

# Guidelines for the PhD Programme

---

The Faculty of Science  
SDU  
September 2020

## Table of Contents

Table of Contents .....	2
1 Objective and organization .....	6
1.1 The organization of the PhD School .....	6
1.1.1 The Head of the PhD School .....	6
1.1.2 The Vice Head of the PhD School .....	6
1.1.3 The Faculty PhD Committee.....	7
1.1.4 The PhD Study Committees.....	7
1.1.5 The PhD School Secretariat's functions .....	8
1.1.6 The Department Secretariat's tasks .....	8
2 Enrolment and employment.....	8
2.1 Enrolment .....	8
2.1.1 Conditions for enrolment.....	8
2.1.2 Credit transfer .....	9
2.1.3 Part-time enrolment.....	9
2.2 Admission to the PhD Programme with or without SDU scholarship (employment).....	9
2.2.1 Admission as a PhD Fellowship (employed PhD Student) after the completion of a master's degree (the 5+3 programme).....	10
2.2.2 Admission as a PhD Fellowship before the completion of a master's degree (the 4+4 programme).....	10
2.2.3 Enrolment with external funding without employment at SDU (5+3 and 4+4 programmes).....	12
2.2.4 Enrolment as Industrial PhD .....	13
2.3 Economic conditions during the PhD Programme .....	14
2.3.1 Salaried PhD-stipend according to the 5+3 programme .....	14
2.3.2 SU (State educational support) PhD scholarship and paid scholarship under the 4+4 programme .....	14
2.3.3 External funding of the PhD Programme .....	15
2.3.4 Registration and settling of work hours .....	15
2.3.5 Secondary employment .....	16
2.4 Leave of absence and termination of employment .....	16
2.4.1 Termination of enrolment .....	16
2.4.2 Maternity leave .....	16
2.4.3 Extension in relation to illness .....	16
2.4.4 Other types of leave of absence .....	16
2.4.5 Exceeding the period of enrolment .....	17
3 Study Elements .....	17
3.1 Supervision .....	17
3.1.1 Appointment of principal supervisor and possible co-supervisor(s) .....	17
3.1.2 Principal Supervisor .....	17
3.1.3 Co-supervisor(s) .....	18

3.1.4	The Supervisor's obligations .....	18
3.1.5	The PhD student's obligations in relation to supervision .....	19
3.1.6	Change in Supervisor .....	19
3.2	Parts of the course .....	20
3.2.1	Transfer of course credits .....	20
3.2.2	Evaluation of PhD courses .....	20
3.2.3	Specifically, with regard to the 5+3 programme .....	20
3.2.4	Specifically, with regard to the 4+4 programme .....	20
3.2.5	Composition of the PhD students' course programme .....	20
3.2.6	Approval of the academic programme and courses .....	22
3.3	Stays at other research institutions .....	23
3.4	Knowledge Dissemination .....	24
3.4.1	Rules for calculating knowledge dissemination hours .....	24
4	Milestones .....	25
4.1	The PhD Plan .....	25
4.2	Regular assessments .....	25
4.2.1	Assessments of the PhD Project .....	26
4.2.2	Assessment of the evaluation .....	27
4.2.3	Re-establishment Period .....	27
4.2.4	The Qualifying Examination/Master's examination .....	27
5	Completion of the Programme .....	28
5.1	PhD thesis .....	28
5.1.1	Formal requirements for the thesis .....	29
5.1.2	The use of the status report in the qualifying exam .....	29
5.1.3	The departmental guidelines on publishing activity for obtaining a PhD degree .....	29
5.1.4	Co-author Statements .....	31
5.2	Submission of thesis .....	31
5.2.1	Warning two months before submission .....	31
5.2.2	Principal Supervisor's statement .....	31
5.2.3	Submission of thesis .....	31
5.3	Assessment and Defense .....	31
5.3.1	Assessment Committee .....	31
5.3.2	Appointment of the Assessment Committee .....	31
5.3.3	The work of the Assessment Committee .....	32
5.3.4	Preliminary assessment of the PhD thesis .....	32
5.3.5	The Defense .....	33
5.3.6	Procedures for the Defense of the PhD thesis .....	33
5.4	Award of PhD degree .....	34

5.4.1	PhD certificate.....	34
5.4.2	Documentation for completed parts of the PhD Programme.....	34
6	Other provisions.....	35
6.1	Submission of a PhD thesis without prior enrolment.....	35
6.2	Double Degree – SDU as a host university.....	35
6.2.1	Conditions for entering into a collaboration agreement regarding a double PhD degree student when the main enrolment is at SDU .....	36
6.2.2	Assessment according to the PhD Order.....	36
6.2.3	Mandatory conditions for a public defense according to the Danish PhD order: .....	36
6.3	Double Degree - Foreign university as host university .....	37
6.3.1	Application.....	37
6.3.2	Conditions for entering into a collaboration agreement regarding a double PhD degree student when the main enrolment is at a foreign university.....	37
6.3.3	Assessment according to the PhD Order.....	38
6.3.4	Mandatory conditions for a public defense according to the Danish PhD order: .....	38
7	Communication .....	39
8	Guidelines for appeals and waivers .....	39

The PhD programme is organized on the basis of:

- University Act Executive order no. 960 of 14 August 2014 (*please note that only the Danish version Universitetsloven is legally binding and there have been changes since the linked English translation*)
- PhD order : Ministerial Order on the PhD Programme at the Universities, No. 1039 of 29 August 2013 (which came into force on 1 September 2013) (Only the Danish version is legally binding).
- Articles of association for SDU [http://www.sdu.dk/om\\_sdu/organisationen/vedtaegter](http://www.sdu.dk/om_sdu/organisationen/vedtaegter)

The present guidelines supplement and elaborate the provisions set forth in the orders and regulations mentioned and thus comprise the Faculty of Science's internal regulations.

*PhD programme for a 5+3 PhD student:*

Start	3 months	1 yr	1½yr	2yr	2½yr 2 yr 10 months	3 yr	3 yr 2 months 3 yrs 3 months
<b>Enrollment</b>	PhD - plan	Written evaluation Written statement from supervisor Written evaluation by the Head of the PhD School		Written evaluation Written statement from supervisor Meeting with the Head of the PhD School Written evaluation by the Head of the PhD School		Co-author statements	Hand in thesis No longer enrolled Preliminary assessment Defence Final assessment Academic Council
			Environmental change Is approved by the Head of PhD School		30 ECTS Courses Courses are approved by the PhD Council on recommendation from the PhD Study Council  Knowledge dissemination Is registered by the department and approved by the Head of the PhD School		Degree
	Study trips Are agreed upon with the supervisor	Study trips		Publishing	Write the thesis		
<b>Employment</b>	MUS Work hours	MUS Work hours		MUS Work hours	MUS	Employment ends	
			Maternity leave and illness Inform the Department secretary, HR service and the PhD School Administration In case of protracted illness: Apply for extension of submission date				

## 1 Objective and organization

The PhD Programme is a research training programme qualifying PhD students at an international level to independently undertake research, development and teaching assignments in the private and public sectors, for which a broad knowledge of research is required. The programme comprises active research training under supervision.

This means that, through the course of their training, PhD students will obtain experience with research at the highest international level with research results that are publishable in internationally acclaimed scientific journals. PhD students will also obtain experience with teaching and dissemination as well as acquire a broad scientific understanding through participation in tailored PhD-courses.

### 1.1 The organization of the PhD School

The Faculty of Science has established one PhD School, which is managed by the Head of the PhD School. All PhD students at the Faculty of Science are enrolled in the PhD School and affiliated to the Department where their main supervisor is employed. PhD students are also affiliated with a research training programme throughout the PhD programme. See the PhD School's website for an overview of the research training programs.

[http://www.sdu.dk/en/Om\\_SDU/Fakulteterne/Naturvidenskab/Forskning/Forskeruddannelseprogrammer](http://www.sdu.dk/en/Om_SDU/Fakulteterne/Naturvidenskab/Forskning/Forskeruddannelseprogrammer).

#### 1.1.1 The Head of the PhD School

The Dean of the Faculty of Science appoints the Head of the PhD School for a period of three years. The Head of the PhD School refers to the Dean.

##### *The Head of the PhD School*

- Has the overall responsibility for the activities of the PhD School.
- Has the responsibility to include the Faculty PhD Committee in the planning, development, quality assessment and evaluation of the PhD Programme.
- Establishes internal guidelines and rules for the PhD School, including completion of PhD training and supervision according to the recommendations of the Faculty PhD Committee and approval by the Dean.
- Appoints a main supervisor according to the recommendation of the Head of Department
- Approves enrolment of PhD students on the recommendation of the relevant PhD Study Committee representing the scientific staff.
- Approves PhD plans.
- Conducts regular evaluations and oral conversations with the PhD students.
- Approves recommendation from the assessment committee.
- Is available to students and supervisors for guidance as well as confidential meetings.
- Has the responsibility to initiate evaluations of the PhD school and follow up on the evaluations.
- Has close dialogue with the four departments about the PhD Programme and the PhD students' progression.

#### 1.1.2 The Vice Head of the PhD School

- Has the overall administrative responsibility for the PhD School.
- Quality assurance of the PhD school and international evaluation.
- Is responsible for drafting the rules and guidelines for the PhD School.
- Hearings, memorandums to the Faculty Management and survey.
- Handles cases regarding approval of environmental change, knowledge dissemination and application for change of title.
- Conducts introductory courses for new PhD students.

- Conducts PhD Supervision courses for PhD supervisors.
- Is available to students and supervisors for guidance as well as confidential meetings.
- Handles the administrative cooperation with other faculties at SDU, the central SDU administration, HR-development and SDUB.
- Is secretary to the Faculty PhD committee.
- Implements and follow up on the recommendations from the Faculty PhD Committee.
- Is secretary to the Head of the PhD School.
- Handles administrative matters regarding internal and external cooperation agreements concerning PhD study.
- Represents the PhD School administration in the Faculty PhD Committee and the SDU PhD Coordination Committee (PhD-K).
- Represents the PhD School in the network group for the other Danish Universities.
- Is the facilitator and contact person for the cooperation between the department PhD secretaries.
- Is responsible for optimization of web and administrative systems for the PhD School administration of PhD studies.
- Is the facilitator for the PhD School management of the GDPR guidelines and process description of the school administration.

### 1.1.3 The Faculty PhD Committee

The Faculty PhD Committee is composed of four elected representatives of the scientific staff and four elected representatives of the PhD students.

