Handbook of the

# PhD School at

# IT University of Copenhagen

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## The legal scope for the PhD Handbook

The legal framework for PhD education in Denmark and for awarding the PhD Degree, is defined by the Danish University Act (*Universitetsloven*)<sup>1</sup> and the Ministerial Order on the PhD Programme<sup>2</sup> (PhD Order) issued by the Danish Ministry of Higher Education and Science. In addition, other legislation such as the Danish Public Administration Act (*Forvaltningsloven*)<sup>3</sup>, and the Articles of Association of ITU<sup>4</sup> are also applicable.

The PhD Order requests according to Chapter 10, §25, 1-5 that the University defines 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 PhD 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. The Handbook is an overall set of rules, which does not go into specific details with the various processes that constitute the PhD education at ITU. Guidelines for the specific elements of the PhD Programme is available on the ITU intranet.

Following the introduction, the structure of this Handbook is intended to reflect and guide relevant issues while being enrolled as a PhD student at ITU.

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<sup>&</sup>lt;sup>1</sup> Ministerial Order No. 778 as of 07/08/2019.

 <sup>&</sup>lt;sup>2</sup> Ministerial Order on the PhD Programme at the Universities and Certain Higher Artistic Educational Institutions No. 1039 as of 27/8/2013.
<sup>3</sup> Ministerial Order No. 433 as of 22/04/2014

<sup>&</sup>lt;sup>4</sup><u>https://en.itu.dk/~/media/en/aboutitu/organisation%20facts%20and%20figures/articles%20of%20association%20of%20itu%20approved%20and</u> <u>%20signed%202018-04-16%20pdf.ashx</u>

## **Chapter 1 – Introduction**

## 1.1 PhD students and the vision and mission of ITU

The role of the PhD School at ITU is to enrol PhD students who contribute to the mission and vision of ITU. Furthermore, the role of the PhD School is to graduate PhD students who conduct excellent research by international standards.

ITU provides PhD education at a high international level, consistent with the mission of the institution to deliver internationally leading teaching and research in order to create value with IT.

## **1.2 Expectations to the PhD student and the principal supervisor**

Every PhD student enters a formal supervisor/student relationship with a faculty member employed at ITU at Associate Professor or Professor level. When taking on a new PhD student, the principal occupation of the principal supervisor must be the ITU employment. For the day-to-day work of the PhD School, this means that the PhD School primarily interacts with PhD students and their principal supervisors. The PhD School encourages the use of co-supervisors when it is of benefit for the academic progression of the PhD project.

ITU expects shared responsibility between the PhD students and the supervisors to maintain synergy with the PhD School.

The PhD School expects that:

- The PhD 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 and ITU. 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 PhD students who, in addition to their ITU supervision, have supervision outside ITU, the formal supervisor team is composed of a principal ITU supervisor, external supervisor(s), and possible ITU co-supervisor(s). This is the case for PhD students employed outside ITU, and PhD students who have external co-supervision. It is mandatory for all ITU PhD students to have a principal supervisor, employed at ITU as his/her principal occupation. In cases of a supervisor team consisting of both internal and external supervisors, the PhD School emphasises the need for synergy between these parties to prevent the PhD student from being caught between conflicting advice or research directions. The PhD School recommends that the supervisor team and the PhD student have joint meetings on a regular basis to foster such a synergy. The PhD School should be consulted by the PhD School is responsible for assisting in resolving any

possible issues.

## 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 ensuring scientific progress, and to ensure 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., a PhD Study Plan, half-yearly reports, and a midway evaluation. Furthermore, the PhD School aims to ensure that internal courses of relevance to ITU PhD students are offered on a regular basis.

## **Chapter 2 - Organisational Structure**

The PhD School operates at the organisational level of ITU and serves all departments in regard to their PhD students and PhD supervisors. The PhD School works closely with the administrative departments at ITU.

## 2.1 The Head of the PhD School

The PhD School is led by the Head of the PhD School, who is assisted in the decision making by the PhD School Council and PhD Support.

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 regulations<sup>5</sup>. The Head of the PhD School has the responsibility for the planning and running of the overall PhD Programme at ITU. The Head of the PhD School is responsible for the scientific content of the overall PhD Programme, including PhD courses and PhD supervisor courses organised by the PhD School. 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 Heads of Department to what extent practical as well as strategic suggestions from the departments are incorporated in the planning and management of the PhD Programme.

The Head of the PhD School is responsible for raising concerns about a PhD supervisor to the relevant Head of Department in situations where the PhD supervisor neglects the obligations as described in section 5.1. In situations of negligence, the Head of the PhD School, in consultation with the Head of Department, has the authority to suspend a member of faculty from serving as principal PhD supervisor or from taking on new PhD students for a set period of time or until certain requirements are met, e.g., upgrading the PhD supervisor competences by successfully completing ITU's PhD supervisor training.

The Head of the PhD School reports to the Pro-rector.

## 2.2 The PhD School Council

The PhD School Council consists of up to 8 members. All members of the PhD School Council are elected. 4 members are elected among the faculty employed at the level of at least Associate Professor and serve for a period of 4 years. 4 members are elected among the enrolled PhD students who serve for a period of 1 year.

The Chair and the Vice Chair of the PhD School Council are 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 and the Vice Chair of the PhD School Council form the PhD School's Executive Committee, who can act on behalf of the PhD School Council.

<sup>&</sup>lt;sup>5</sup> Articles of Association of the IT University:

https://en.itu.dk/~/media/en/aboutitu/organisation%20facts%20and%20figures/articles%20of%20association%20of%20itu%20approved%20and% 20signed%202018-04-16%20pdf.ashx

The PhD School Council is quorate when 5 Council members are present representing at least half of the senior faculty members and half of the PhD student members<sup>6</sup>.

#### 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 and financial matters, the Head of the PhD School has the ultimate authority.

The mandate of the PhD School Council is defined in the University Act and in ITU regulations. Among the Council's tasks are:

- Propose general and ongoing quality development of the PhD School and the PhD Programme
- Conduct principal discussions about the academic quality of the PhD School and the PhD Programme
- Propose development of processes and procedures to enhance and monitor educational delivery within the PhD School and the PhD Programme
- Manage and quality control the recruitment of new PhD students within the ITU Open Call, such as conducting qualification assessments
- 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
- Approve applications for research stays<sup>7</sup> for all enrolled PhD students
- 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 ECTS<sup>8</sup> points, approval of PhD 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 Chair of the PhD School Council 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.

<sup>&</sup>lt;sup>6</sup> This is also the case with decisions taken by e-mail.

<sup>&</sup>lt;sup>7</sup> Only research stays to meet the legal requirement of change of research environment, cf. Part 3, section 7 of the PhD Order on participation in other active research environments

<sup>&</sup>lt;sup>8</sup> European Credit Transfer and Accumulation System.

## 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 is available to answer questions from both PhD supervisors and PhD students. PhD Support contacts the PhD students and their principal 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.

## 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 stays, travel, and PhD defences. If PhD students lack sufficient economic means to participate in a scientific activity, they can apply for further funding from the PhD School. The PhD School requires PhD students to check if any other funds are available prior to applying for funds from the PhD School Council (project funding, stipends, etc.).

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

## 2.5 Staff Development Interviews (MUS)

The Head of the PhD School will conduct MUS (staff development interviews) annually with all enrolled PhD students. Alternatively, the PhD students can have the MUS with their Head of Department/Section but having the MUS with one's supervisor is not allowed.

