITU. This will provide valuable knowledge and understanding of the requirements of a PhD defence.

5.6.2 ECTS

There are restrictions on the way that ECTS points can be accumulated for both 3-year and 4-year PhD students during their entire period of enrolment. These are as follows:

- No more than 10 ECTS points can be accrued from Master's level courses.
- Master course work accumulate ECTS towards a PhD at two thirds of their face value.
- No more than 8 ECTS points can be accrued from participation in conferences, workshops or symposia
- 1 ECTS can be obtained from conference participation and the output following the conference (for example, via presentation given to a research group).
- A case for ECTS points from conference participation must be made to the PhD School Council.¹⁶

The PhD School reserves the right to add additional mandatory courses and symposia, for example on scientific communication or academic writing.

¹⁶ To avoid disappointment, it is recommended that such applications be made in advance.

5.7 Duties

In addition to being enrolled, PhD students may also be employed at ITU. Employment as a PhD student occurs pursuant to the applicable rules of ITU, as well as the collective agreement between the Ministry of Finance and the Danish Confederation of Professional Associations (AC). Under this agreement, a PhD student is obliged to carry out work for ITU, called “duty hours”.

5.7.1 Duty hours

Duties comprise of dissemination, research, instruction, peer review, work in the library, or other academic assignments (not including work of an administrative nature or participation in research group meetings). The duty hours should be designed to help fulfil objectives in the PhD Study Plan as much as possible.

The duty hours should be planned so that the PhD student can concentrate on the research project during certain periods of the enrolment, especially near the conclusion of the PhD Programme.

5.7.2 Number of duty hours

If employed as a PhD student on a three-year contract the duty hours correspond to a total of 840 hours. If employed as a PhD student on a four-year contract the duty hours correspond to a total of 1280 hours.

It is the responsibility of ITU to make use of the duty hours, i.e. the PhD students are paid the same salary regardless whether the duty hours are accounted for or not.

5.7.3 Permission to take on additional work

If the PhD student is employed at ITU he/she is normally not allowed to take any other paid work, since it is expected that the PhD student spend his/her time in full on their PhD Programme. In the event the PhD student wishes to take on additional paid work not specifically named in the employment contract, an application for secondary employment must be submitted to the PhD School Council. The application must be submitted and possible approval given, prior to the commencement of the additional work.

5.7.4 Duties for Industrial and Tuition Fee Free Stipend PhD students

Due to their non-employment at ITU Industrial and Fee Free stipend PhD students are not obliged to carry out mandatory duty hours at the ITU. However, they do have the obligation to carry out dissemination and peer review as with any other PhD student at ITU. This can take the form of workshops, articles, lectures and other knowledge sharing in the company in which they are employed or at ITU.¹⁷

The extent of the dissemination, its content and frequency, is agreed between the company and ITU in the case of industrial PhDs or between the student and their supervisor in the case of Fee Free Stipend students.¹⁸ Industrial or Fee Free stipend PhD students are not obliged to teach at the ITU but they are encouraged to do so as part of their career development and should be given opportunity if they wish. Paid opportunities can be pursued with their supervisor in discussion with the relevant section head.

¹⁷ No additional fees will be paid to the Industrial PhD students for occasional lecturing at ITU.

¹⁸ See guidelines from the Innovations Foundation; <http://innovationsfonden.dk>

Chapter 6 - The PhD Thesis

§ 7 (2) 5) in the PhD Order: During the Programme, the student is required to complete a PhD thesis on the basis of the PhD project.

§ 11 in the PhD Order: The PhD thesis must document the PhD student's or the author's ability to apply relevant scientific methods and to carry out research work meeting the international standards for PhD degrees within the field in question.

§ 12 (2) in the PhD Order: A PhD thesis cannot be submitted for evaluation by two or more authors jointly.

§ 12 (3): The PhD thesis must contain an abstract in Danish and English.

§ 12 (4): Any articles included in the thesis may be written in cooperation with others, provided that each of the co-authors submits a written declaration stating the PhD student's or the author's contribution to the work

6.1 Shape and requirements of the PhD Thesis

The PhD thesis serves as documentation of the PhD students scientific work during his or her PhD studies, as well as the PhD student's ability to express in writing the acquired competences and findings achieved. The PhD thesis must meet the requirements mentioned in the PhD Order §11 as mentioned above.