#### *The Faculty PhD Committee*

- Recommends its chair from among the Committee's scientific staff and its vice chair from among the committee's PhD students to the Dean for appointment.
- 
- Prepares proposals to the Head of the PhD School concerning internal guidelines and supervision.
- Prepares opinions on evaluation of the PhD Programme and PhD Supervision for the Head of the PhD School. Prepares opinions on matters of importance to the PhD Programme and PhD Supervision, that are put forward by the Dean or by a representative, appointed by the Dean
- 

### 1.1.4 The PhD Study Committees

A PhD Study Committee is established at the Faculty's four departments. The PhD Study Committees are each composed of 1-5 representatives of the scientific staff from the department in question. It is possible to involve PhD students in the PhD Study Committee's work as long as it does not involve individual and personal cases. Members of the PhD Study Committees are elected by the Faculty PhD Committee on recommendation of the Heads of Departments. The member of the Faculty PhD Committee who represents the department is a born member of this department's PhD Study Committee and acts as its chair.

The following PhD Study Committees have been appointed:

- The PhD Study Committee of the Department of Biology
- The PhD Study Committee of the Department of Physics, Chemistry and Pharmacy
- The PhD Study Committee of the Department of Mathematics and Computer Science
- The PhD Study Committee of the Department of Biochemistry and Molecular Biology

The PhD Study Committees act as representatives for the scientific staff in the Faculty PhD Committee in evaluating candidates for admittance. Supervisor can in this context advise the PhD Study Committee.

The PhD Study Committees may be consulted on important academic issues, including individual cases, by the Faculty PhD Committee and the Head of the PhD School.

Each PhD Study Committee approves course application and application for credit transfer for their own department.

### 1.1.5 The PhD School Secretariat's functions

The PhD School's administrative support and services is undertaken by the PhD School Secretariat.

*The PhD School secretariat carries out the following tasks:*

- Enrolment of PhD students
- Administration of the PhD Programme
- Administrative support and guidance to potential and current PhD students
- 
- 
- Administration connected to the submission and assessment of PhD thesis
- Completion of PhD certificates
- Quality checks that the elements of the PhD Programme for example PhD courses, knowledge dissemination and environmental change are met.

### 1.1.6 The Department Secretariat's tasks

Department secretariat at each department carries out the following administrative tasks concerning the PhD student's employment:

- Registers maternity/paternity leave and illness
- Registers work hours (840 hours)

The Department PhD secretary carries out tasks in connection with

- Introductory meeting with new PhD students
- Course enrolment and organization (not approval of courses/course activities).
- Support and guidance to the PhD students
- Practical arrangements in connection with establishment of the assessment committee and reservation of room for the defense.

## 2 Enrolment and employment

### 2.1 Enrolment

#### 2.1.1 Conditions for enrolment

Admission to the PhD Programme requires a completed master's degree in a relevant area of study. The PhD programme has 180 ECTS corresponding to 3 years of full-time study from the time of enrolment time and until the time of submission. However, it is possible to start the PhD Programme in continuation of the master's programme and before the master's programme is completed. At the Faculty of Science there is the possibility to start the PhD Programme after having completed 60 ECTS of the master's programme (4+4).



The assessment of application for enrolment as a PhD student is based on the applicant's earlier studies, including grades and how long it took to complete earlier degrees as well as previous research experience, such as publications and other factors indicative of aptitude for research training. Also, recommendations or statements from supervisors and teachers are taken into account. In special cases, an eye for the scientific distribution of the PhD students across the research fields of the Faculty is used as a criterion in assessments.

Applicants with other educational backgrounds, who have acquired the necessary academic qualifications, may be admitted. In these cases, specific supplementary academic requirements must, however, be met prior to enrolment or completed during the programme.

Admission to the PhD Programme requires the award of a scholarship or other funding arrangements.

### **2.1.2 Credit transfer**

At the time of application, it is possible to apply for a transfer of credit for project-relevant research, relevant professional work subsequent to the acquisition of a master's degree, as well as PhD level courses completed prior to enrolment as a PhD student, as long as these are not part of the master's programme. Courses corresponding to a total of 10 ECTS can be transferred without devaluating the enrollment period.

Applications for credit transfer are processed by the PhD Study Committee for each department. See also section 3.2.1 regarding credit transfer of courses.

### **2.1.3 Part-time enrolment**

The PhD Programme is usually scheduled as a full-time programme but can under special circumstances be organized as a part-time programme. Substantiated personal applications for part-time enrolment must be submitted to the Dean via the PhD School and backed up by a recommendation by the Head of Department. The specific agreement must be settled individually at the time of enrolment.

Part-time programmes can normally not exceed the duration of six years. Conditions and terms for part-time programmes are determined in agreement between the PhD-student, the external partner if applicable, and the Faculty of Science.

## **2.2 Admission to the PhD Programme with or without SDU scholarship (employment).**

The awarding of scholarships (employment) for enrolment occurs according to the following models:

- 1) the 5 +3 programme – subsequent to completion of a master's degree (see Section 2.2.1)
- 2) the 4 +4 programme – prior to completion of master's degree (see Section 2.2.2)

In addition, it is possible to apply for admission with external funding according to the following models:

- 3) the 5+3 programme / 4+4 programme with full external funding and without employment at SDU (see Section 2.2.3)
- 4) The 5 +3 scheme – as Industrial PhD (see Section 2.2.4)

The rules governing admission are for the most part the same for all four models. However, certain differences prevail. A careful reading of the section below pertaining to the relevant model is therefore recommended.

Members of the assessment committee and appointments committee must pay attention to the rules on incapacity, including whether there are circumstances which could arouse doubts on the person's impartiality.

### **2.2.1 Admission as a PhD Fellowship (employed PhD Student) after the completion of a master's degree (the 5+3 programme)**

Vacant PhD positions are offered by the Faculty's departments and are posted regularly on the university website and otherwise in accordance with the Faculty's regulations on advertising. Deadlines etc. will appear in the advertisement. Applicants apply for both employment and admission.

Applications must include at least the following

- Project description
- Motivation and substantiated background for the application
- Curriculum vitae
- Copy of diplomas from both undergraduate and graduate degrees
- Letters of recommendation

Applicants should note that letters of recommendation must be submitted before the application deadline in order to be included in the assessment of the applicant's academic qualifications. Advertisements state that if none or some of the required material listed above are missing, the application will not be assessed.

The project description should include an account of the applicant's specific areas of interest under the heading of the project, which research questions are to be addressed, an indication of which methods and theories will be applied as well as a time-plan for the project that shows a realistic progression towards completion of the PhD within a period of three years.

Applications are assessed by the relevant PhD Study Committee, acting on behalf of the Faculty PhD Committee. The PhD Study Committee prepares a written recommendation to the Head of Department and the Head of the PhD School which for each applicant contains:

- A brief characterization of the applicant's academic qualifications including if necessary supplementary courses or similar as a prerequisite to complete the PhD Programme satisfactorily
- The PhD project

An applicant's assessment is sent to the individual applicant for any comments.

An appointment committee comprising of the Head of Department, the Chair of the PhD Study Committee and the supervisor jointly find the best qualified candidate and recommend him/her to the Dean upon approval of admission by the Head of the PhD School. The Dean makes the final decision about employing the applicant as PhD student.

The appointment committee may choose to invite qualified candidates for an interview prior to making their recommendation.

An interview is normal practice in the case of applicants who hold degrees obtained outside Denmark to ensure the applicant's fluency in English or Danish.

Projects cannot commence until enrolment has been completed. Enrolment is possible on the 1st or 15th of the month. Enrolment with retroactive effect is not possible.

### **2.2.2 Admission as a PhD Fellowship before the completion of a master's degree (the 4+4 programme)**

The student can begin the PhD Programme prior to completion of his/her master's degree (4+4) Minimum requirements include completion of a bachelor's degree as well as 60 ECTS of the Master's Programme. For the first two

years of the 4+4 programme the student is enrolled in both the Master's and the PhD Programmes. Within the first two years, the student must pass a qualifying exam/Master's exam. See 4.2.4 for information regarding the qualifying exam/master's exam.

It is a prerequisite for admission in the 4 +4 programme that the applicant's previous course of study in both Bachelor and Master's Programme is completed with a satisfactory grade level and that the applicant is assessed to be capable of meeting the general requirements for enrolment after a maximum of one year's further study.

If the student comes from another University, the Science Study Board will have to approve that the student is admitted in a relevant master's programme at the Faculty of Science with 60 ECTS credit transfer.

Vacant PhD positions are offered by the Faculty's departments and are posted regularly on the university website.

Deadlines etc. will appear in the advertisement. Applicants must apply for both scholarship and admission.

Applications must include at least the following

- Project description
- Motivation and substantiated background for the application
- Curriculum vitae of the applicant
- Copy of diplomas from undergraduate and graduate degrees and courses
- Letter of recommendation from applicant's former teacher or supervisor on the applicant's research aptitude and whether the applicant is assessed to have the necessary knowledge of theories and methods within the chosen research field
- Other letters of recommendation

Applicants should note that letters of recommendation must be submitted before the application deadline in order to be included in the assessment of the applicant's academic qualifications. Advertisements state that if none or some of the required material listed above is missing, the application will not be assessed.

The project description should include an account of the applicant's specific areas of interest under the heading of the project, which research questions are to be addressed, an indication of which methods and theories will be applied as well as a time-plan for the project that shows a realistic progression towards completion of the PhD within a period of four years.

Applications are academically assessed by the relevant PhD Study Committee, acting on behalf of the Faculty PhD Committee. The PhD Study Committee prepares a written recommendation to the Head of Department and the Head of the PhD School which for each applicant contains:

- A brief characterization of the applicant's academic qualifications including if necessary supplementary courses or similar as a prerequisite to complete the PhD Programme satisfactorily
- The PhD project

If the applicant comes from another university, including a foreign university, the assessment must suggest a suitable master's programme and a reasoned assessment of whether the student can get 60 ECTS credit transfer on his/her master's programme. The assessment is conditional on final approval of admission to the master's programme and credit transfer in the study board.

The PhD Study Committee's assessment is sent to the individual applicants for any comments.

An appointment committee comprising of the Head of Department, the Chair of the PhD Study Committee and the supervisor jointly find the best qualified candidate and recommend him/her to the Dean. Before the Dean approves the employment, the Head of the PhD School must approve of the enrolment. The Dean makes the final decision about

appointing the applicant as PhD student.

If the applicant comes from another university, the appointment committee must apply the study board for admission to a relevant master's programme and credit transfer on the basis of the assessment committee's recommendation. In practice the application is sent to the local education committee who sends a recommendation to the Study board. The Study Board's decision is sent to the applicant.

The appointment committee can only request the Head of the PhD School and the Dean of admission/employment if the Science Study board has approved the admission to a master's programme and has awarded 60 ECTS credit transfer to the master's programme.