## **Chapter 3 - PhD Programmes**

The PhD School currently offers 2 PhD Programmes. 1 of 3 years duration and 1 of 4 years duration. The PhD 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 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.

## 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 3 years of bachelor's level studies plus 2 years of master's level studies, including final exams (a total of 300 ECTS points).

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 research stay(s) 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 PhD student's 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's degree of 180 ECTS points plus 1 year of master's level studies of 60 ECTS points (a total of 240 ECTS points).

The 4-year Programme consists of 2 parts (A and B), each of 2 years duration. Part A is composed of equal portions of master's and PhD studies. Part B consists exclusively of PhD level study.

4-year PhD students must start their enrolment at the start of the semester of the master's programme they are going to follow or immediately before.

If a PhD student withdraws from the PhD Programme during part A before completing the master's programme, the PhD student will have the opportunity to complete the 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 master's studies and PhD studies:

- Original research work with academic supervision (the PhD project)
- Coursework or project work (or both) in the master's programme, corresponding to 30 ECTS points, 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, corresponding to 30 ECTS points
- 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.

No later than halfway through the studies, the midway evaluation must take place. See section 5.4 for an elaborate description of the midway evaluation. The qualification examination and the midway evaluation cannot be combined into 1 session. However, it is recommended to have them both at the same day.

The qualifying examination can have 1 of 2 outcomes:

- Passed master's degree
- Failed master's thesis and thereby the master's degree. Cf. the examination order, the student has 2 more attempts to pass the master's thesis examination

After a passed qualification examination, the midway evaluation must take place. See section 5.4 for requirements for the midway evaluation, and the consequences for an unsuccessful midway evaluation.

### 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 points
- Participation in active research environments, including stay(s) 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 PhD student's PhD project.
- Completion of a PhD thesis on the basis of the PhD project

## **Chapter 4 - Enrolment and employment**

**§5 in the PhD Order**: Admission to the PhD programme is based on a 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

ITU has two types of calls for PhD applications. Open calls and project calls. Annually, ITU holds a number of full PhD stipends to distribute to either co-financing or fully funded PhD positions. Head of Departments are responsible for allocating the stipends to research projects or open call stipends. Research Support at ITU is responsible for keeping count of the spending of ITU PhD stipends.

### 4.1.1 Open calls

ITU can choose to announce open calls for PhD applications. In the open calls, candidates can apply with their own project proposals to be funded by ITU. The open call is normally published in early spring.

### 4.1.2 Project calls

Project calls are calls for applications that are submitted by ITU researchers on an ongoing basis and advertised in a timeframe suited to the project. The PhD School and HR department may choose to bundle calls for several projects for the most effective processes. In order to publish a call, funding must be guaranteed for the entire PhD position.

4.1.3 Possibilities for enrolment without announcing a call for applications

For Industrial PhD students, self-financed PhD students, PhD students who have obtained a Tuition Fee Free stipend<sup>9</sup>, and named candidates in a successful research grant application, it is possible to enrol without announcing a call. 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.

### 4.1.4 General requirements of PhD applications

To become a PhD student at ITU by application to a call, it is a requirement that the application is

<sup>&</sup>lt;sup>9</sup> A self-financed PhD student is a student who is 100% financed by own funds (salary and tuition fee). A PhD student who has obtained a Tuition Fee Free stipend is a PhD student where the salary is 100% self-financed, but where the tuition fee is paid by ITU.

submitted before the deadline specified in the call and is assessed positively.

When a PhD student applicant responds to a project call, the application must include a statement addressing the applicant's potential contribution to the project.

ITU only accepts PhD students in research areas where qualified academic supervision can be guaranteed by ITU faculty<sup>10</sup>, and where the research project is in line with ITU's vision and mission. The decision of enrolment is therefore based on the applicant's documented academic qualifications, the suitability of the research project as a PhD project, and how the project fits into the department's academic profile and priorities. The decision is also based on whether the necessary academic resources (finding a relevant supervisor) as well as financial resources can be made available for an academically sound completion of the project.

In order for an application to be taken into consideration, the formal requirements of the call and the PhD School must be met<sup>11</sup>. Subsequently, the candidate and the project will be assessed on:

- Project proposal
- Excellent master's thesis grade expectation 10-12<sup>12</sup> (exemptions can apply when the candidate can document other relevant experience/publications that demonstrate academic insight into the research field in question)
- Already established contact to potential supervisor
- Alignment with the vision and mission of ITU
- Letters of recommendation
- English language skills
- Grades
- Other relevant work experience
- Possible contributions of the project/publications
- A plan for field work, including funding if relevant

4.1.5 Types of PhDs - equal qualifications and requirements

The PhD School enrols different types of PhD students.

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

The responsibility of the PhD School towards all types of PhD students is as described in section 1.3.

<sup>10</sup> Cf. §2 (2) in the PhD Order: "The institutions (...) may award the PhD degree within fields within which they carry out research"

<sup>&</sup>lt;sup>11</sup> The formal requirements can be found on the ITU website

 $<sup>^{\</sup>rm 12}$  Does not apply for candidates to the 4-year PhD programme

## 4.2 Assessment Committee

For each PhD call the Head of the PhD School is responsible for forming an Assessment Committee.

### 4.2.1 Mandate of the Assessment Committee

The mandate of the Assessment Committee is to evaluate the academic qualifications of the applicant and the feasibility of the proposed project plan.

## 4.2.2 Composition of the Assessment Committee

An Assessment Committee must be constituted immediately after the publication of the call or immediately after submission of an application. The Assessment Committee must be approved by the Academic Council of ITU. For ongoing committees, the Academic Council can approve a permanent Committee for a 1-year duration.

The Assessment Committee is composed of ITU faculty members with respect to availability, expertise, and conflict of interest. For each call, more than 1 department must be represented in the Assessment Committee, and a balanced gender representation should be obtained, if at all possible. If it is not possible for the Head of the PhD school to compose an Assessment Committee that meets the requirements, the senior faculty members of the PhD School Council must step in as members of the Assessment Committee.

In regard to project calls, the Committee member of the relevant department will normally act as Chair of the Assessment Committee.

Any member of the Assessment Committee must be employed by ITU, and no more than 1 member can be at the level of Assistant Professor. The Chair of the Assessment Committee must be employed at the level of at least Associate Professor.

## 4.3 Enrolment and Hiring Committee

## 4.3.1 Mandate of the Enrolment and Hiring Committee

The mandate of the Enrolment and Hiring Committee is to consider the pool of candidates recommended by the Assessment Committee and by personal interview decide which candidate(s) best meets the criteria for enrolment as a PhD student at ITU. The Head of the relevant department decides if the project fits into the department's academic profile and priorities, and the Head of the PhD School approves the project's alignment with ITU's vision and mission.

## 4.3.2 Composition and tasks of the Enrolment and Hiring Committee

A PhD Enrolment and Hiring Committee is composed of the budget holder responsible for the stipend (e.g. project owner and/or Head of Department), the personnel manager (relevant Head of Department/Section), the potential principal supervisor, and the Head of the PhD School. The Chair of the Enrolment and Hiring Committee is always Head of Department/Section except in the case where they have served as Chair of the

Assessment Committee.