A PhD thesis is composed independently by the author in the context of the programmes specific academic area, and is not to be submitted by more than one author. The thesis must include a summary of all major findings of the research process achieved during the course of study. As a rule, findings or portions thereof should be of such quality as is suitable for publication in a relevant international journal.

6.1.1 Monograph or synopsis

A thesis may either be written as a monograph or as a collection of papers or already published and peer-reviewed papers.

If the thesis is written as a monograph, it should include the following elements:

- Summaries in Danish and English.
- Abstract suitable for publication in article database.
- Stated and clear research objectives.
- Description of the research project in the context of the international state-of-the-art within the specific subject area.
- Discussion of results achieved (including material, methods and results).

- Analysis of results – including a comparison between the PhD students own findings and other results, such that the student’s work is seen in the context of the relevant on-going work in the specific area investigated.
- Conclusions and perspectives for further research.
- Citations and References

If the PhD thesis is written as a collection and based on manuscripts or published papers, it should include the following elements:

- Summaries in Danish and English.
- Abstract suitable for publication in article databases.
- Stated and clear research objectives.
- Description of the research project in the context of the international state-of-the-art within the specific subject area
- Summary of the results in the papers and their relation to the international state-of-the-art.
- A critical discussion of the work of other researchers in the field, as well as a comparison between their own findings, such that the student’s work is seen in the context of the relevant on-going work in the specific area studied.
- Conclusions and perspectives for further research
- Citations and References
- The published papers or accepted manuscripts¹⁹

6.1.2 Co-author statements

If one or more of the submitted sections of a thesis has more than one author, a declaration (called a co-author statement) from all authors should follow the thesis. The thesis should state that each author is compliant with the fact that the work is part of the presented PhD thesis, and that they are in agreement about the scope and character of the individual contribution of the PhD student’s work. Prior to submitting the thesis, it is the responsibility of the PhD student to check with the supervisors and PhD Support whether co-author statements are needed.²⁰

Co-author statements must be submitted to PhD Support at the same time as submission of the thesis. PhD Support will then forward them to the Chair of the Examination Committee. The process of assessment cannot begin before the Chair of the Examination Committee has received the co-author statements.

¹⁹ The minimum requirement with regards to number of papers and/or manuscripts will depend on the tradition within the different academic disciplines.final

²⁰ A co-author statement template is available on the PhD WikIT, <https://phd.wikit.itu.dk>

6.1.3 Language and design

The PhD thesis should normally be written in Danish or English, with English being the preferred language and Danish being used in exceptional cases approved by the PhD School Council. The PhD School Council may also approve that a PhD thesis or portions thereof be written in a third language in special circumstances. The thesis is expected to be comprehensible, e.g., readable in terms of language and spelling. Any kind of extension of the submission date due to proofreading is not acceptable.

The PhD thesis is normally submitted as a single PDF file. Upon the submission of the PhD thesis to the PhD support, the author is given a receipt confirming that the PhD thesis has been submitted for examination.

The front page of the PhD thesis must state that the thesis has been submitted at ITU and the relevant institution in case of Joint and/or Double degree. It is optional to name the section in which the thesis was carried out. For Industrial PhD students the front page may also include the name of the company where the student was employed during the enrolment at ITU.

6.2 Submission of the PhD Thesis

When the enrolment expires, the PhD thesis must be submitted in the form and number stated by ITU. The thesis must include a declaration by the PhD student that the work is wholly his/her own work unless otherwise referred to or acknowledged.²¹ Further, the declaration must also state that the thesis has not been submitted for qualifications at any other academic institution in Denmark or abroad.

The enrolment as a PhD student at the PhD School at ITU expires upon submission of the PhD thesis and the PhD School cannot approve travel funding beyond the students' enrolment.

6.2.1 Statement from the supervisor

In connection with the submission of the PhD thesis, the principal supervisor must submit a statement on the course of the PhD student's development as a whole. The statement must contain an outline of how the PhD student acquired his or her teaching experience or other forms of knowledge dissemination, along with a record of ECTS points earned by the PhD student.