The enrolment committee may choose to invite qualified candidates for an interview prior to making their recommendation.

Projects cannot commence until enrolment has been completed. Enrolment is possible on the 1st or 15th of the month. Enrolment with retroactive effect is not possible.

### **2.2.3 Enrolment with external funding without employment at SDU (5+3 and 4+4 programmes)**

Enrolment without employment at SDU requires that the PhD Programme is fully financed by other means. Enrolment is only possible if the Head of the PhD School finds the applicant qualified and the Head of the Department's recommendation is positive.

The Faculty charges a tax on the enrolment of PhD projects with external funding. This tax can maximally total 154,800 DKK per year (2014 numbers) + an overhead of 44% for covering utilities. The tax is negotiated by the Head of the Department to which the project is affiliated. The tax covers costs that are directly related to the PhD Programme, such as supervision, office expenses and work station.

Applications for enrolment with external funding can be submitted continuously. A specific application form must be used. Applications must be submitted to Dean's Office, Faculty of Science, SDU, Campusvej 55, 5230 Odense M, Denmark.

Applications must include the following

- Copy of diplomas from undergraduate and graduate degrees (and courses, if application is for the 4+4 programme)
- Curriculum vitae of the applicant
- Project description
- List of publications, if applicable
- Motivation and substantiated background for the application
- Letter of recommendation from academic contact person from the research milieu at the department to which the project will be affiliated
- Advance commitment to the funding of the programme from the provider of the grant as well as information about the contact person from the grant provider (financing voucher)

Applications will normally first be processed when documentation for full financing of the PhD Programme is presented. This includes the salary of the PhD student, the tax, costs in relation to studies abroad and courses as well as costs in relation to the research project, such as the collection of data and administrative and laboratory assistance.

Applications are assessed by an assessment committee comprising by the relevant PhD Study Committee. The PhD Study Committee prepares a written recommendation to the Head of Department and the Head of the PhD School containing:

- A brief characterization of the applicant's academic qualifications including if necessary supplementary courses or similar as a prerequisite to completing the PhD Programme satisfactorily
- The PhD project

This assessment committee's assessment is sent to the applicant for any comments.

On the basis of the assessment committee's recommendation, the Head of the PhD School decides whether the applicant is qualified for admission to the PhD Programme.

The Head of Department decides whether the project lies within the research strategy of the department and whether there is sufficient supervisory capacity available. The Heads of the PhD School/Department may each choose to invite qualified applicants for an interview prior to making a decision concerning admission.

An interview is normal practice in the case of applicants who hold degrees obtained outside of Denmark in order to ensure the applicant's fluency in English or Danish.

For enrolment as a PhD student with external funding it must be determined whether to enter into a contract between the relevant parties. The contract is drawn up by the PhD School Secretariat and is signed by the Dean, the Head of the PhD School, the Head of Department, the external grant provider, and the PhD student. The objective of the contract is to determine the general conditions of the collaboration prior to the start of the project, including the financial conditions. The contract must also state how the various costs of the project are covered and where the PhD student will carry out his/her daily work. In addition, the contract must refer to the PhD Order and the Faculty's guidelines in relation to the PhD Programme, which the student is subjected to.

Projects cannot commence until enrolment has been completed. Enrolment is possible on the 1st or 15th of the month. Enrolment with retroactive effect is not possible.

Enrolment according to the 4+4 programme with external funding may entail deviations from the above. See section 2.2.2 for documentation requirements.

#### **2.2.4 Enrolment as Industrial PhD**

An Industrial PhD project is a specifically industrially oriented PhD Programme. The project is conducted as a collaborative effort between a private or public organization, the PhD student and a university. In addition to the academic affiliation – either at the university or within the organization – a public knowledge institution may also be affiliated: the so-called Third Party. As an Industrial PhD student, employment takes place in the organization with admission at the university.

Further information concerning the Industrial PhD Programme may be obtained here:  
<https://innovationsfonden.dk/da/programmer>.

Applications for an Industrial PhD scholarship must be submitted to the Danish Agency for Science, Technology and Innovation using a specific application form which can be found here:  
<https://innovationsfonden.dk/en/programmes/industrial-researcher>. Applicants are advised to submit an application for enrolment as PhD student with external funding without employment at SDU (see section 2.2.3) parallel to submitting an application to the Danish Agency for Science, Technology and Innovation.

An Industrial PhD project must be approved by *both* the Danish Agency for Science, Technology and Innovation *and* the Faculty of Science before enrolment can take place and the project can be initiated.

Applications to the Danish Agency for Science, Technology and Innovation must therefore be prepared in collaboration with the potential academic supervisor from the university who must have obtained the consent from the Head of

Department that he/she may act as supervisor and that the project is relevant to the research strategy of the Department, as well as a recommendation from the Chairman of the local PhD Study Committee and the Head of the PhD School that the applicant is eligible for enrolment.

Contact information to a relevant department and potential supervisor may be obtained from the Head of the PhD School.

Upon approval of the Industrial PhD project by the Danish Agency for Science, Technology and Innovation, a copy of the application along with the written approval from The Agency must be submitted to the PhD School Secretariat for final approval of enrolment. When the PhD School Secretariat has received The Agency's confirmation and the Head of the PhD School has approved the enrolment on the basis of the recommendation by the PhD Study Committee, a letter of enrolment is issued to the Industrial PhD Student.

Projects cannot commence until enrolment has been completed. Enrolment is possible from the 1st or 15th of the month. Enrolment with retroactive effect is not possible.

## **2.3 Economic conditions during the PhD Programme**

### **2.3.1 Salaried PhD-stipend according to the 5+3 programme**

The Faculty employs salaried PhD fellows in accordance with the AC protocol, and one is placed on step 4-8 on the common-academic scale by seniority.

The Protocol applies to all PhD fellows who receive their salary from the University.

In accordance with the AC Protocol, the PhD student must meet the requirements set out in The PhD order. Furthermore, the PhD student is required to carry out tasks equivalent to 840 hours (see Section 2.3.4). Tasks may consist of teaching, dissemination or other specialized tasks. In exceptional cases, reductions in the 840 hours may be granted with a corresponding reduction in salary, but never more than 1/6. Salaries, pensions and other employment conditions take place according to the rules, agreements and organizational regulations in force at any given time.

### **2.3.2 SU (State educational support) PhD scholarship and paid scholarship under the 4+4 programme**

PhD students who are simultaneously enrolled in a master's programme and a PhD programme (the 4 +4 programme) are eligible for the State educational support (SU) for the completion of the Master's degree in accordance with the general conditions for SU for the duration of enrolment in the master's programme. 4+4 PhD Students are urged to contact the SU Office about this.

At enrolment, the PhD student under the 4+4 programme is awarded a scholarship, which consists of a SU PhD scholarship for a maximum of two years followed by a salaried PhD scholarship for the last two years of the programme.

For the first two years or until the qualifying exam is passed and the master's degree is obtained, the student receives monthly two SU PhD installments ('grants'). The SU PhD Scholarship totals a maximum of 48 grants. These grants are paid monthly in advance. In addition, the student may receive pay for 280 hours of work. Note that the salary is paid monthly backwards, whereas the grant is paid at the beginning of the month.

Throughout the course of the programme, PhD students are required to perform tasks equivalent to 840 hours (see sections 2.3.1 and 2.3.4). This assignment is divided with 280 hours during the SU PhD scholarship and 560 hours during the salaried PhD employment. The 280 hours during the SU-scholarship is an offer the PhD student may decline. When the student passes the qualifying exam, his/her status transfers to that of a salaried employee. In exceptional cases, reductions in the 560 hours may be granted with a corresponding reduction in salary. The student has rights and obligations (in terms of leave, maternity leave, illness, study delays, etc.) according to the

standard conditions for SU-recipients until the qualifying exam is passed.

Salaries, pensions and other employment conditions take place according the rules, agreements and organizational regulations in force at any given time.

Questions concerning SU PhD grants should be addressed to the Salaries Office.

### 2.3.3 External funding of the PhD Programme

In the case of funding of the PhD Programme in whole or in part from an external grant provider, the Dean, the Head of the PhD School, the Head of Department, the grant provider and the PhD student enter into agreement concerning the funding of the programme (see Section 2.2.3).

### 2.3.4 Registration and settling of work hours

The required working hours in accordance with the Protocol is as a rule carried out at the Department where the PhD student is employed and takes place according to agreements made between the Head of Department and the PhD student. As far as possible, the required tasks must be relevant to the research project, the research interests and career plans of the PhD student. Moreover, the timing and placement of the hours must accommodate maximally for the PhD plan and must not hinder the student in carrying out his/her project, participate in courses and have study periods abroad.

The Head of Department is responsible for continuously recording the tasks performed and providing a statement of hours worked, and continuously informing the PhD student and principal supervisor of the scheduled and planned required work, for example in connection with annual employee development supervisions, long term planning, settlement of allocation of hours etc.

Hours of work are calculated as follows:

For students in the 4 +4 scheme, the following calculation applies only after the qualifying examination has been passed.

*Study abroad:* The PhD student is credited  $X$  hours of required working hours for a study period abroad of a duration of  $l_u$  weeks.  $X$  is calculated according to the following formula

$$X = \begin{cases} 280, & l_u > 52 \\ \frac{280}{52} l_u, & 4 \leq l_u \leq 52 \\ 0, & l_u < 4 \end{cases}$$

NB: the maximum value for  $X$  is 280 hours. That is, that study abroad of a duration of a minimum of four weeks and a maximum of 52 weeks, the PhD student is compensated for 5.38 hours per week at 280 required work hours per year.

*Teaching, knowledge dissemination and other required tasks carried out on behalf of the Department:* The PhD student carries out tasks of teaching, knowledge dissemination and other required work at the Department up to  $840 - X$  hours (for the 4+4 programme:  $560 - X$  hours)

Required tasks can in some cases by prior arrangement with the Head of Department be carried out in the research group with work relevant to the research, however without directly pertaining to the PhD student's own research project, since this work is paid by the remaining salary.

The teaching load of the PhD student is calculated with a preparation factor of a minimum of 3.5 (one confrontation hour equals 3.5 working hours). When a PhD student teaches a subject in a study element that has a higher default factor in accordance with the basic values of the Teaching Load Agreement of the Faculty, this higher factor is applied.

The PhD student cannot perform tasks that normally are carried out by administrative employees.

In the case of disagreement between the Head of Department, the PhD student and / or principal supervisor regarding the nature, extent or timing of required work, the Dean in consultation with the Head of PhD School makes the final decision regarding the required tasks.