In some cases, there may be more than 1 budget holder, when financing is shared. Should this occur, the Head of the PhD School will determine on a case-by-case basis whether it serves any meaningful purpose to have all budget holders participate in the Enrolment and Hiring Committee.

The Enrolment and Hiring Committee is also responsible for making offers of PhD positions to potential candidates, including contacting the qualified candidates, and informing PhD Support about the recruitment process and its outcomes. Once interviews with potential candidates have been held, the Chair of the Enrolment and Hiring Committee informs the HR department whether or not the application was successful.

Financing of the entire PhD position for each PhD student must be secured prior to any enrolment and/or employment offer is made. A plan for expenses such as fieldwork should be clarified as well.

## 4.4 Decisions regarding 3-year or 4-year Programme

After a positive assessment, the applicants may be admitted into the 3-year or the 4-year Programme<sup>13</sup>. This decision is initiated by the HR department in close cooperation with the department of Student Affairs and Programmes and PhD Support. If necessary, an evaluation of foreign academic degrees is obtained by the HR department or by PhD Support<sup>14</sup>.

## 4.5 Full-time or Part-time Enrolment

#### 4.5.1 Full-time enrolment

In general, a Danish PhD is a full-time study. The PhD Programme may be partially carried out at other institutions or businesses if approved by the PhD School Council, but a PhD student enrolled at ITU may not be enrolled as a PhD student at any other institution. ITU expects PhD students to be physically present at ITU in order to contribute to the research environment of the University.

#### 4.5.2 Part-time enrolment

A PhD student may be permitted part-time enrolment for only part of the enrolment if the PhD student can supply the appropriate reasons for doing so<sup>15</sup>. The total time to be spent in part-time enrolment must 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 along with the formal application for enrolment to the PhD School. If the wish for part-time enrolment occurs during the enrolment, the PhD student must submit an application to the PhD School Council.

It is a prerequisite for granting part-time enrolment that the financial authority/ies sponsoring the PhD student is in full agreement with such enrolment and that the planned enrolment period does not exceed a

<sup>&</sup>lt;sup>13</sup> See section 3.1 and 3.2

<sup>&</sup>lt;sup>14</sup> PhD Support obtains the information in cases of enrolment without employment (Industrial PhDs, self-financed PhDs, and Tuition Fee Free PhDs)

<sup>&</sup>lt;sup>15</sup> The appropriateness of a period of part-time study is decided on a case-by-case basis.

total duration of 5 years<sup>16</sup>. 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.

An application for part-time enrolment or leave of absence must include a statement of support from the principal supervisor, as well as an approval from the relevant Head of Department/Section, and the budget holder.

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

#### 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 relevant to the PhD project (transfer of credit) for these to be considered part of the applicant's PhD studies<sup>17</sup>.

A total of 15 ECTS points can be granted as advance credit transfer for PhD courses completed prior to enrolment. Credit transfer may only be granted for PhD courses completed no earlier than 5 years from the time of the PhD enrolment at ITU. The PhD enrolment will be reduced 1 month for every 5 ECTS points approved as advance credit transfer.

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 any other 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, a written cooperation agreement, covering financial aspects, agreements on intellectual property rights, publication, supervision, and distribution of work and time, must be prepared. The cooperation agreement is prepared by the Legal department of ITU and must be approved and signed by the Pro-rector.

<sup>&</sup>lt;sup>16</sup> This excludes any type of leave.

<sup>&</sup>lt;sup>17</sup> Cf. §7, subsection 3 of the PhD Order

## **Chapter 5 - The PhD Programme: Content 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 enrolment. In order to take on a new PhD student, the principal supervisor must be a recognised researcher within the relevant research field and must be employed as Associate Professor or Professor at ITU. The ITU employment must be the principal supervisor's principal occupation. The PhD student has the *right* as well as the *obligation* to be supervised.

Industrial PhD students with a grant from Innovation Fund Denmark must have a supervisor and a cosupervisor, who are both affiliated with the company in which the PhD student is employed. These two supervisors are in addition to the principal ITU supervisor. The formal requirement of the supervisors is qualifications within the areas of the PhD project<sup>18</sup>.

The PhD supervision is a very important element in the PhD Programme as the principal supervisor is responsible for the PhD student's PhD Programme as a whole<sup>19</sup>. In order to support the supervisors in their duties, the PhD School organises a course in PhD supervision open to all ITU PhD supervisors.

The principal supervisor has the following responsibilities:

- Be familiarised with the PhD Order and the ITU PhD Handbook
- Advise the PhD student on all matters related to the research project<sup>20</sup>
- Advise the PhD student on all matters related to preparing the PhD student's individual PhD Study Plan
- Advise the PhD student about research stays (abroad) and participation in relevant conferences
- Advise the PhD student about course requirements and participation as well as providing recommendation on applications for ECTS points
- Advise the PhD student about integrity and responsible conduct of research
- Serve as intermediary between the PhD student and contacts at other research institutions
- Align expectations with the PhD student, including roles and responsibility of the principal supervisor, the PhD student, and the co-supervisor(s)
- Ensure the PhD student becomes a member of active research groups and available networks

<sup>&</sup>lt;sup>18</sup> See Innovation Fund Denmark's guidelines for Industrial PhD; <u>https://innovationsfonden.dk/en</u>

 $<sup>^{19}</sup>$  Cf. §8 (1) of the PhD order.

<sup>&</sup>lt;sup>20</sup> 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.

- Evaluate and digitally sign half-yearly reports, midway evaluation report, approve the academic relevance of 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 PhD thesis submitted is comprehensible; that is, readable in terms of language and spelling (see section 6.1.3), and that it is ready for submission
- Be present at the PhD defence<sup>21</sup>
- Chair the PhD defence or find a suitable replacement

In addition to the principal supervisor, 1 or more co-supervisors may be assigned to the PhD student. It is encouraged by the PhD School that all PhD students have a co-supervisor, especially when it is of benefit for the academic progression of the PhD project. A co-supervisor can be a faculty member from ITU or can be external, coming from another university or the business community. The PhD School Council must approve any application for an external co-supervisor. Head of Department and Head of the PhD School must approve applications for internal co-supervisors. Co-supervisors may have a subset of responsibilities from the principal supervisor and are usually appointed to give the PhD student access to additional advice and/or expertise.

No later than 1 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.

In the event that, during the PhD student's enrolment, the principal supervisor's main occupation is no longer at ITU, but it is agreed that the supervisor continues in the role as principal supervisor, an internal co-supervisor must be assigned to the PhD student. The principal supervisor is responsible for identifying a co-supervisor and informing the PhD School, but can seek advise from the Head of the PhD School, if necessary.

The decision to either agree to keep the principal supervisor on, or to change the principal supervisor, must always be in the PhD student's best interest; academically and scientifically.

### 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 the duties as supervisor, or if other extenuating circumstances prevail, the Head of the PhD School, after discussions with the PhD student and the Head of

<sup>&</sup>lt;sup>21</sup> The supervisor may seek funding from the PhD School Council to cover half the cost of attending a defence if they are on approved leave abroad.

the relevant department, appoints another principal supervisor from among Professors, Associate Professors, or others with equivalent qualifications employed at ITU.

An application for change of principal supervisor must be approved by the relevant Head of Department and the Head of the PhD School.