The principal supervisor's statement should also include a description of any research stay abroad and any research groups with which the PhD student has been in contact during the course of the PhD Programme. The statement must not exceed two standard pages in length, and must be prepared in English.

6.2.2 Recommendation for Examination Committee

The principal supervisor's statement is submitted to the PhD School Council together with the recommendation for the Examination Committee at least one month before the scheduled submission date for the PhD thesis. It is the responsibility of the principal supervisor to prepare and submit these documents to the PhD Support.

²¹ Such a form is available on the PhD Support WikIT, <https://phd.wikit.itu.dk>

6.2.3 Attendance by the members of the Examination Committee

If one or more of the members of the Examination Committee are not able to be present at the defence, but will join by videoconference, the PhD School Council must be informed at the time the Examination Committee is forwarded for approval by the Council. The PhD School Council requires that all members of the Examination Committee be physically present during the PhD defence unless extraordinary circumstances apply.

6.2.4 Submission from other PhD students

ITU does not normally accept any PhD thesis submissions from authors not previously enrolled as PhD students at ITU.

The extent of the affiliation with ITU can however be taken into consideration in relation to an application for PhD submission without prior enrolment. The affiliation must be documented, e.g., in the form of a Bachelor's or Master's degree, research cooperation or the like.

ITU can, under special circumstances, accept PhD thesis submissions from PhD students previously enrolled for a shorter period than 3 years at other universities, provided the PhD student has completed other study elements that are comparable to the requirements in the Danish PhD Order (independent research work, PhD courses, participation in research environments etc.).

In connection with the examination of a PhD thesis at ITU without prior enrolment, the Head of the PhD School may ask the PhD student to pay all expenses associated with such examination, defence etc. The PhD School Council sets the fee. The author may be granted exemption from thesis expenses subject to application.

6.2.5 Between submission and defence

Although the PhD student's enrolment at ITU expires upon the submission of the thesis, the supervisor is expected to assist the PhD student within reason during the period until the defence, should the student need any assistance preparing for his/her defence.

Chapter 7 - Evaluation of PhD Thesis

7.1 The Examination Committee

§ 16 in the PhD Order: Upon the submission of the PhD thesis at the latest, the institution appoints an expert examination committee composed of three members. The institution appoints a chairman from among the committee members.

§ 16(2) in the PhD Order: The members of the examination committee must be recognized researchers within the relevant field. Two of the members must be external researchers, of whom at least one member must be from outside of Denmark, unless this is not practicable considering the subject in question. The PhD student's supervisors must not be members of the examination committee; however the principal supervisor assists the examination committee without voting rights.

§ 17(1) in the University Act: The PhD examination committee has the following tasks: Making recommendations to the Vice Chancellor on the composition of examination committees.

§ 27(2) in the PhD Order: The following applies to PhD studentships financed through the Industrial PhD scheme: At least one of the members of the examination committee, see section 16(1), must have company-relevant research experience within the relevant field.

Assuming all requirements for the completion of the PhD Programme are satisfied, the PhD School Council recommends the composition of the Examination Committee to the Vice Chancellor of ITU in conjunction with the proposal presented by the principal supervisor. The proposal for the members of the Examination Committee must include arguments for member inclusion as well as links to current CVs.

7.1.1 Composition of the Examination Committee

The Examination Committee is composed of three members at the rank of Associate Professor or Professor of which two members are external.²² The internal member of the Examination Committee from ITU will by default act as Chairman of the Committee.

For PhD candidates with a scholarship financed by the Innovation Foundation (Industrial PhD candidates) at least one of the members of the Examination Committee must have company-relevant research experience within the field of the study, but must not be employed with the company where the candidate is employed.

In special circumstances such as sickness, death or misadventure, the Vice Chancellor can decide that the Examination Committee consists of only two members.

²² External means that the members cannot be employed at ITU during the assessment.

7.1.2 Conflict of interests

No member of the Examination Committee may have a conflict of interest evaluating the thesis such as common authorship or employment relations in the immediate future. It is the supervisor's responsibility to ensure that there is no conflict of interest or that if there is a potential conflict of interest, it is declared and measures are taken. Where any actual or perceived conflict of interest exists, it should also be declared to the Chair of the Examination Committee and this information should be shared with the Head of the PhD school. The Chair of the Examination Committee decides if a conflict of interest exists and how it is resolved.