### **2.3.5 Secondary employment**

Under exceptional circumstances, the Head of the Department can give permission to secondary employment on a small scale, when and if this activity has professional relevance for the PhD project. Applications for permission to take on secondary employment must be submitted to the Head of Department together with a statement from the supervisor substantiating that the secondary employment will not delay the course of the PhD Programme significantly. The objective with a fully funded PhD is precisely that there is sufficient time to concentrate on the research full time.

## **2.4 Leave of absence and termination of employment**

### **2.4.1 Termination of enrolment**

If the student wishes to discontinue his/her enrolment in the PhD Programme, this must be communicated in writing to the department and the PhD School..

### **2.4.2 Maternity leave**

PhD students employed according to the 5+3 programme and PhD students employed according to the 4+4 programme who have passed their qualifying exam have the right to take maternity leave in accordance with the rules concerning parental leave in force at any given time.

PhD students employed according to the 4+4 programme who have not yet passed their qualifying exam have rights and obligations in relation to maternity leave in accordance with Ministerial order no. 653 of July 31st 1999 on the awarding of SU-stipends to PhD students.

PhD students employed by the Faculty of Science must inform the Department, the personnel office and the PhD School of the necessity of taking maternity leave at least 3 months prior to the expected birth. Information on current rules for childbirth and adoption can be found on the personnel office website:

<http://sdunet.dk/Personale/Ansaettelsesforhold/Barsel-og-adoption/Gen-info-barsel-adop-foraeldre.aspx>

An enrolled PhD student not employed by SDU must notify the PhD School and the department in writing. The notification must be given by e-mail to the PhD School and the department secretary.

### **2.4.3 Extension in relation to illness**

If the PhD student has been absent owing to illness for a period of at least one month, and the absence is documented with a doctor's statement, extension in relation to illness may be granted along with extension of the enrolment, upon application to the Dean via the Head of the PhD School. If the enrolment period is extended, the department can apply for extension of employment.

### **2.4.4 Other types of leave of absence**

In exceptional cases, leave of absence from the PhD Programme may be granted upon substantiated application to the Head of the PhD School along with recommendation from the principal supervisor and the Head of Department. The



Dean, in consultation with the Head of the PhD School, determines whether the leave may be granted and issues via the PhD School a written statement of the decision to the PhD student. This type of leave is as a rule without salary.

#### **2.4.5 Exceeding the period of enrolment**

In the case where the PhD project has met with problems that make it impossible to meet the original submission date for the thesis, the Dean may grant permission to postpone the deadline. The PhD student must apply for an extension of the project period as soon as it is apparent that the deadline cannot be met. Processing must be given a minimum of two weeks from the time the application has been received by the PhD School.

The application must be recommended by the supervisor, PhD Study Committee and the Head of PhD School, after which the Dean makes the final decision.

The application must include a description and schedule for the completion of the project. Note that postponements are granted only in exceptional cases and on the basis of unusual circumstances.

Salary is not paid over and beyond the stipulated period of employment, and a postponement of more than three months cannot be expected.

Two months prior to the expected submission date, the student and principal supervisor will be notified by the PhD School with information on how and when the thesis is to be submitted. If the thesis is not submitted at the determined date of submission and postponement has not been sought and granted, the student is notified that the enrolment will be terminated.

### **3 Study Elements**

#### **3.1 Supervision**

##### **3.1.1 Appointment of principal supervisor and possible co-supervisor(s)**

The Head of the PhD School appoints a principal supervisor on the recommendation of the Head of Department. The Head of Department with the approval of the principal supervisor must take into account how many PhD students he or she is already principal supervisor for and whether the principal supervisor has the professional and supervisory skills as well as the time resources required for the supervision. On the recommendation of the respective PhD Study Committees or Head of Department or on his or her own initiative the Head of the PhD School can also appoint one or more co-supervisors.

For PhD students under the Industrial PhD Programme a supervisor must be appointed from the Faculty of Science as well as a co-supervisor who is affiliated with the company where the PhD student is employed and who has business-relevant research experience in the relevant discipline.

The Head of the PhD School may on recommendation from the Head of the Department decide to appoint a support group to support the PhD student's supervision.

##### **3.1.2 Principal Supervisor**

The principal supervisor must be a recognized researcher in the relevant field and have qualifications equivalent to the level of professor or associate professor, be employed by SDU and be affiliated to the PhD School. The principal supervisor must have supervision qualifications, such as having passed SDU's PhD supervisor course and the Faculty's PhD supervisor course.

### 3.1.3 Co-supervisor(s)

Co-supervisors must have research qualifications in a relevant discipline. In appointing the co-supervisor the Head of Department must take into account how many PhD students he or she is already supervising, and whether the supervisor has the necessary time resources to supervise the student.

Under special circumstances, the Head of the PhD School can approve the appointment of co-supervisors who are not permanently employed by SDU. This occurs after application and the application must show what particular reasons there are for the connection to an external co-supervisor and be accompanied by documentary evidence that the external co-supervisor is qualified in the relevant field. The Head of the PhD School approves the connection of an external co-supervisor on the recommendation of the Head of Department. For students under the Industrial PhD Programme a co-supervisor must be appointed who is affiliated with the employing company and who has special insight into and responsibility for the research project at the company.

### 3.1.4 The Supervisor's obligations

The supervisory function is the most important component of the PhD programme. The supervision includes information and advice on all aspects of the PhD programme focusing on academic guidance in research activities. The principal supervisor should however also be prepared to guide the PhD student in issues such as teaching skills and career guidance.

*The principal supervisor* is responsible for the overall PhD programme, see the PhD order § 8.

The principal supervisor is responsible for ensuring that all formalities in connection with the PhD programme, as described in the PhD Order and supplemented by local regulations of the Faculty and any regulations of the Department or research training programme, must be respected.

The principal supervisor must ensure that the PhD plan can be approved by the Head of the PhD School no later than 3 months after enrollment. It is therefore recommended that the PhD Plan is completed and handed in for the Head of the PhD School's approval no later than 2 months after enrollment.

The principal supervisor is responsible for project supervision, which includes ensuring that the supervision and advice is relevant and adequate (usually meeting at least once a week, unless there are reasons otherwise)

- That any other supervisors are involved where appropriate
- That the PhD project is feasible within the allotted time
- That the project could lead to new results on a sufficiently high level to form the basis for a PhD thesis at an international level
- That there is enough time for the PhD student to have a realistic opportunity of submitting the PhD thesis on time.

Prior to each of the regular evaluations of the PhD study programme, the principal supervisor, together with any co-supervisors, shall evaluate whether the PhD student is following the PhD plan satisfactorily and that continuation may be recommended unconditionally, or whether the PhD student should be given three months to put his or her studies in order (this option can be given only once). At the same time the principal supervisor together with any co-supervisors should assess whether the PhD plan should be changed.

The principal supervisor must seek to ensure that the student has a realistic chance of following the PhD plan. In the event of unforeseen difficulties, for example equipment problems, weather problems in biology, the idea is not sustainable, etc., the principal supervisor is then responsible for changing the PhD plan together with the student and any co-supervisors, so that a realistic opportunity is re-established for the PhD student to obtain a PhD degree without delay (see Section 4.2.1).

The principal supervisor has primary responsibility for the environmental change and, in due time, usually within two years before the end of the study, plan, together with the PhD student, the environmental change.

The principal supervisor is also responsible for

- Being in regular contact with the PhD student, and serving as a sounding board for the research project
- Advising the student about relevant courses and conferences
- Assisting the student in establishing contacts with relevant national and international centers of research
- Advising the student on how work commitments and the knowledge dissemination element can be accommodated in the course of study
- Reviewing and commenting on the PhD project
- Preparing the final statement of the principal supervisor which summarizes the overall PhD programme when the PhD thesis is submitted, see Section 5.2.2
- Participating in the assessment work and PhD defense, see Section 5.3.3 and 5.3.5.

A good PhD programme requires that from the start of the PhD education there is a good working relationship between the student and principal supervisor, in which the PhD student and principal supervisor can reach agreement on the demands and expectations placed on each other. An outline of the mutual demands and expectations of the supervision process - including expectations regarding the form and extent of supervision - should be included in the PhD plan.

Co-supervisors assist the principal supervisor. The tasks of a co-supervisor are agreed on his or her appointment and will usually include academic discussions in selected parts of the research project.

### 3.1.5 The PhD student's obligations in relation to supervision

*The PhD student* is required to:

- Contact the principal supervisor in good time in the preparation of the PhD plan and the regular evaluations.
- Send course descriptions regarding courses that are not pre-approved to the PhD Study Committee for approval and to send certificates regarding courses passed to the PhD School
- Keep the supervisor(s) informed about the project
- Ensure the arrangement of supervision meetings, meeting agendas, deadlines, delivering texts for feedback, etc.
- Contact the principal supervisor and possibly the Head of Department in good time if there are problems with carrying out the project which the student cannot resolve himself or herself within a reasonable time.
- Together with the supervisor(s) plan
  - the research (the project)
  - courses,
  - the environmental change,
  - knowledge dissemination,
  - participation in international meetings and
  - the writing of the thesis.

The PhD student is entitled to a reasonable amount of relevant supervision and advice from supervisors, usually at least once a week, unless there are grounds for this not to be the case.

### 3.1.6 Change in Supervisor

The Head of the PhD School may on his or her own initiative or upon request from the PhD student approve the replacement of the principal supervisor or co-supervisors, or appoint additional co-supervisors.

Upon the request of the PhD student it should be shown that the PhD student, Head of Department, the previous and new supervisor have accepted the change of supervisor.

## **3.2 Parts of the course**

### **3.2.1 Transfer of course credits**

PhD courses taken before enrolment can be transferred on condition that they are accepted as PhD courses for the student in question and that they are not part of another degree. The latter condition means that there is a maximum credit transfer of courses taken during a Danish 5-year education for that number of ECTS credits that exceeds 300 ECTS credits for the 5+3 programme or exceeds 240 ECTS credits for the 4+4 programme. For applications for credit transfer of courses from foreign programmes it must be demonstrated that the requested amount is beyond the requirement of the degree (i.e. that the degree could have been achieved without this course), for example by a certificate from the university in question.

### **3.2.2 Evaluation of PhD courses**

All PhD courses to be approved in a PhD Programme must be evaluated in one form or another and be documented in order for it to have been passed successfully.

The PhD student is required to complete PhD courses totaling approximately 30 ECTS credits.

The PhD courses must be pre-approved by the local PhD Study Committee.

A PhD student when participating in courses cannot be assessed by the supervisor alone. In these cases, there should be the assistance of an internal or external examiner.

### **3.2.3 Specifically, with regard to the 5+3 programme**

One year before the end of the PhD programme it is expected that 30 ECTS credits should be passed. For students on the 5+3 programme at least 15 ECTS credits should be passed after one year.