5.1.2 Change of company supervisor for Industrial PhD students

If Industrial PhD students want to change their supervisor(s) from the company where they are employed, 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 PhD Support when such a change occurs.

5.1.3 Temporary change of supervisor in case of leave

If the principal supervisor is prevented in carrying out the supervisory duties due to a leave of absence for a period longer than 1 month, it is the joint responsibility of the supervisor and the PhD student to inform PhD Support and suggest a temporary replacement of the supervisor, if possible. If the principal supervisor is prevented from suggesting a temporary replacement, the PhD student should consult the Head of the PhD School or the Head of Department who, jointly, must appoint a temporary supervisor. The temporary supervisor is responsible for carrying out the principal supervisor's duties (cf. section 5.1) during the replacement period.

## 5.2 PhD Study Plan

The PhD Study Plan must be submitted within 2 months and approved no later than 3 months after the start date 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 PhD 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)<sup>22</sup>

In connection with the conclusion of the agreement on the type and scope of the supervision provided,

<sup>&</sup>lt;sup>22</sup> At ITU, this is manifested in a statement as to the source of the funding.

mutual expectations of the PhD student and the supervisor(s) must be discussed and agreed upon.

The PhD student must follow the current guidelines in regards to the GDPR<sup>23</sup>. In order for ITU to maintain records of any processing performed on personal data, all enrolled PhD students must ensure that all processing activities in the PhD project are covered by a record of processing activities and a Privacy Impact Assessment (PIA). The PhD student must register the progress of this process in the PhD Study Plan. The principal supervisor and the Legal department of ITU must be available for assisting the PhD student in the process.

The PhD Study Plan is dynamic and should be updated continually by the PhD student or at the initiative of the principal supervisor, for example in connection with major changes to the project, changes in relation to research stay, leave of absence, etc. The PhD Study Plan forms the basis for the half-yearly reports at ITU. If progress varies from the PhD Study Plan, it should be highlighted in the half-yearly report. The PhD School Council approves revisions to the PhD Study Plan in connection with 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 should only reflect the ECTS awarding activities that are counted towards the PhD requirement of approx. 30 PhD level ECTS points. The ECTS points counted towards obtaining the master's degree during part A are not reflected in the PhD Study Plan. However, the PhD level activities can take place both during part A and during part B of the PhD education. No later than 1 month after completion of part A and the qualifying examination (obtaining the master's degree), the PhD student must have the midway evaluation.

## 5.2.2 Approval of the PhD Study Plan

The PhD Study Plan is submitted via the provided platform within the first 2 months of enrolment for approval by the PhD School Council. The PhD Study Plan is prepared by the PhD student in close cooperation with 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 PhD Study Plan can either be:

- "Approved", in which case the PhD student continues the enrolment
- "Not approved", in which case the PhD student has 2 weeks to address the point(s) raised by the PhD School Council

The revised PhD Study Plan is resubmitted within 2 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 PhD School Council may recommend to the Head of the PhD School that ITU terminates the PhD student's enrolment. After consulting all involved parties, the Head of the PhD School makes the final decision on whether or not

<sup>&</sup>lt;sup>23</sup> General Data Protection Regulation. For more information on GDPR at ITU, see ITU's GDPR-site: <u>https://intranet.itu.dk/guides/gdpr</u>

to terminate the PhD student's enrolment. The PhD student may appeal this outcome to the Vice Chancellor within 2 weeks of notification of the termination from the PhD Programme.

5.2.3 Consequences of not submitting

If the first deadline for submitting the PhD Study Plan is not met within the first 2 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, after consulting all involved parties, will make the final decision on whether or not to terminate the PhD student's enrolment at ITU. The PhD student may appeal this outcome to the Vice Chancellor within 2 weeks of notification of the termination from the PhD 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 the PhD School assesses if the PhD student follows the PhD Study Plan on a half-yearly basis. 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 the provided PhD platform at ITU.

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

- Milestones for the prior half-year and whether those were met
- Research activities in the prior half-year, such as papers and other academic outputs
- Milestones for the next half-year
- An account of all coursework activities, i.e., ECTS points completed and planned
- Comments from the principal 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 principal supervisor about the progress of the research project and its viability. 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 2 parts, 1 for the PhD student and 1 for the principal supervisor. The reports are filled separately by each party and submitted to the PhD Support via the provided platform.

### 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 3 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 in a rectification period. This opportunity is granted only once for the entire enrolment in the PhD Programme, and the enrolment will not be extended due to the 3-month rectification period. The rectification period is described in detail in section 10.3.

### 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 3-months rectification 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 principal 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 2 weeks of notification of termination from the PhD 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 automatic termination of the PhD student's enrolment within 3 months of the half-yearly report falling due. If a PhD student is terminated by virtue of failing to submit a half-yearly report, the PhD student may appeal this outcome to the Vice Chancellor within 2 weeks of the notification of termination from the PhD Programme.

To avoid this situation, the PhD student may apply for an extension of the submission deadline of the halfyearly report to the PhD School Council. Approval can be granted for an extension of maximum 2 months.

Any documentation regarding illness, part-time, 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 full time leave have no obligation to submit half-yearly reports. If the leave is longer than 3 months, the PhD student must update the PhD Study Plan in the next half-yearly report.

When there is less than 2 months to the thesis submission date, there is no obligation for the PhD student to submit a half-yearly report in full detail.

## **5.4 Midway Evaluation**

All PhD students at ITU are obligated to pass a midway evaluation. The midway evaluation consists of a written thesis proposal, a midway report, and an oral presentation, where the PhD student presents the thesis proposal to a Midway Evaluation Committee.

The midway evaluation must take place no later than halfway through the enrolment. The PhD student may apply for an extension of the midway evaluation to the PhD School Council. Approval can be granted for an extension of maximum 2 months.

The principal supervisor is responsible for planning the practical aspects of the thesis proposal session.

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

### 5.4.1 Midway Evaluation Committee

The principal supervisor must form the Midway Evaluation Committee consisting of 3 faculty members at the level of Assistant, Associate, or full Professor. At most, 1 member of the Midway Evaluation Committee can be at Assistant Professor level. It is possible to have external members of the Committee if it is found to be beneficial to the quality of the midway evaluation<sup>24</sup>. The Chair of the Midway Evaluation Committee must be an ITU faculty member. At least 1 of the members is expected to be a specialist in the field.

If a member of the Midway Evaluation Committee is hindered in doing his/her duties or in any other extraordinary circumstances, the Head of the PhD School decides the course of action.

The members of the Midway Evaluation Committee cannot be members of the Examination Committee for the PhD defence.

The role of the Midway Evaluation Committee is to evaluate the PhD project at its current state based on the thesis proposal and the oral presentation from the PhD student. Furthermore, the Midway Evaluation Committee must provide feedback and comments on the work and direction for the second half of the project.

### 5.4.2 Thesis proposal

The PhD student must write a thesis proposal and submit it to the PhD School 1 month before the date of the thesis proposal session. The thesis proposal is an outline of the prospective thesis, describing research question, methodology, theory, preliminary results, etc.

The PhD student must also submit a midway evaluation report. This is done by filling in the required sections about the midway evaluation on the provided platform.

<sup>&</sup>lt;sup>24</sup> In case external members are relevant as members of the Midway Evaluation Committee, the PhD School can pay a minor fee as well to cover transportation costs.