7.1.3 Formal restrictions for the members of the Examination Committee

The same examiner cannot usually be used more than once in any two-year period and usually not more than four times in any ten-year period. An examiner must also be in his or her active working life.²³

The principal supervisor cannot be a member of the Examination Committee, but he/she can assist the Examination Committee (without voting rights). In this way, the principal supervisor is available to answer questions clarifying the course of the candidates PhD Programme and/or research project. The principal supervisor may be invited to any meetings held by the Examination Committee for this purpose, but cannot act as secretary for the Committee.

7.1.4 Approval of the Examination Committee

Following the approval of the Examination Committee by the Vice Chancellor, the PhD candidate must approve the composition of the Committee. If the PhD candidate wishes to object to one or several of the appointed members of the Examination Committee this must be done no later than one week after the notification of the Examination Committee has been forwarded by the PhD Support to the PhD candidate.

²³ If one of the suggested members of the Examination Committees is retired, the PhD School Council will decide on a case-to-case basis whether that person can qualify as a member of the Examination Committee, looking at the person's active and current relations to the particular discipline and research environment.

7.2 The Preliminary Evaluation of PhD Thesis

§ 18(1) in the PhD Order: Within two months of the submission of the PhD thesis, the examination committee must make its recommendation to the institution as to whether the PhD thesis fulfils the requirements for the award of the PhD degree. The month of July is not included when calculating the two-month deadline. The recommendation must be reasoned, and in the event of disagreement, the majority will prevail.

The Examination Committee prepares a recommendation as to whether the PhD thesis fulfils the requirements for the award of the PhD degree. This report is prepared first in a preliminary (or draft) examination report and after the defence in a final examination report.

7.2.1 The preliminary (or draft) examination report

The preliminary examination report is completed and submitted to PhD Support by the Chair of the Examination Committee no later than two months after submission of the PhD thesis. When the preliminary report is submitted to PhD Support in its last and final version it is forwarded to the PhD candidate and supervisor. A copy is also forwarded to the Head of the PhD School for general information.

The preliminary examination report should be well founded and written in straightforward, objective language; it should provide a critical evaluation of the PhD candidates work with respect to standard scientific practice in the relevant discipline of the thesis. The report should additionally contain a point-by-point discussion of the elements of the thesis, including an aggregate evaluation of the same, with the work's most significant findings highlighted. The conclusion should be formulated in general and understandable terms and it should clearly state whether the thesis as submitted is recommended for oral defence.

The examination report is normally three to four pages in length and written in English. In the event of disagreement among the members of the Examination Committee, the preliminary examination is based on a majority vote with the disagreements documented.

7.2.2 Recommendations

The preliminary report concludes with one of the following three recommendations:

- **The thesis is recommended for defence.** A list of minor modifications is given to the candidate, who has the opportunity to improve the text before the defence and publication. In this case, a defence date is proposed as soon as possible and agreed upon by the Examination Committee, the PhD candidate, and the principal supervisor. The PhD candidate has the right that the defence takes place within three months after the thesis submission date.
- **The thesis is not recommended for defence – two options apply**
 1. It is recommended that the thesis can be handed in for a second evaluation with a given deadline.

A deadline for the submission of the revised thesis is set – between three and six months. The same Examination Committee assesses the revised thesis unless special circumstances apply. The PhD candidate must confirm his or hers willingness to resubmit the thesis.

Upon the second evaluation the PhD candidate gives a list of major modifications to the Examination Committee. The Examination Committee has in this way the opportunity to check if the modifications have been executed to the Committee's satisfaction prior to the defence (and publication of the thesis).

2. It is not recommended that the thesis is handed in for a new evaluation

In option two, the Vice Chancellor makes one of the following decisions based on the Examination Committee's recommendation, the author's and the principal supervisor's comments (if any):

- 1) That the defence should not take place and the PhD candidate's enrolment is terminated.
- 2) That the PhD thesis is submitted in a revised version within a deadline of at least three months but no less than 12 months. If the PhD thesis is resubmitted, the same Examination Committee assesses it unless special circumstances apply
- 3) That the PhD thesis is re-submitted for evaluation by a newly formed Examination Committee.