### **3.2.4 Specifically, with regard to the 4+4 programme**

For students on the 4+4 programme at least 10 ECTS PhD courses should be passed within one year and at least 22.5 ECTS credits must be passed by the time of the qualifying exam. A year before handing in the PhD thesis it is expected that the PhD student must have completed approximately 30 ECTS of PhD courses.

### **3.2.5 Composition of the PhD students' course programme**

PhD courses are designed to provide students with academic breadth, and to form a reasonable basis for their PhD project. The academic breadth is designed to improve the student's job opportunities after obtaining the PhD degree.

Research courses should therefore generally be at a higher academic level than the qualifying Master's degree. However, courses at Master's level can be included, if they fit into the PhD student's PhD plan.

*Mandatory introductory course worth 2,5 ECTS:*

New PhD students must enroll within the first year of their PhD Programme in mandatory introductory courses composed of the following:

- An introductory course held by the PhD School
- A course on good scientific practice

When the PhD School has received course certificates for both elements, the PhD Student will receive 2,5 ECTS.

PhD courses may include:

- Actual PhD courses offered by the Faculty of Science and SDU
- Courses offered by the research education programmes that the Faculty participates in or cooperates with, either in other Danish institutions or in foreign institutions, provided that the application is approved by the PhD Study Committee
- The Danish Agency for Science, Technology and Innovation's Business Course for Industrial PhD students
- Other courses particularly relevant for the PhD project, for example courses in IT or statistical methods
- "Summer / Winter Schools" must include active participation by the student or an evaluation (either by the course providers or subsequently by the supervisor and an internal external examiner) in order to be approved.
- Participation in conferences may count as a course activity twice during a PhD programme with 3 ECTS for each conference if the PhD student afterwards holds a lecture about the conference with an internal or external censor present. If the PhD student holds a poster presentation at the conference knowledge dissemination may be given (see section 3.4.1 for more information regarding knowledge dissemination)?
- SDU's course in communication for PhD students, which is offered once a year
- Individual study activities under the guidance of a lecturer (max 10 ECTS). It is required that some form of evaluation or examination with internal censor must be included in connection with such a programme.
- Actively participating in eight relevant seminars at the university can count as a course giving 1.5 ECTS points. This kind of course can be taken three times. Active participation means giving a presentation of a topic at one seminar. The seminars can for instance be journal club presentations or section meeting presentations. After the participation and to get the ECTS, you have to submit documentation for your participation in form of a signed document from the responsible person for the seminar.

Each of these items is elaborated under section 3.2.6 Approval of individual courses.

The programme of courses is tailored to each student's project and research interests. The principal supervisor must ensure that there is sufficient academic diversity in the composition of the courses, and that the planned courses are relevant and of a high academic level.

Upon approval of the PhD courses, as a starting point 1 ECTS credit is awarded per 10 contact hours, taking into account the specific course load. Courses are assigned points in units of 0.5 ECTS credits. If a course has been given ECTS points with a decimal other than 0.5 the ECTS point are rounded. A maximum of 15 ECTS credits can be given for a course, as the study programme otherwise would become too narrow.

Up to approx. 15 ECTS credits of supplementary courses can be approved as research courses. A supplementary course is a course outside the student's discipline which is not at PhD level. Of the 15 ECTS, 5 ECTS may be relevant courses at the Bachelor level. There must be strong academic reasons for choosing a Bachelor level course and the PhD student must make sure that there are no alternate courses at the Master's or PhD level.

Usually the PhD Study Committee approves the course's recommended ECTS.

If the course description does not include a recommendation for ECTS then the PhD Study Committee determines the course's ECTS through an individual assessment (see 3.2.6).

When the PhD Study Committee approves an individual PhD course (see 3.2.6) the PhD Study Committee makes a decision regarding ECTS-points. Should the course description change after the application was submitted and until the course was completed then the PhD Study Committee may decide to change the number of ECTS points awarded for the course.

PhD courses offered by the Faculty are announced on the PhD School's website.

### 3.2.6 Approval of the academic programme and courses

The individual PhD students' course programme is part of the PhD plan (see Section 4.1) approved by the Head of the PhD School. PhD courses that have not been pre-approved must also be approved by the PhD Study Committee. Often it is not possible to give a fully detailed course programme as research courses are often offered with relatively short notice, and it is then up to the principal supervisor and the PhD student regularly to identify relevant courses so that the PhD plan can be carried out.

The departments provide a range of courses pre-approved by the Faculty PhD Committee as PhD courses for all PhD students at the Faculty of Science of SDU. The PhD School's website contains a list with pre-approved courses for PhD students at the Faculty of Science.

If the Department wishes to offer new courses, these should also be approved in advance by the Faculty PhD Committee. Application for approval must contain the following information about the course:

- Course Title
- Extent (number of hours and ECTS credits)
- Aims
- Synopsis
- Evaluation method
- Teaching method
- Responsible lecturer(s)
- Literature
- A statement from the Department's PhD Study Committee should also be included regarding the course's suitability as a PhD course.

It is not necessary to seek approval for pre-approved research courses offered by one's own department. The PhD School must, however, be notified when the course is passed. Pre-approved research courses are shown on the PhD School's website.

#### *Approval of individual courses*

PhD students can seek approval for summer schools, external courses and similar to be recognized as PhD courses before the course takes place. Final approval requires that the course is assessed with a satisfactory result. On the form it must be indicated who is the provider of the activity and what number of ECTS credits is being proposed. The form is signed by the student and the principal supervisor. An academic description or similar should be included as well as any documentation demonstrating that the activity has been completed/passed.

When the activity is completed, documentation showing that the activity has been completed/passed should be forwarded to the PhD School, which will record the activity in the PhD system.

Self-study activities supervised by the student's main PhD supervisor must be clearly distinguishable from the background reading that is expected as part of any research project. If a formal course exists at any Danish university with content comparable to that of the proposed activity, the student should follow that formal course in preference to the self-study activity.

When giving approval the PhD Study Committee will decide how many ECTS credits each activity can be awarded in accordance with the following principles:

- The Committee has adopted the following rates for week courses:
  - o 1 week is awarded 4.5 ECTS credits
  - o 2 weeks are awarded 7.5 ECTS credits
  - o 3 weeks are awarded 10.5 ECTS credits

- 4 weeks are awarded 13.5 ECTS credits
- 5 weeks are awarded 15 ECTS credits
  
- "Summer Schools" with at least 40 hours scheduled per week, which have not been assigned credits by the provider, are normally awarded 4.5 ECTS credits for the first week and 3 ECTS credits for any subsequent week up to a maximum of 15 ECTS credits. If the duration is less than 40 contact hours, the number of credits is reduced proportionately in line with the number of hours.
- For "conference participation" the conference must have a minimum duration of 3 days and be followed by an oral presentation, where the PhD student gives an account to the Department (the group) of the most important presentations (5-10) at the conference he or she participated in. The presentation must be witnessed (at least) by the student's supervisor and an internal examiner, both of whom must formally approve the course. Conference participation with subsequent evaluation may be approved with 3 ECTS credits.
- The report on journal literature as background for the PhD project can be approved with a maximum of 6 ECTS credits. The literature review task should not be part of the PhD thesis, and because of the nature of the task it cannot be approved in advance. The assignment is evaluated by an internal examination, but not by the supervisor alone. The Department for Biochemistry and Molecular Biology has set the size of the literature review at around written 20 pages and a theoretical requirement of 30-50 articles. Students from other departments should contact their local PhD Study Committee for guidance.
- Foreigners can receive 3 ECTS credits for a Danish language course .
- For courses offered by the research education programmes which the Faculty takes part in, the ECTS credits set by the research programme should be used.

In individual subject areas there may be specific requirements for the composition of the course programme, including requirements that certain courses are included.

### 3.3 Stays at other research institutions

Under § 7 paragraph 2 of the PhD order, the PhD student should participate in active research environments, including stays at other, mainly foreign, research institutions and must therefore for a part of the PhD period study at another research institution (environmental change).

In the interests of the international level of education, this should normally be a lengthy environmental change of 2 to 6 months at a foreign research institution that is academically relevant to the PhD programme. Residence should at any rate have a minimum length of 3 consecutive weeks.

The principal supervisor must ensure that the student has the opportunity to establish contacts with active research environments outside of SDU. The principal supervisor will typically make use of his or her national and international networks in the planning of the PhD student's study stay in a different international or national research environment.

The environmental change must be approved by the the PhD School and must appear in the PhD plan. If the stay is not finalized in connection with the PhD plan, the plan should indicate when the stay abroad is expected to be planned. For the purposes of approval, a special form should be used. The PhD student may apply for financial support for the trip and stay at their department. See the PhD School's website for more information.

If a prolonged stay abroad is not possible or appropriate, reasons for this must be given in the PhD plan and at the same time plans should be given for how the PhD Order's requirement for an environmental change should be settled.

For PhD students who have completed their graduate studies abroad it is not required to travel abroad for the environmental change. The environmental change can be in Denmark.

If the industrial PhD student's place of employment has an active research environment, then the the PhD School can decide that the environmental change can take place at employment's active research environment.

### 3.4 Knowledge Dissemination

According to § 7 of the PhD order, the PhD student should gain experience in teaching or other forms of knowledge dissemination. All dissemination activities must be approved by the PhD Study Committee. The Faculty PhD Committee has decided that the extent of knowledge dissemination should be at least 300 working hours. The 300 hours knowledge dissemination can be part of the 840 working hours. See sections 2.3.1 and 2.3.2.

Knowledge dissemination hours are registered locally at each department via the system SmartReg and approved by the Head of the department or the chairman of the local PhD Study Committee. The PhD student must have completed the knowledge dissemination hours at least 3 months before the PhD thesis is to be handed in. Together with the Head of the department and the Head of the PhD School decides on the details regarding the requirements for knowledge dissemination hereunder the necessary documentation.

If the PhD student teaches more than 300 hours of paid work as part of the 840 hours of paid work, then it is not necessary to apply the PhD School for approval of knowledge dissemination. However, proof of the execution of the 840 hours must be issued before the completion of studies.

#### 3.4.1 Rules for calculating knowledge dissemination hours

Posters and short presentation (less than 40 min.) held externally count for 30 knowledge dissemination hours. A longer presentation (at least 40 min.) held externally counts for 50 knowledge dissemination hours. An internal presentation counts for 5 dissemination hours. Where the same presentation is repeated the 2<sup>nd</sup> time the student receives 50%, the 3<sup>rd</sup> time 25% and the 4<sup>th</sup> time 10% of the amount of hours the PhD student received for giving the same presentation the first time.