Once the PhD student has submitted, the principal supervisor must state whether he/she recommends the enrolment to continue and provide a comment on the progression of the work according to the PhD Study Plan. Lastly, the principal supervisor must distribute the documents to the Midway Evaluation Committee.

#### 5.4.3 Thesis proposal session

The thesis proposal is discussed at the thesis proposal session in the presence of the Midway Evaluation Committee. During this session, a presentation is given by the PhD student. The principal supervisor may also give a short presentation of the project from the supervisor perspective. It is the responsibility of the principal supervisor to answer questions directed at the supervisor from the Committee.

The thesis proposal session must include:

- A presentation from the PhD student
- Discussion between the PhD student, the principal supervisor, and the Midway Evaluation Committee including questions from the Committee
- Discussion between the Midway Evaluation Committee members and their recommendation of the result of the midway evaluation
- The recommendation of the Midway Evaluation Committee including feedback and advise for the PhD student

There is no time limit for the thesis proposal session. The PhD student can choose, in agreement with the principal supervisor, to have the thesis proposal session open or closed to an audience. In addition to the elements listed above, the session may include other components, if relevant, e.g., questions from the audience, or private discussion between the Midway Evaluation Committee and the PhD student.

### 5.4.4 Approval of the midway evaluation

The Midway Evaluation Committee must give its recommendation of whether the PhD student should "pass", "try again", or "fail" by writing and signing a short evaluation including the recommendation of the result. This is uploaded by the principal supervisor to the PhD School through the provided platform.

The Midway Evaluation Committee orally informs the PhD student of its recommendation at the thesis proposal session.

The midway evaluation must be finally approved by the PhD School Council. The PhD School Council can, based on the recommendation of the Midway Evaluation Committee, decide 1 of the following outcomes:

- Approved; based on the recommendation to "pass", in which case the PhD student continues the enrolment unchanged
- Not approved; based on the recommendation to "try again", in which case the thesis proposal is revised, and a new evaluation is needed
- Not approved; based on the recommendation to "fail" (after a "try again" result), in which case the enrolment of the PhD student is terminated

If the midway evaluation is not approved based on the recommendation to "try again", the PhD student is given a 3-months rectification period<sup>25</sup> to revise the thesis proposal according to the Midway Evaluation Committee's recommendations and feedback. The revised proposal must be accompanied by a separate document explaining the changes from the previous version and how the feedback has been addressed in the new version. After 3 months, the thesis proposal is redistributed to the same Midway Evaluation Committee. The Committee decides if a new thesis proposal session is needed. If there are any questions that the Midway Evaluation Committee wants the PhD student to address or if there is the possibility to fail, a new thesis proposal session must be arranged. If this assessment is positive after the rectification period, and the midway evaluation is approved, the enrolment continues unchanged.

The opportunity to try again is only granted once for the entire enrolment of the PhD Programme and the period of enrolment is not extended due to the 3-months period at the midterm evaluation point.

In case of "fail", of the "try again" attempt, based on the fact that the issues that were raised are not satisfactorily addressed, the enrolment as a PhD student is terminated. This decision is taken in joint responsibility between the principal supervisor, the Head of the PhD School, and the Chair of the Midway Evaluation Committee. This will also be the case if the PhD student chooses not to address the suggested changes or chooses not to re-submit.

The PhD student receives the outcome in writing; however, it is highly recommended also having a meeting with the PhD student in order to explain the reasons for the outcome. The principal supervisor and the Head of the PhD School should attend this meeting with the PhD student. The PhD student is offered the option of bringing an observer to the meeting.

If the PhD student is employed at ITU, the employment is also terminated. The HR department is contacted immediately after the PhD School is informed of a negative outcome of a rectification period. If the PhD student is employed externally, the relevant place of employment is notified.

The PhD student can appeal this outcome to the Vice Chancellor within 2 weeks of the notification of termination from the PhD Programme.

5.4.5 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 3 months of the date from when the midway evaluation is due. If a PhD student is terminated by virtue of failure to undertake a midway evaluation, the PhD student may appeal this outcome to the Vice Chancellor within 2 weeks of the notification of termination from the PhD Programme.

To avoid this situation, the PhD student may apply for an extension of the submission of the midway evaluation to the PhD School Council. Approval can be granted for an extension of maximum 2 months.

 $<sup>^{\</sup>rm 25}$  For the rules regarding the rectification period, see section 10.3

## **5.5 Research Stays**

**§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 research enterprises etc.

Besides from participating in the active research environment at ITU, it is mandatory for all enrolled PhD students to participate in active research environments outside ITU in the form of at least 1 research stay. The research stay must be planned early on and registered in the PhD Study Plan. The research stay must be approved by the PhD School Council.

ITU strongly encourages all PhD students to become acquainted with and participate in research environments at recognised research institutions abroad. The period and place for such a research stay is not prescribed but visiting a foreign research institution for 3 to 6 months is recommended. It is vital for the PhD School Council to ensure that the research institution chosen fits the student's PhD study project and research, and that the PhD student is well taken care of.

Research stays can be customised to fit the PhD Study Plan and the life circumstances of the individual PhD student.

If the research stay is in a company, the Legal department of ITU must be involved before signing any contract.

#### 5.5.1 Financial support

The PhD School Council normally grants financial support for research stays<sup>26</sup>, provided that the PhD student applies in advance. PhD students are encouraged to seek funding for their research stay from other grant holders and other funding sources. If relevant, the PhD student must secure external funding to cover any form of tuition fee the hosting University might require, as the PhD School Council cannot under any circumstances cover tuition fees related to research stays. No exemptions are made.

## **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 of approximately 30 ECTS points<sup>27</sup> is mainly fulfilled through participation in courses approved by the PhD School Council. ECTS point activities are normally rated pursuant to the number of ECTS points set by other cognate Danish and international universities offering

<sup>&</sup>lt;sup>26</sup> Except for Industrial PhD students

<sup>&</sup>lt;sup>27</sup> "Approximately" is interpreted as at least 28 ECTS points by the PhD School Council

the course, but the final approval and determination of ECTS points for courses will be decided by the PhD School Council. In order for completed ECTS point activities to count towards the PhD student's academic record, the PhD student must submit an application for ECTS points to the PhD School Council.

The requirement can also be partially fulfilled through other activities, such as Summer Schools, seminars, workshops, or study groups at research institutions in Denmark or abroad, provided the PhD student applies for approval in advance, and the PhD School Council approves the application. For activities without a clear indication of ECTS points, the PhD School uses the current ECTS key to calculate the number of ECTS points based on the workload of the activity. It is the responsibility of the PhD student to provide sufficient documentation of the activity.

The PhD student and the principal supervisor are expected to plan for PhD courses that provide the PhD student with the skills and competences that supports the quality of the PhD project.

#### 5.6.1 Specific requirements

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.

It is mandatory for all PhD students to complete a research ethics course during the enrolment, preferably in the beginning of the enrolment. The PhD School offers a 1 ECTS point course on research code of conduct for PhD students every year.

Furthermore, the PhD School offers all enrolled PhD students an interdisciplinary course of 2 ECTS points every Fall. All PhD students with teaching obligations at ITU must furthermore complete a mandatory pedagogical training course of 3 ECTS points at ITU. The course is optional for those who are teaching assistants.

PhD courses offered by ITU are characterised by being formalised and well-defined courses. All PhD courses offered by ITU must be approved by the PhD School Council.