In both cases of unfavourable recommendations, the PhD candidate and the principal supervisor have the opportunity to submit their comments within two weeks after the recommendation has been received.

7.2.3 Resubmission

A PhD thesis can only be resubmitted three times making the total number of submissions four.

Any deadlines set in a process of resubmission are to be respected. If not, the Head of the PhD School has the right to refuse any further submission from the PhD candidate after seeking advice from the Chair of the PhD candidates Examination Committee and supervisor.

7.2.4 Extension of resubmission date

In case the PhD candidate requests an extension of the second or third submission date, the application should be sent to the PhD Support, but addressed to the Chair of the Examination Committee, who has the authority to take the decision. The Chair must however, inform the Head of the PhD School of such application and seek advice from the Head of the PhD School and the supervisor prior to such a decision. The PhD School Council and the Head of the PhD School have the right to refuse or adjust the period of extension set by the Chair of the Examination Committee.

An application for extension between two submissions must be submitted at the latest two weeks before any submission date.

7.2.5 Status of the PhD candidate during examination

During the process of examination, delegation of authority for certain decisions such as extensions is with the Chair of the Examination Committee.

The PhD candidate may request office space in order to prepare for the defence and can expect reasonable resources from the supervisor in case assistance for the preparations, such as a rehearsal of the defence, is needed.

The PhD School has no financial obligations towards the PhD candidate during the thesis examination process, but will financially support the PhD defence.

7.3 Final Evaluation

Following the defence, the Examination Committee makes its final recommendation as to whether the PhD candidate should be awarded a PhD degree. A final written recommendation (final examination report) must be available no later than one week after the defence, and will be forwarded to the PhD candidate by the PhD Support. This recommendation must be reasoned, and, in case of disagreement within the Examination Committee, based on a majority vote. If the final recommendation is negative, the Vice Chancellor of ITU may decide to let the thesis be assessed by a new Examination Committee as described in Section 7.2.2.

Chapter 8 - Defence and Award of PhD Degree

8.1 The Defence

§19(1) in the PhD Order: The PhD thesis must be defended publicly in accordance with internal rules laid down by the institution. At the defence, the PhD student or the author must be given the opportunity to explain his or her work and defend the PhD thesis before the members of the examination committee.

8.1.1 Time and location

The Chair of the Examination Committee sets the time and place for the thesis defence in conjunction with the other members of the Examination Committee, the PhD candidate and the supervisor. The date is communicated to the Head of the PhD School and PhD Support. The defence and the thesis (if there are no conflicting concerns) are open to the public and will be announced at ITU through the available media. A PhD defence is held at ITU during normal business hours. The PhD School Council approves variations to this practice.

For Industrial PhD candidates, an exemption may be granted for holding the defence at the PhD candidates place of employment provided that will be open to the public. The PhD School Council must approve such an arrangement.

Exceptions can also be granted by the PhD School Council in case of example Joint and/or Double degrees defences if it has been defined in a written agreement made prior to the enrolment.

8.1.2 Publicity and confidentiality

For cases in which the regulations in the PhD Order concerning publicity are an infringement of the legislation regarding inventions within public research institutions, the PhD Order is followed. In such cases, ITU can require that publication of the PhD thesis be postponed until at least two months after submission.

A PhD defence cannot be confidential and any confidential parts in the research project cannot be included in the basis for the award of the PhD degree. Confidential parts can be excluded from the defence, providing that the Examination Committee has had access to the data during the process of assessment.

8.1.3 Chair of the defence

The defence is chaired by the principal supervisor of the PhD candidate, or an appropriate replacement, and the Chair of the Examination Committee chairs the Q&A section of the defence.

The Chair of the Examination Committee may allow members of the public to comment or raise questions during the Q&A part of the defence. The Chair of the defence must ensure that the defence proceeds in a dignified manner and can if necessary, curtail or prolong the defence.

8.1.4 Course of the Defence

At the defence, the PhD candidate is introduced by the supervisor, presents the thesis, its relevant findings, and applied scientific methods, including critical discussion of the validity of the work. The PhD candidate is afterwards examined by the members of the Examination Committee, a Q&A process lead by the Chair of the Examination Committee as described in Section 8.1.3.