##### *Activities that can be credited as knowledge dissemination*

- External presentations and posters
- Articles conveying scientific information to the general public
- In certain cases, scientific articles
- Production of books
- Commissioned research
- Internal presentations

##### *Activities that can be credited as knowledge dissemination and as work commitment*

- Teaching for the Department
- Supervision of fellow students/technical staff
- Dissemination tasks

##### *Activities that can be credited as work commitment*

Activities under this paragraph must be relevant to the PhD student, but cannot be directly included in the student's research project.

- Work duties imposed by the Head of Department which are performed for the Department/Faculty
- Work duties imposed by the Head of Department which are conducted for the research group.

Time spent on teaching is calculated according to the principles for the calculation of working hours for PhD students (see Section 2.3.4).

For PhD students on the Industrial PhD programme it may be agreed on between the PhD School, the Head of Department and the collaboration partner that the experience of teaching and knowledge dissemination is achieved through activities with the collaboration partner. The time assigned for the Industrial Report is set at 120 hours.

Plans for carrying out the provision in the PhD Order regarding teaching experience or other forms of knowledge dissemination must be stated in the PhD plan (see Section 4.1) and be approved by the Head of the PhD School. Often it



is not possible to set out a detailed plan and it is then up to the principal supervisor and the PhD student to periodically fill out the schedule.

## 4 Milestones

### 4.1 The PhD Plan

The PhD Plan is a comprehensive plan for the PhD project and the other elements that make up the PhD Programme. The PhD Plan must be approved within three months of the start of the PhD Programme, see PhD order § 9. The PhD Plan should ensure a swift clarification of expectations between the student and principal supervisor of the project about the supervision and the study in general. The PhD Plan must be as precise as possible but can be periodically adjusted and clarified - for example in connection with ongoing evaluations. This means that plans for stays at other research institutions, participation in courses, form of thesis etc. that are not in place after 2 months, can be subsequently added.

The PhD Plan must be approved by the Head of the PhD School 3 months after enrollment at the latest.

The approved PhD Plan provides the basis for the ongoing evaluation of the PhD project and the progress of studies.

The PhD plan can be based on all or part of the project description that was included in the application for the PhD project.

The PhD plan must include:

- 1) Information about the study area, department affiliation and connection to a research training programme
- 2) A timetable for the entire PhD Programme, which accounts for the completion of the individual parts of the course
- 3) An agreement on the form of supervision. It should be stated how many hours of supervision is expected per semester. If there are several supervisors, the agreement must specify a division of roles between them, and to what extent they will be available to the PhD student
- 4) A plan for the PhD project. A project description for the research project, including the research questions, theory and methodology, as well as a description of any sub-projects and milestones
- 5) A plan for the PhD courses, see Section 3.2. The composition of PhD courses must be made in consultation with the principal supervisor. The academic descriptions for the planned courses must be included if possible.
- 6) A plan for participation in active research environments - including stays at other, principally foreign, research institutions, see Section 3.3
- 7) A plan for knowledge dissemination, see Section 3.4
- 8) An agreement on copyright. If the PhD study is to be carried out in collaboration with several partners, the PhD Plan must include an agreement on copyright and rights for any data collected. Any limitations to copyright must be approved by the Dean upon recommendation from the Head of the PhD School. If there are no special circumstances, the thesis will be published
- 9) A financial plan in relation to enrolment.

### 4.2 Regular assessments

In accordance with PhD order § 10, there should be regular assessments during the PhD education of whether the PhD student is following the PhD Plan and if necessary, adjustments to the PhD plan must be made.

If the Head of the PhD School assesses that the PhD plan despite adjustments is not being followed, then the PhD Student must be given the opportunity to reestablish the PhD project. The reestablishment period may have a length of three months, may not in itself prolong the PhD and may only be given once during a PhD project.

#### Planned assessments

There are two planned assessments during a PhD education. In addition, 4+4 PhD students have a third planned assessment in connection with their qualifying exam/master's exam. The last assessment involves a meeting between the PhD Student and the Head of the PhD School.

For PhD students on the 5+3 programme, regular assessments will be carried out according to the following plan.

Time after enrolment	Students on 5 +3
3 months	PhD Plan (written)
1 year	1st assessment (written)
2 years	2nd assessment (written and oral)

For PhD students enrolled in the 4+4 programme, regular assessments are carried out in accordance with the following plan.

Time after enrolment	Students on the 4+4 programme
3 months	PhD Plan (written)
1 year	1st assessment (written)
2 years	2 <sup>nd</sup> assessment in connection with the qualifying exam/master's exam (oral)
3 years	3rd assessment (written and oral)

### Extraordinary assessments

Besides the regular assessments, the main supervisor must have regular (weekly) contact with the PhD Student. If the supervisor observes that the PhD Student is not following the PhD plan, then an extraordinary assessment must be held. Examples where the PhD Student is not following the PhD plan could be significant changes in research design, the data or the theoretical basis. It could also include significant changes to the timetables, including delays in some of the constituent parts. It could also involve a modification to the form of the thesis, a change of location or significant changes in the duration of the stay abroad, or significant changes in the course programme or knowledge dissemination activities.

A closer description of the assessment procedure hereunder the assessment procedure in connection to the qualifying exam and a description of a reestablishment period can be found in the following sections.

#### 4.2.1 Assessments of the PhD Project

The following describes the procedure for planned and extraordinary assessments.

##### *Principal Supervisor's Evaluation*

Latest 12 months after enrollment the main supervisor sends an evaluation to the PhD School with an assessment of progress so far. The supervisor writes the evaluation after speaking to the PhD student. With reference to the PhD plan the supervisor's evaluation must describe which parts of the PhD programme have been completed, which parts are missing and if the PhD program is following the PhD plan. If the supervisor finds that the PhD student is not following the PhD plan the supervisor must in the evaluation suggest necessary changes to the PhD plan.

The PhD student must have a copy of the evaluation and has two weeks to comment on the evaluation.

#### 4.2.2 Assessment of the evaluation

On the basis of the evaluation, the Head of the PhD School will assess whether the PhD student is following the PhD plan and whether suggestions on changes in the PhD plan can be approved.

If the Head of the PhD School assesses that the PhD plan despite adjustments cannot be followed the Head of the PhD School gives a clear written reason for this and must indicate in which respects the progress has not been satisfactory so that the student is able to relate specifically to the missing elements. If the assessment is not approved, the PhD student has a deadline of two weeks to submit any comments. After this the PhD student will receive an offer of re-establishment.

Before the Head of the PhD School makes the last planned assessment (for 5+3 students the second assessment and for 4+4 students the third assessment) the Head of the PhD School invites the PhD Student to a meeting. The purpose of the meeting(s) is to acquire additional information to the written report.

During the meeting the Head of the PhD School and the PhD student have the possibility to discuss specific issues in connection with the PhD education hereunder problems relating to supervision, planning, or other issues of educational or personal nature as well as carrier options.

#### 4.2.3 Re-establishment Period

If the Head of the PhD School concludes that the student does not meet the requirements of the PhD Plan despite any adjustments, the PhD student must have an offer to re-establish the PhD study within three months. The three months must not in itself lead to an extension of the total PhD programme.

If two weeks after receipt of the offer of three months to re-establish the study the PhD student has not accepted this, the enrolment will be terminated.

If the PhD student accepts the offer to re-establish studies, the Head of the PhD School will appoint an assessment committee consisting of two expert assessors and the principal supervisor. The assessment committee must set specific goals for how the PhD student can re-establish the course of study within three months, assess whether there is a need for changes to the PhD Plan and describe the type of support the PhD student needs in during the reestablishment period.

At the end of the 3 months period the assessors will undertake a new evaluation within a month, where it will be evaluated whether the student has met the goals set and the course of study can continue.

If at the end of the 3 months period the assessment is positive, the Head of the PhD School approves the assessment and the PhD Programme can continue. The Head of the PhD School will notify in writing the PhD student and the principal supervisor of the decision.

If, at the end of the 3 months period the assessment is still negative, enrolment will be terminated. The Head of the PhD School will inform any other employer that enrolment has been terminated. The Head of the PhD School will notify in writing the PhD student and the principal supervisor of the decision. The PhD student has 1 week to submit comments to the Dean with regard to the decision of the Head of the PhD School. The final decision will be taken in this case by the Dean.

#### 4.2.4 The Qualifying Examination/Master's examination

As a 4+4 PhD student the PhD student is enrolled as a Master's student and a PhD student the first two years. After two years, the PhD student enrolled in a 4+4 programme will take a qualifying examination/master's examination. The qualifying examination should demonstrate that the student has achieved a skill level equivalent to a master's degree, and the oral exam must provide a broad basis for assessing the student's ability to complete the PhD Programme and possibly to make adjustments to the PhD project.

The qualifying examination is held as a master's examination worth 60 ECTS and is based on a written status report prepared by the PhD student. The status report should basically be around 30 pages long and be written as a research article.

The master's examination is judged based on learning objectives for students at master's level.

PhD students enrolled in the master's program in mathematics must before completing the master's examination of 30 ECTS have passed 30 ECTS preparation courses or other individual study activities.

The status report must set out the results obtained so far, as well as future research plans. Articles, reports, etc. that the student has been (co-)author of should be attached and form the basis of the examination.

There is an oral examination 1-1 ½ hours in length. There should include an approximately 30 minute presentation by the PhD student, after which questions can be asked both about the presentation and generally within the academic area. The examination should include a discussion of future plans. The examination is conducted by the supervisor in the presence of an external examiner.

The supervisor and external examiner give a comprehensive written assessment of the qualifying exam and progress report. The assessment ends with a grade according to the Danish grading system ("7-trinsskalaen"). The PhD student should be informed orally as to the examination result immediately after the examination.

The examination protocol is sent to the exam office who in turn registers the grade. The student thereby completes his/her master's and achieves the title cand. Scient./cand. scient. pharm.

The written assessment (approximately one A4 page) is sent to the PhD School, confirming that PhD courses equivalent to at least 22.5 ECTS credits have been passed and the rules for the examination have been met. The Head of the PhD School makes the final approval of the qualifying examination.

The PhD student receives an employment contract for the remaining two years of the PhD programme when the PhD School has received the Head of the PhD School's approval of the qualifying examination.

PhD students who fail the qualifying examination cannot continue their research training and must set aside extra time to complete a thesis in order to obtain the Master's degree.

If the PhD student wishes to leave his or her studies before the qualifying examination is passed, the work that has been passed in the course of the PhD study is transferred to the Master's education under the current procedures for credit transfer.

For information regarding use of the status report in the PhD thesis please see section 5.1.2.