### 5.6.2 ECTS points

The following are restrictions on the way that ECTS points can be accumulated for PhD students during their entire period of enrolment:

- No more than 10 ECTS points can be obtained from courses at the master's level
- Master's level course work accumulates ECTS points towards a PhD at 2/3 of their face value
- No more than 10 ECTS points can be obtained from courses without clear ECTS indications
- No more than 8 ECTS points can be obtained from other study activities without clear ECTS activities such as conferences, workshops, symposia, and reading groups
- 1 ECTS point can be obtained from conference participation with paper presentation and the output following the conference (for example, via presentation given to a research group)

The PhD School reserves the right to add additional mandatory courses and symposia.

## **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, organising workshops, co-organising conferences, or other academic assignments (not including work of an administrative nature). 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 3-year contract, the duty hours correspond to a total of 840 hours. If employed as a PhD student on a 4-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., PhD students are paid the same salary regardless of the duty hours being accounted for or not.

5.7.3 Permission to take on additional work

All enrolled PhD students are expected to spend their time in full on the PhD Programme.

PhD students who are employed by ITU and wish to take on additional paid work not specifically named in the employment contract, must submit an application for secondary employment to the PhD School Council. The application must include clarifications on IPR aspects if relevant. After the PhD School Council's approval, the PhD student must follow the ITU procedure for secondary employment<sup>28</sup>. The approval of the PhD School Council must be enclosed to the Secondary Employment Agreement that is submitted to the Head of Department.

PhD students who are not employed by ITU and wish to take on additional paid work must submit an application for secondary work to the PhD School Council. The application must include clarifications on IPR aspects if relevant.

It is possible to apply for an unpaid leave of absence from the PhD Programme in order to do full time paid work, e.g. a paid internship, for a period of up to 1 year<sup>29</sup>.

<sup>&</sup>lt;sup>28</sup> See the Administrative ABC for details: <u>https://intranet.itu.dk/administrative-abc/s/secondary-employment</u>

 $<sup>^{\</sup>rm 29}$  See section 10.1 for rules on leave of absence

#### 5.7.4 Duties for Industrial PhD students

Due to their non-employment status at ITU, Industrial PhD students are not obliged to carry out mandatory duty hours at 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 forms of knowledge sharing in the company in which they are employed or at ITU<sup>30</sup>.

The extent of the dissemination, its content and frequency, is agreed between the company and the principal ITU supervisor<sup>31</sup>. Industrial PhD students are not obliged to teach at ITU, but they are encouraged to do so as part of their career development and should be given the opportunity if they wish to teach. Paid opportunities can be pursued with their principal supervisor in discussion with the relevant Head of Department.

### 5.7.5 Duties for Tuition Fee Free Stipend PhD students

Due to their non-employment status at ITU, Tuition Fee Free PhD students are not obliged to carry out mandatory duty hours at 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 forms of knowledge sharing at ITU<sup>32</sup>.

The extent of the dissemination, its content and frequency, is agreed between the PhD student and the principal supervisor. Tuition Fee Free PhD students are not obliged to teach at ITU but they are encouraged to do so as part of their career development and should be given opportunity if they wish to teach. Paid opportunities can be pursued with their principal supervisor in discussion with the relevant Head of Department.

<sup>&</sup>lt;sup>30</sup> No additional fees will be paid to the Industrial PhD student for occasional lecturing at ITU

<sup>&</sup>lt;sup>31</sup> See guidelines from Innovation Fund Denmark; <u>https://innovationsfonden.dk/en</u>

<sup>&</sup>lt;sup>32</sup> No additional fees will be paid to the Tuition Fee Free PhD student for occasional lecturing at ITU

## **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 assessment by two or more authors jointly.

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

**§12 (4) in the PhD Order**: 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 student's scientific work during the 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 §11 of the PhD Order as mentioned above.

A PhD thesis is composed independently by the author in the context of the Programme's specific academic area and is not to be submitted by more than 1 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 and preferably already submitted<sup>33</sup>.

The PhD thesis must demonstrate the PhD student's ability to apply relevant scientific methods at a high academic level, and the PhD student's ability to carry out research work that meets the international standards for PhD degrees within the field in question.

### 6.1.1 Article-based thesis or monograph

A PhD thesis may be either article-based or written as a monograph. An article-based PhD thesis would normally consist of 3 to 4 articles and a kappa; however, the number of articles can vary depending on the field of research. The choice of the type of PhD thesis should be discussed by the PhD student and the principal supervisor.

<sup>&</sup>lt;sup>33</sup> Please be aware of copyright issues of published articles in article-based PhD theses, and/or restrictions on making the thesis public in relation to the defence

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

- Summaries in Danish and English
- 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 student's own findings and other results, such that the PhD 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 **article-based**, it should include the following elements:

- Summaries in Danish and English
- 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 PhD 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 accepted/published papers<sup>34</sup>

### 6.1.2 Co-author statements

If 1 or more of the submitted sections of a thesis has more than 1 author, a declaration (called a co-author statement) from all authors should follow the thesis. The statement should declare 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 supervisor(s) and PhD Support whether co-author statements are needed<sup>35</sup>.

<sup>&</sup>lt;sup>34</sup> The PhD School expects that the majority, but not necessarily all of the papers in the article-based PhD thesis are published, peer-reviewed or accepted by the time of submission

<sup>&</sup>lt;sup>35</sup> A co-author statement template is available in the PhD Guide: <u>https://intranet.itu.dk/the-phd-guide</u>

The PhD School highly recommends acquiring the co-author statements at the time of completing the articles.

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

#### 6.1.3 Language and design

The PhD thesis should 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, i.e., 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 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, the year of submission, and the department. For Industrial PhD students, the front page must also include the name of the company where the PhD 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 the PhD student's own work unless otherwise referred to or acknowledged<sup>36</sup>. 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 PhD student's enrolment.

### 6.2.1 Statement from the principal 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 teaching experience or other forms of knowledge dissemination, along with a record of ECTS points obtained by the PhD student.

The principal supervisor's statement should also include a description of any research stays in Denmark and abroad and any research groups with which the PhD student has been in contact during the course of the PhD Programme. The principal supervisor must confirm whether they find the PhD thesis ready for

<sup>&</sup>lt;sup>36</sup> A form is available on the PhD Guide: <u>https://intranet.itu.dk/the-phd-guide</u>

submission. The statement must not exceed 2 standard pages in length, and it must be prepared in English.

#### 6.2.2 Recommendation of Examination Committee

The principal supervisor's statement is submitted to the PhD School Council together with the recommendation for the Examination Committee at least 1 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 PhD Support.

#### 6.2.3 Attendance by the members of the Examination Committee

If 1 or more of the members of the Examination Committee are not able to be present at the defence, but will join by video conference, 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.

However, the extent of the affiliation with ITU can 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 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 PhD thesis, the principal supervisor is expected to assist the PhD student within reason during the period until the defence, should the PhD student need any assistance preparing for the defence.

The PhD student is not allowed to have any contact with the Examination Committee during the assessment. Any communication between the PhD student and the Examination Committee must go through the principal supervisor.

## **Chapter 7 - Evaluation of the PhD thesis**

## 7.1 The Examination Committee

**§16 (1) in the PhD Order**: Upon the submission of the PhD thesis at the latest, the institution appoints an expert assessment 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 assessment committee must be recognised 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 assessment committee; however, the principal supervisor assists the assessment committee without voting rights.