8.1.5 Duration of the Defence

The entire defence typically lasts two hours but may continue for up to four hours and it is expected that all members of the Examination Committee attend for the duration.

After the defence, the Examination Committee makes its final recommendation as to whether the PhD degree should be awarded. This recommendation is communicated to the PhD candidate immediately after the defence, normally at the civic reception, that takes place after the defence.

8.2 Award of the PhD Degree

§22 in the PhD Order: The PhD degree may be awarded if the Examination committee submits a recommendation to that effect.

§ 23 in the PhD Order: The institution issues a certificate of the award of the PhD degree.

As soon as possible, and no later than one week after the defence, the Chair of the Examination Committee submits its final recommendation report to the PhD Support (final report). The PhD degree is awarded by the Academic Council (cf. The University Act 15, 2) of the ITU to whom the final report is forwarded by PhD Support.

8.2.1 Diploma

After the PhD degree is awarded, PhD Support issues a diploma for the PhD degree. The diploma is prepared in both Danish and English versions and these forwarded to the PhD candidate by PhD support. If the PhD degree is not awarded, documentation concerning the elements of the PhD Programme that were completed can be issued upon request.

If a mutual agreement of a Joint or Double degree exists, PhD Support issues a certificate for the PhD degree with an endorsed signature, etc. from one (or several) other education institutions or may agree to add the ITU's name and logo on to another institutions diploma (Joint degree). In case of a Double degree ITU will to the extent possible, follow the design for the diploma as if it was a regular PhD degree.

Chapter 9 - Printing of PhD thesis

9.1 Time and scope of printing

After a successful PhD defence, the PhD has up to two weeks to make minor changes and corrections to the PhD thesis. Written documentation of the changes has to be sent to - and approved by - the Head of the PhD School before it is printed. The printed thesis is provided with ISBN and ISSN numbers. The number of copies printed depends on the number of colour pages and the total number of pages. The total number of printed theses therefore depends on the current budget allocated for this purpose.

Four copies of the thesis are sent to ITU library, one copy is given to the principal supervisor (and co-supervisor if any) and PhD Support keeps one copy.

9.1.1 Prior to printing

If the Examination Committee decided to award the PhD Degree conditionally that certain parts of the content are corrected in the thesis, the PhD must correct this prior to printing the thesis.

It is the responsibility of the Chair of the Examination Committee to ensure that the comments from the Examination Committee are addressed in the printed version of the PhD thesis. Namely, to ensure that comments and revisions - as conditions for the recommendation of the defence - are addressed in the final version. The PhD must therefore forward the revised thesis prior to printing to be approved by the Chair of the Examination Committee.

9.1.2 Intellectual Property Rights (IPR)

The PhD thesis is in all respects the property of the author and may not, apart from the requirement in the PhD Ministerial Order stipulating that it must be publicly available in due time before the defence, be lent, sold or made available to others without written permission by the author.

For Industrial PhDs the author does not automatically own the rights of the findings and the data in the thesis. In order to insure a common understanding between the PhD and the company on IPR, it is mandatory that an IPR agreement between the PhD student and the company be signed prior to enrolment. See footnote 7 in Section 4.1.3.

Chapter 10 - Exemptions

10.1 Leave of Absence

10.1.1 Criteria for leave

The PhD School Council will consider a request for leave of absence from the PhD Programme for both academic and personal reasons. A leave of absence request must be in writing, be suitably motivated and include a statement of support from the PhD student's principal supervisor. The PhD School Council will consider the academic and study-related issues in connection with a leave of absence request. All decisions on leave of absence will be based on an individual basis and with due regard to the consequences of the absence to the completion of the PhD Programme.

10.1.2 Approval of leave

In the case of leave for sickness or parental leave, the Head of the PhD School on advice from the Head of the Personnel Section will approve applications ex officio. Other types of leave of a personal nature can be marked "private and confidential" and can be approved by the Head of the PhD School without recourse to the PhD School Council. Following any kind of leave, an adjustment of the PhD Study Plan must be made.