## **5 Completion of the Programme**

### **5.1 PhD thesis**

The PhD Programme ends with the submission, assessment and public defense of the PhD thesis. The thesis must demonstrate the author's ability to apply relevant scientific methods and to provide research work equivalent to international standards for PhD degrees within the academic area, see PhD order § 11.

A PhD thesis is an independent work, based on an individual PhD Programme, and therefore cannot be submitted by multiple authors for assessment. The underlying research project, however, can indeed have been carried out in collaboration with others.

Special rules apply for PhD students under the Industrial PhD scheme in relation to the submission of the PhD thesis and procedures for the appointment of the assessment committee, etc. read more in the guidelines to the Industrial PhD Programme on the PhD Order's website.

### 5.1.1 Formal requirements for the thesis

The PhD thesis must be written in English<sup>1</sup> and include an adequate introduction to the scientific topic and a summary and discussion of the scientific results obtained.

The thesis must contain an abstract in both English and Danish.

The following structure is recommended:

- 1) Front page with: title of project, the student's name, department, date and year and the supervisor's name
  - a. If the PhD thesis is printed at SDU's Grafisk Center, then you have to follow their rules regarding the front page: <http://anygivenmonday.org/clients/sdu/brandguide/#phd-pub>
- 2) Publications List
- 3) Contents
- 4) Preface
- 5) List of Abbreviations
- 6) English abstract (maximum one page)
- 7) Danish abstract (maximum one page)
- 8) Introduction to the scientific field
- 9) Summary of the results obtained, which are discussed and evaluated in relation to the research area as a whole
- 10) List of References
- 11) Possibly appendices that may contain useful information of a technical nature and which do not naturally belong in the other chapters, where they might affect the reading rhythm
- 12) Copies of articles and manuscripts, which are included with the thesis for assessment

### 5.1.2 The use of the status report in the qualifying exam

Material from the status report may be reused in the PhD thesis. It is however important the thesis clearly identifies which parts of the PhD thesis have been reused in order to avoid self-plagiarism.

The PhD School suggests the following:

- that each chapter in the PhD thesis begins by specifying which parts of the thesis that have been assessed before or
- that the PhD thesis contains an overview of which parts of the PhD thesis that have been assessed before.

### 5.1.3 The departmental guidelines on publishing activity for obtaining a PhD degree

#### *Department of Biology*

A PhD thesis will typically contain three or more full-length articles consisting of original research. Of these, at least one should be submitted, to an internationally recognized journal and at least two articles should have the Ph.D. student as first author. In cases where only manuscripts are included that have not been accepted for publication in an internationally recognized journal, it is up to the assessment committee to assess whether these have the sufficient quality that they could be publicized in an internationally recognized journal.

#### *Department of Biochemistry and Molecular Biology*

A PhD thesis must normally contain at least one full-length article consisting of original research with the PhD student as first author. The article must be published or accepted for publication in an internationally recognized journal. If there is

---

<sup>1</sup> If it is a pedagogical thesis (IMADA), however, it can be written in Danish.

only a manuscript, it is for the assessment committee to assess whether the quality of the article is sufficient to be published in an internationally recognized journal.

In cases where a manuscript has not yet been prepared, or where the student does not appear as first author on any article or manuscript, detailed explanation must be set out for the reasons for this, as well as arguments that the work should still lead to the acquisition of a PhD degree. Based on this, the assessment committee must decide whether, despite the lack of publications, the quality of the thesis is of a sufficiently high level and can be submitted for public defense.

#### *Department of Physics and Chemistry*

A PhD thesis must normally contain at least two full length articles consisting of original research with the PhD student as first author and should be published or accepted for publication in an internationally recognized journal. If there are only one or more manuscripts, it is up to the assessment committee to assess whether these manuscripts have the sufficient quality to be accepted by an internationally recognized journal.

In cases where a manuscript has not yet been prepared, or where the student does not appear as first author on any article or manuscript, detailed explanation must be set out for the reasons for this, as well as arguments that the work should still lead to the acquisition of a PhD degree. Based on this, the assessment committee must decide whether, despite the lack of publications, the quality of the thesis is of a sufficiently high level and can be submitted for public defense.

#### *Department of Mathematics and Computer Science*

In computer science, it is expected that the PhD Programme will lead to original research equivalent to 3-5 publications in international peer-reviewed forums (conferences and journals). Usually students will submit their findings for publication during the course of the programme and thus by the time of completion of the PhD work have experience and understanding of the computer science publication process and research dissemination.

In statistics, it is expected that the PhD Programme will lead to original research equivalent to 2-5 publications in international peer-reviewed forums (journals). Usually students will submit their findings for publication during the course of the programme and thus by the time of completion of the PhD work have experience and understanding of the statistics publication process and research dissemination.

In mathematics, it is expected that the PhD Programme will lead to original research equivalent to 1-2 publications in international peer-reviewed forums (journals). Usually students will submit their findings for publication during the course of the programme and thus by the time of completion of the PhD work have experience and understanding of the mathematics publication process and research dissemination.

In science and mathematics education, it is expected that a PhD programme will lead to original research equivalent to 2-4 publications in international or Scandinavian hereunder Danish peer reviewed forums (journals). At least one of the publications shall have the PhD student as first author.

In cases where a manuscript has not yet been prepared, or (where applicable) the student does not appear as first author on any article or manuscript, detailed explanation must be set out for the reasons for this, as well as arguments that the work should still lead to the acquisition of a PhD degree. Based on this, the assessment committee must decide whether, despite the lack of publications, the quality of the thesis is of a sufficiently high level and can be submitted for public defense.

#### *Interdisciplinary PhD-programmes*

With regard to interdisciplinary PhD programmes the Dean sets up specific publications requirements based on a recommendation from the relevant PhD Study Board via the Faculty PhD Committee. The specific publication requirements must be set out latest when the Head of the PhD School accepts the PhD plan.

#### **5.1.4 Co-author Statements**

Articles included in the thesis may be prepared in collaboration with others on condition that the co-authors' proportionate share of the article is clearly stated. There must always be a written co-author statement from the first author and or senior author stating the proportionate share of work completed by the PhD student.

Co-author statement should be made on a special form and be signed by the co-author (first author/senior author) and the PhD student. It is recommended that co-author declarations are collected in an ongoing manner.

### **5.2 Submission of thesis**

#### **5.2.1 Warning two months before submission**

For purposes of complying with the deadlines for assessment and defense, the student will be alerted by the PhD School about submission of the thesis 2 months before the expected submission date.

#### **5.2.2 Principal Supervisor's statement**

The principal supervisor will prepare a statement on the overall PhD programme, including implementation of the individual components of the PhD Plan, which must accompany the thesis, see PhD order § 9. The principal supervisor will involve any co-supervisor(s) and other supervisors in forming the statement. This statement must be in English. The PhD School has a special form and this form can be downloaded from the PhD School's website.

#### **5.2.3 Submission of thesis**

The PhD thesis must be submitted to the PhD School Secretariat per e-mail as a pdf-file within the deadline for the PhD Programme. The principal supervisor's statement, a lending declaration and any co-author statements must be attached.

The PhD student's enrolment at the university will cease upon the submission of the PhD thesis. The PhD student is here from onwards referred to as the author.

### **5.3 Assessment and Defense**

#### **5.3.1 Assessment Committee**

The thesis is assessed by an expert committee consisting of three members. The members must be professors, full-time associate professors or hold equivalent professional qualifications in the relevant field. Two of the members must be external, at least one of whom must be from abroad, unless this is inappropriate from an academic standpoint. It is the individual assessor's responsibility to make sure, that there are no conflicting interests in connection with assessing the PhD thesis (no conflict of interest). The assessor must contact the PhD School and the others members and inform if they have been involved in any way.

For PhD students on the Industrial PhD Programme, at least one of its members must have business relevant research experience in the relevant field, see PhD order § 26, paragraph 2. SDU's representative functions as chair of the committee. The PhD student's supervisors cannot be members of the Assessment Committee, but the principal supervisor is attached to the Assessment Committee without voting rights.

The Faculty aims to have both genders represented in an Assessment Committee.

#### **5.3.2 Appointment of the Assessment Committee**

The Assessment Committee is appointed by the Dean upon recommendation from the Head of Department.

When the submission warning is sent, the PhD School asks the Department for a proposal for the composition of the Assessment Committee.

The Head of Department sends a proposal for the composition of the Assessment Committee to the PhD School. The Head of Department must first ensure that the proposed members of the Assessment Committee will agree to join the committee. CVs of the external examiners should be attached.

On this basis, the Faculty PhD Committee will give its recommendation for the composition of the committee to the Dean, see the University Act § 16b, paragraph. 7, no. 2.

The PhD School will inform the author of the committee's composition. The author may raise objections to the members within one week. If the author has not objected within one week, the PhD School sends the thesis to the Assessment Committee and the principal supervisor.

### **5.3.3 The work of the Assessment Committee**

The Assessment Committee's chair is invited to take the initiative in establishing the timeframe for the assessment work and agree on a provisional defense date immediately upon the appointment of the Assessment Committee. The defense date must be agreed with the Assessment Committee, the principal supervisor and the PhD student. The PhD School is notified of the date when it is agreed, but it is made public only when there is a positive recommendation from the Assessment Committee.

It is the duty of the chair of the Assessment Committee to include the principal supervisor. The chair should ensure that the principal supervisor is invited to the Assessment Committee's meetings, is advised on email correspondence and similar. The principal supervisor will participate in the work of the Assessment Committee in order, among other things, to answer questions about the underlying PhD Programme and the academic progression of the research project. The chair is responsible for the principal supervisor being informed of the preliminary assessment of the thesis. The principal supervisor must have the opportunity to comment on the preliminary assessment and to clarify any possible misunderstandings before it is sent to the PhD School.

### **5.3.4 Preliminary assessment of the PhD thesis**

Within 2 months after the submission of the thesis, the Assessment Committee should provide a preliminary recommendation that must be signed by all the members from the Assessment Committee. The preliminary recommendation will decide whether the thesis in its present form is suitable as a basis for awarding the PhD degree. It is the PhD School's responsibility that the Assessment Committee meets the deadline. The month of July is not included in the deadline for the preliminary recommendation.

The preliminary recommendation should serve as a basis of the expected final recommendation and will normally have a total length of 1 – 2 pages. The preliminary recommendation must address whether the thesis is of high quality, sufficiently self-conducted and of sufficiently high standard measured by international standards. The preliminary assessment should address any potential serious critical points made by the Assessment Committee. Also, the recommendation must note whether the thesis complies with the department's publication guidelines. The recommendation must be justified, and the decision must be either unanimous or by majority vote. The recommendation is sent to the department's PhD secretary who forwards the recommendation to the PhD School. After the Head of the PhD School's approval the PhD School Secretariat sends a copy of the recommendation to the author.