**§16b (2) 2) in the University Act**: The PhD Council has the following tasks: Making recommendations to the Vice Chancellor on the composition of assessment committees.

**§27 (2) in the PhD Order:** The following applies to PhD fellowships financed through the Industrial PhD scheme: At least one of the members of the assessment committee, see §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 3 members at the rank of Associate Professor or Professor of which 2 members must be external researchers<sup>37</sup>. At least 1 of the 2 external members must be from abroad. The internal member of the Examination Committee from ITU will by default act as Chair of the Committee.

The members of the PhD student's Midway Evaluation Committee cannot be members of the Examination Committee for the PhD defence.

For Industrial PhD students with a grant from Innovation Fund Denmark, at least 1 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 PhD student is employed.

In special circumstances such as sickness, death or misadventure, the Vice Chancellor can decide that the Examination Committee consists of only 2 members.

<sup>&</sup>lt;sup>37</sup> External means that the members cannot be employed at ITU during the assessment.

### 7.1.2 Conflict of interest

The Examination Committee is part of the public administration and is therefore included by the Danish Public Administration Act's rules on conflict of interest and confidentiality<sup>38</sup>.

No member of the Examination Committee may have a conflict of interest when evaluating the thesis.

The PhD student, the principal supervisor, and the members of the Examination Committee must declare if a conflict of interest exists. Examination Committee members must declare their conflicts to the Chair of the Committee before any discussions of the thesis begin.

It is the principal supervisor's responsibility to avoid conflict of interest when composing and proposing the Examination Committee.

If any questions of doubt regarding conflict of interest occur after the composition of the Examination Committee or during the examination process, the Chair of the Examination Committee is responsible for notifying the PhD School.

The PhD School Council assesses and makes the final decision on whether a committee member should be excluded from serving in the Examination Committee based on the information about the conflict of interest. If necessary, the PhD School Council may request further information in order to assess the case in question.

Conflict of interest is defined by, but not limited to<sup>39</sup>:

- Co-authorship on articles or books within the last 5 years
- Employment relations in the immediate future
- Past or current student or academic advisor relationship
- Relations where the result of the examination would influence goals of one of the parties (personal, financial, etc.), e.g., a competitor
- Family and close friends
- Any relations where, for whatever reason, an objective evaluation cannot happen

In practice, it can be difficult to decide, but a good question to ask is "can this reasonably be seen to be a conflict of interest by an outside party?" If the answer is yes, the situation should be avoided, and an alternative solution should be sought.

Furthermore, any rules about conflict of interest and research ethics and integrity of ITU must always be followed<sup>40</sup>.

<sup>&</sup>lt;sup>38</sup> The Danish Public Administration Act (Forvaltningsloven): <u>https://www.retsinformation.dk/eli/lta/2014/433</u>

<sup>&</sup>lt;sup>39</sup> Applies to the student-examiner relation, and the supervisor-examiner relation

<sup>&</sup>lt;sup>40</sup> Research Ethics and Integrity at ITU: <u>https://intranet.itu.dk/organisation/management-committees/itu-research-ethics-committee/research-</u> <u>ethics-and-integrity-at-itu</u>

### 7.1.3 Formal restrictions for the members of the Examination Committee

The principal supervisor cannot be a member of the Examination Committee but can assist the Examination Committee (without voting rights). In this way, the principal supervisor is available to answer questions clarifying the course of the PhD student's 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 Examination Committee. Examiners must be in their active working life<sup>41</sup>.

## 7.1.4 Approval of the Examination Committee

Following the approval of the Examination Committee by the Vice Chancellor, the PhD student must approve the composition of the Committee. If the PhD student wishes to object to 1 or several of the appointed members of the Examination Committee, this must be done no later than 1 week after the notification of the Examination Committee has been forwarded by PhD Support to the PhD student.

## 7.2 The Preliminary Evaluation of the 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 (draft) examination report

The preliminary examination report is completed and submitted to PhD Support by the Chair of the Examination Committee no later than 7 weeks 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 Head of the PhD School for approval. If the preliminary report is not satisfactory in its form and/or content or if parts of it is unclear, it is sent back to the Chair of the Examination Committee for correction. 1 week is reserved for this correction period.

When the preliminary report is approved by the Head of the PhD School, it is forwarded to the PhD student and the principal supervisor by PhD Support.

The preliminary examination report must be well-founded and written in straightforward, objective

<sup>&</sup>lt;sup>41</sup> If 1 of the suggested members of the Examination Committees is retired, the PhD School Council will decide on a case-by-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.

language; it should provide a critical evaluation of the PhD student's 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 must be formulated in general and understandable terms and it should clearly state whether the thesis as submitted is recommended for oral defence. The Chair of the Examination Committee can consult the Head of the PhD School in case of concerns.

The preliminary examination report is normally 3 to 4 pages in length, written in English and must be signed by all members. In the event of a 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 1 of the following 3 recommendations:

• The thesis is recommended for defence. A list of minor modifications, such as typos and spelling and grammar mistakes, is given to the PhD student, who has the opportunity to improve the text before the PhD defence and publication or up to 2 weeks after the PhD defence. Changes to the content of the thesis are not allowed. Minor modifications must be approved by the Head of the PhD school. In this case, a defence date is proposed as soon as possible and agreed upon by the Examination Committee, the PhD student, and the principal supervisor. The PhD student is entitled to have the defence take place within 3 months after the thesis submission date.

### • The thesis is not recommended for defence – 2 options apply

**1**. It is recommended that the thesis can be revised and handed in for a second evaluation with a given deadline.

The Examination Committee recommends a deadline for the submission of the revised thesis – between 3 and 6 months.

The PhD student and the principal supervisor have the opportunity to submit their comments within 2 weeks after the recommendation has been received.

The Head of the PhD School makes the decision of whether the PhD student should resubmit the thesis for a second evaluation based on the Examination Committee's recommendation, and the author's and the principal supervisor's comments (if any). If necessary, the Head of the PhD School can consult the Pro-rector and make a joint decision on the matter.

The PhD student must confirm the willingness to resubmit the thesis.

Upon the second evaluation, the same Examination Committee assesses the revised thesis unless special circumstances apply. The PhD student must submit 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.

The PhD student and the principal supervisor have the opportunity to submit their comments within 2 weeks after the recommendation has been received.

The Vice Chancellor makes 1 of the following decisions based on the Examination Committee's recommendation, and the author's and the principal supervisor's comments (if any):

- 1) That the defence should not take place
- 2) That the PhD thesis is submitted in a revised version within a deadline of at least 3 months but no more 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.

### 7.2.3 Resubmission

A PhD thesis can be resubmitted 3 times making the total number of submissions 4.

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 student after seeking advice from the Chair of the PhD student's Examination Committee and principal supervisor.

#### 7.2.4 Extension of resubmission date

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

Applications for extension of the second or third submission date, should be sent to PhD Support and addressed to the Chair of the Examination Committee. 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 principal 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 2 submissions must be submitted at the latest 2 weeks before any submission date.

#### 7.2.5 Status of the PhD student during examination

The PhD student may request office space in order to prepare for the defence and can expect reasonable resources from the principal 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 student 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 student should be awarded a PhD degree. A final written recommendation (final examination report) must be available no later than 1 week after the defence, and it will be forwarded to the PhD student by 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 the PhD Degree**

# 8.1 The Defence

**§19 (1) in the PhD Order**: The PhD thesis must be defended publicly in accordance with 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 assessment committee.