The PhD School Council may also approve unpaid leave of absence from the PhD Programme. The following must be included in an application for leave;

- An application from the student
- A statement from the principal supervisor

10.1.3 Timespan for leave

Leave of absence may be granted on a full-time or part-time basis. The entire leave period for all PhD students cannot exceed one year without the Vice Chancellor's prior approval. Leave in connection to maternity, paternity or sickness is not included in this definition.

10.1.4 Status of the PhD student during leave

The PhD student has non-student status during a leave of absence. Thus the student may not actively participate in study during a leave of absence and is not entitled to supervision, office space etc. If accepted by the PhD School Council, the PhD student may participate in a planned course provided that the course is of relevance to the student's studies and is not expected to be offered again later.

The PhD School has no financial obligations towards the PhD students during any kind of leave.

10.1.5 Sickness for enrolled PhD students

In case of long-term sickness for enrolled PhD students, the student must forward a medical report to the PhD support within two month of sick leave. This will serve as documentation to extend the period of

enrolment as necessary. The PhD School Council does not cover any expenses related to sickness.

Sick leave can be obtained for a maximum of twelve months initially, after which a meeting must be arranged with the supervisor and the Head of the PhD School to evaluate the present and future situation, namely the currency of the research and the prospects for completion.

In case of long-term sick leave (more than three months), the PhD student must provide an updated PhD Study Plan upon return to his/her studies. The PhD School Council approves the revised plan.

10.2 Delay of Thesis Submission and Extension of Enrolment

The Head of the PhD School can approve routine extensions of enrolment of up to three months. Extensions that exceed three months, or additional applications that mean that the total extension period will exceed three months, are submitted to the PhD School Council. The PhD School Council may approve enrolment for three to six months.

Accordingly, the total period of an extension to enrolment never exceeds nine months. Other approved leave of absence, such as parent leave or sick leave, do not count in these totals.

The following must be included in an application for extension:

- An application from the PhD student;
- A statement from the principal supervisor confirming that the both supervisor and applicant have a complete understanding of the conditions and terms of the extension;
- A three-six months extension to the PhD School Council must contain detailed grounds for the extension. A statement from the principal supervisor must also be included, confirming the circumstances of the student's application.

The economic consequences to the PhD student in connection with extensions are not germane to the decision-making. There is no mechanism to consider salary or employment extensions by either the Head of the PhD School or PhD School Council.

10.4 Appeals and Protests

Decisions made by ITU pursuant to the PhD Ministerial Order are referred to the Danish Agency for Universities and Internationalisation, if the complaint concerns legal issues. Complaints must be submitted within two weeks of the complainant being informed of the decision. The complaint is submitted to ITU whom will issue a response. The complainant is given the opportunity to comment on this response within a deadline of at least one week. ITU will send the complaint to the Danish Agency for Universities and Internationalisation, enclosing the university opinion and any comments from the complainant.

Any complaints concerning decisions made by the PhD School that do not raise legal issues may be referred to the Vice Chancellor of ITU. Complaints must be submitted within two weeks of the complainant having been informed of the decision.²⁴

10.4.1 Special cases

In special cases the Vice Chancellor may grant exemptions from the rules laid down by ITU. The Danish Agency for Universities and Internationalisation may, in special cases, grant an exemption from the PhD Order (§ 28).

10.4.2 Review of the PhD School

The work of the PhD School is subject to on-going review, including regular international reviews. The Head of the PhD School must initiate such reviews on regular basis. The review report will be published.

²⁴ All complaints regarding decisions made by the PhD School must be submitted in writing and be reasoned.

Chapter 11 - Operation and Changeover Guidelines

This Handbook to the PhD Programme goes into effect 17 August 2015

The enrolment of all current PhD students is automatically transferred to the jurisdiction of the new PhD Handbook. If a student believes a conflict exists between the existing and the preceding version of the PhD Handbook and its regulations, an exception can be sought from the PhD School Council to apply whichever set of regulations the student chooses. In these cases, the PhD School Council will apply those guidelines that are to the PhD student's advantage.

The PhD School Council has prepared suggestions for a new PhD Handbook or significant changes to the current one. The Academic Council approves the PhD Handbook or significant changes hereto, and the PhD Handbook is signed by the Vice Chancellor.

Approved by Academic Council _____ 2015

Mads Tofte

Vice Chancellor, Academic Council Chair