## 8.1.1 Time and location

The Chair of the Examination Committee sets the time and place for the PhD thesis defence in conjunction with the other members of the Examination Committee, the PhD student, and the principal supervisor. The date is communicated to 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 students, an exemption may be granted for holding the defence at the PhD student's place of employment, provided that it will be open to the public. The PhD School Council must approve such an arrangement.

## 8.1.2 Publicity and confidentiality

The PhD thesis is made publicly available in good time before the defence. 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 2 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, provided 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 student, 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 student is introduced by the principal supervisor. The PhD student then presents

the thesis, all relevant findings, and applied scientific methods, including critical discussion of the validity of the work. The PhD student is afterwards examined by the members of the Examination Committee, a Q&A process led 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 2 hours but may continue for up to 4 hours and it is expected that all members of the Examination Committee attend for the full 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 student 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 assessment committee submits a recommendation to that effect.

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

As soon as possible, and no later than 1 week after the defence, the Chair of the Examination Committee submits its final examination report to PhD Support. The PhD degree is awarded by the Academic Council (cf. section 15, 2, 4 in the University Act) of ITU to whom the final examination 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 forwarded to the PhD student 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.

# **Chapter 9 - Printing of the PhD thesis**

# 9.1 Time and scope of printing

After a successful PhD defence, the PhD student has up to 2 weeks to make minor changes to the PhD thesis such as correcting typos, grammar, and spelling mistakes. Changes to the content of the PhD thesis are not allowed. Written documentation of the changes must be sent to - and approved by - the Head of the PhD School before the thesis 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.

1 copy of the thesis is sent to the IT Library, 2 copies are sent to the legal deposit of published work at the Royal Danish Library, 1 copy is given to the principal supervisor (and co-supervisor if any) and PhD Support keeps 1 copy.

## 9.1.1 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 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 ensure a common understanding between the PhD student and the company on IPR, it is mandatory that an IPR agreement between the PhD student and the company is signed prior to enrolment. See section 4.1.3.

# **Chapter 10 – Special Circumstances**

# **10.1 Leave of Absence**

## 10.1.1 Criteria for leave

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 and the Head of the relevant department. 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 sick leave or parental leave, the PhD student informs the HR department which informs PhD Support. Enrolled PhD students without employment at ITU must send an application for approval of leave to the Head of the PhD School (PhD Support cc). 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 sick 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 PhD student
- A statement from the principal supervisor

An unpaid leave of absence from the PhD Programme can be used to e.g., do full time paid work, such as a paid internship at a private company.

If the PhD student applies for an unpaid leave of absence during the last year of the PhD enrolment, the PhD student must enclose a status report of the thesis and an in-depth plan for completing the PhD Programme in the application to the PhD School Council. This is for the PhD School Council to assess and ensure that the leave will not affect the completion of the PhD Programme. The plan must be supported by 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 a PhD student cannot exceed 1 year without the Vice Chancellor's prior approval. Leave in connection to maternity, paternity, parental, 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 PhD 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 PhD student's studies and is not expected to be offered again later.

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

## 10.1.5 Sickness for enrolled PhD students

In case of long-term sickness for enrolled PhD students who are not employed at ITU, the PhD student must forward a medical report to PhD Support within 2 months 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.

Following sick leave, an adjustment of the PhD Study Plan must be made.

# **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 3 months. Extensions that exceed 3 months, or additional applications that mean that the total extension period will exceed 3 months, are submitted to the PhD School Council. The PhD School Council may approve extension for 3 to 6 months.

Accordingly, the total period of an extension to enrolment never exceeds 9 months. Other approved leave of absence, such as parental 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 both the supervisor and PhD student have a complete understanding of the conditions and terms of the extension
- Detailed grounds for the extension, including a status report of the thesis and an in-depth plan for completing the PhD Programme. This is for the PhD School Council to assess and ensure that the extension is suitable and realistic in relation to the completion of the PhD Programme. The plan must be supported by the principal supervisor.

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 the PhD School Council.

## **10.3 Rectification Period**

Once in the course of the PhD Programme, the PhD student can be given the opportunity to correct issues

connected to the PhD studies within a 3-months period. This is called the rectification period.

If the issues raised are not resolved by the end of the 3-months period, the enrolment is terminated.

The 3-months rectification period is only started in situations where the PhD student fails to comply with the agreements set out in the PhD Study Plan. Commencing a rectification period must be accompanied by an explanation that contains specific reasons for the offer, and specific points to be corrected. The offer of a 3-months rectification period is made in writing to the PhD student with a clear start and end date.

The most common reasons for offering the rectification period are a "try again"-result of the midway evaluation or a not approved half-yearly report.

The enrolment will not be extended due to a 3-months rectification period.

During the rectification period, the PhD student must address the situation and correct the issues that are raised. By the end of the 3-months period, the PhD student must resubmit the work that was subject for the rectification period (e.g., the midway thesis proposal or the half-yearly report). The work will then be re-assessed on the basis of the issues that were raised the first time.

If this assessment is positive, the enrolment continues unchanged.

If the assessment is negative and the issues that were raised are not satisfactorily addressed, the PhD School Council in conjunction with the principal supervisor recommend to the Head of the PhD School that the enrolment of the PhD student is terminated. This will also be the case if the PhD student chooses not to address the suggested changes or chooses not to re-submit.

The PhD student receives the outcome in writing; however, it is highly recommended also having a meeting with the PhD student in order to explain the reasons for the outcome. The principal supervisor and the Head of the PhD School should attend this meeting with the PhD student. The PhD student is offered the option to bring an observer to the meeting, e.g., an assessor or union representative.

After the meeting, the PhD student will receive the outcome in writing including appeal/complaint instructions. The PhD student may appeal the outcome to the Vice Chancellor within 2 weeks of the notification of termination from the PhD Programme.

If the PhD student is employed at ITU, the employment is also terminated. The HR department and the Head of the relevant department is contacted immediately after the PhD School is informed of a negative outcome of a rectification period. If the PhD student is employed externally, the relevant place of employment is notified.

## **10.4 Appeals and Protests**

Decisions made by ITU pursuant to the PhD Order are referred to the Danish Agency for Science and Higher Education if the complaint concerns legal issues. Complaints must be submitted within 2 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 1 week. ITU will send the complaint to the Danish Agency for Science and Higher Education, 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 2 weeks of the complainant having been informed of the decision<sup>42</sup>.

### 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 Science and Higher Education may, in special cases, grant an exemption from the PhD Order (§28).

## **10.5 Review of the PhD School**

The work of the PhD School is subject to on-going review, including regular international reviews. The Prorector must initiate such reviews on regular basis.

<sup>&</sup>lt;sup>42</sup> 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 20 May 2021.

The enrolment of all current PhD students is automatically transferred to the jurisdiction of the new PhD Handbook. If a PhD 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 prepares suggestions for a new PhD Handbook or significant changes to the current one. The Academic Council approves the PhD Handbook or significant changes hereto. The PhD Handbook is signed by the Vice Chancellor.

Approved by Academic Council 20 April 2021

ede Zachariasen

Vice Chancellor, Academic Council Chair