If the recommendation is positive the Assessment Committee together with the recommendation submits a proposal for the title of the lecture for the defense and recommends time and location for the defense to the department secretary. The PhD student should have the opportunity to explain central parts of the thesis during the defense, but the defense should not be limited to this.

If the preliminary assessment of the thesis is positive the defense can take place.



The Assessment Committee may at this stage, if it does not delay the defense, allow changes or additions to the thesis prior to or at the time of the defense, and shall fix a deadline for these changes.

If the thesis is recommended as not suitable the Assessment Committee will indicate in its recommendation whether the thesis can be resubmitted in revised form and if so within what time limit.

The author and the principal supervisor should be allowed two weeks to submit comments on the recommendation.

Based on the comments of the Assessment Committee, and possibly those of the author and principal supervisor, the Dean, in consultation with the Head of the PhD School, makes one of the following decisions:

1. That the defense cannot take place.
2. That the thesis may be resubmitted in revised form within a period of at least three months. If the PhD thesis is resubmitted it will be assessed by the previously appointed Assessment Committee, unless there are any special circumstances that apply.
3. That the thesis is to be re-assessed by a new Assessment Committee.

### **5.3.5 The Defense**

The thesis is defended at a public defense. The defense must take place no earlier than two weeks after the assessment has made its recommendation and within three months after submission of the thesis, see PhD order § 20 paragraph 2. The chair of the Assessment Committee agrees on a time for the defense with the committee members, the principal supervisor and author, and notifies the department's PhD secretary, see Section 5.3.3.

If special circumstances exist, the Head of the PhD School can decide to postpone the defense. A postponement of the defense requires an agreement between the author, chair of the Assessment Committee and Head of the PhD School, including an agreement on the time period of the postponement of the defense, see PhD order § 20 paragraph 3.

The defense is held at SDU. In exceptional circumstances, the Dean may allow the defense to take place elsewhere than SDU.

It is the duty of the chair of the Assessment Committee to ensure that a room of adequate size is reserved for the defense. This is arranged with the departmental PhD secretary. The Department is in charge of the practical tasks associated with the defense (reservation of a room for the defense, the sending of any invitations and reception, etc.).

The PhD School sends notification of the defense and possibly the lecture topic to the author and the members of the Assessment Committee and the department.

The Department has the responsibility of advertising the defense under Upcoming events on SDU's website. The PhD thesis is publicly available at the University Library of SDU in good time before the defense.

### **5.3.6 Procedures for the Defense of the PhD thesis**

At the defense the author should present his or her work and defend the PhD thesis to the members of the Assessment Committee. Prior to the defense, the Assessment Committee has notified the author about the lecture topic, see Section 5.3.4.

The defense may not exceed 3 hours, of which 30-45 minutes is devoted to the author's lecture.

The defense will be based on the following plan:

- 1) Introduction by the chairman of the Assessment Committee (moderator), with a presentation of the author as well as the members of the Assessment Committee. The moderator conducts the defense proceedings

- 2) A 30-45 minute presentation by the author
- 3) The moderator may allow questions from the audience with specific reference to the lecture given
- 4) The three members of the Assessment Committee comment on the thesis and put questions to the author. The moderator shall ensure that this opposition is limited to 1 hour and 30 minutes divided among the members according to internal agreement. The opposition must include specific questions on key topics in the thesis
- 5) The moderator concludes the defense proceedings. Before the conclusion, he or she may allow the author to make a brief comment.

It should be noted that it is not expected that the principal supervisor or the co-supervisors should make a contribution. The moderator may waive this rule upon the request of the Assessment Committee. In such case the speech of the supervisor(s) will be limited to 30 minutes.

## **5.4 Award of PhD degree**

After the defense, the Assessment Committee gives its final written recommendation. The final recommendation must be justified, and the decision must be either unanimous or by majority vote. The final recommendation must, be on the basis of the preliminary recommendation and the oral defense.

The final recommendation should generally concur with the preliminary assessment, but in addition evaluate the quality of the oral defense. The typical length of the evaluation would be around 1½ - 2½ pages. The final recommendation must be signed by all members of the Assessment Committee.

The final recommendation must be submitted via the department to the PhD School within two weeks after the public defense.

The PhD degree may be awarded if there is a positive recommendation from a unanimous Assessment Committee or from a majority of its members.

If the final recommendation is positive, it is send to the Academic Council. The Academic Council has two weeks to raise any objections. If there are no objections, the PhD School notifies the author that he or she has been awarded the PhD degree.

If the Assessment Committee's recommendation is negative, the Dean may decide that the thesis should be assessed by a new committee, if the author requests this within one week.

### **5.4.1 PhD certificate**

The PhD School prepares a PhD certificate in Danish and English. The certificate states in which field the PhD degree has been obtained, and the title of PhD thesis. The certificate is signed by the Dean. A summary in Danish and English of completed courses and the study abroad/environmental change will be attached to the certificate.

### **5.4.2 Documentation for completed parts of the PhD Programme**

For PhD students who cease their studies without obtaining a PhD degree, upon written request the PhD School will issue documentation in both Danish and English for those parts of the PhD Programme that were satisfactorily completed.

## 6 Other provisions

### 6.1 Submission of a PhD thesis without prior enrolment

The university may in exceptional cases decide that a PhD thesis may be reviewed without the author having completed a PhD Programme, if the university finds that the author has otherwise acquired skills that can be equated with a completed PhD training, see PhD order § 15 paragraph 2.

For the submission of a PhD thesis without prior enrolment, the Faculty of Science may levy a charge for expenses associated with the Assessment Committee's work and the organization of the PhD defense.

An application for the submission of a PhD thesis without prior enrolment must be made on a special form which must be accompanied by explanation of how the author has otherwise acquired skills that can be equated with the requirements that are made in the PhD order of the PhD Programme with documentation of the activities mentioned in the statement, and a sworn statement as to whether the thesis has previously been submitted for assessment.

The PhD thesis, application and sworn statement must be submitted to the PhD School Secretariat in 5 copies.

At the request of the Head of the PhD School, the respective PhD Study Committees can make an initial decision on whether the PhD thesis can be assessed, and whether the author has obtained qualifications equivalent to the requirements of the PhD Order for conducting the PhD Programme.

If the thesis can be assessed, the Head of Department propose the composition of the Assessment Committee to the Dean. The PhD School Secretariat will inform the author of the committee's composition. If the author has not objected to the members within one week, the PhD School Secretariat sends the thesis to the Assessment Committee. The same procedures are followed for the composition of the Assessment Committee and for the defense of the thesis as for the assessment of a thesis after the completion of a PhD Programme.

### 6.2 Double Degree – SDU as a host university

According to the PhD Order a foreign university may award a PhD degree to a PhD student enrolled at SDU, if the PhD student has completed a period of study at the foreign university as part of a mutually obliging collaboration agreement on PhD training, including the assessment, defence, awarding of degrees etc. This means that on successful completion of the PhD programme the PhD student may be awarded a degree from the foreign university and from SDU (double degree).

Before entering into a collaboration agreement:

- 1) the PhD School must make a positive assessment of:
  - a. the PhD student's academic qualifications
  - b. the PhD project
- 2) the Head of the Department at the Faculty of Science SDU where the supervisor from SDU is employed must agree on :
  - a. financing of the PhD project
  - b. possible intellectual property rights

The final decision to enter into a double PhD collaboration agreement is made by the Head of the Department where the SDU supervisor is employed.

For an example of a standard collaboration agreement please contact the PhD School Secretariat.

## **6.2.1 Conditions for entering into a collaboration agreement regarding a double PhD degree student when the main enrolment is at SDU**

### **6.2.1.1 The PhD School's academic requirements:**

- 1) The candidate must be admitted or accepted to be admitted as a PhD student at SDU with a main supervisor at SDU
- 2) The academic level of the foreign PhD education must as a minimum correspond to that of the Danish PhD education
- 3) The candidate must be enrolled at the foreign university as a double degree PhD student and must have a co-supervisor there
- 4) The supervisors must support the application for enrolment as a double degree student and have the responsibility to ensure that the universities enter into a collaboration agreement
- 5) The process for entering into a collaboration agreement should begin before the PhD student starts the PhD programme and no later than 6 months after the candidate has been admitted as a PhD student at SDU.

### **6.2.1.2 Financing and IPR:**

- 1) The financial conditions must be described in the collaboration agreement and they must include:
  - tuition fee, if any, to Faculty of Science (supervision, access to office and IT-facilities, course fees)
  - travel and living costs of the candidate, if any (accommodation, salary)
  - reimbursement, if any, of travel expenses for the Science co-supervisor during supervision visits and the collaborating university and for participation in the PhD defence.
  - fee and reimbursement of travel expenses, if any, for Science faculty member for participation in the assessment committee and in the PhD defence
- 2) If relevant, IPR must be agreed on in the collaboration agreement

## **6.2.2 Assessment according to the PhD Order**

The double degree programme can be concluded as the result of two defense – one at SDU in accordance with the rules and regulations at SDU and another defense at the foreign university in accordance with the rules and regulations there - or as the result of one mutual public defense.

If a mutual public defense is arranged, the defense must be according to the Danish PhD order, mandatory conditions for assessment and a mutual public defense as described below.

### **6.2.3 Mandatory conditions for a public defense according to the Danish PhD order:**

- Latest a week after the thesis has been submitted the supervisor from SDU submits an opinion on the completion of the PhD programme as a whole including the completion of the individual elements of the PhD programme to the PhD School Secretariat at SDU
- The Assessment Committee comprises of three or, if it's a mutual assessment, more members. One member should be employed at the Faculty of Science, SDU and two members must be researchers outside SDU hereof one should be from abroad. All members must be at associate professor or professor level within the relevant field
- The supervisors are not allowed to be members of the Assessment Committee but assist the Assessment Committee without voting rights.
- Within two months (can be longer when it's a mutual assessment) of the submission of the thesis the Assessment Committee must make a preliminary assessment. If the preliminary assessment is positive, then the defense can take place
- The public defense must take place at earliest two weeks and at most one month after the preliminary assessment (can be longer when it's a mutual assessment).
- After the defense the Assessment Committee makes its final assessment.

If the final assessment is positive the Academic Council at the Faculty of Science may award the PhD degree.

### 6.3 Double Degree - Foreign university as host university

According to the PhD Order § 15 section 3 a Danish university may accept a PhD thesis written by a PhD student from a foreign university, if the PhD student has completed a period of study at the Danish university as part of a mutually obliging collaboration agreement and the Danish university assesses that the PhD student has acquired qualifications comparable with those acquired under a Danish PhD Programme. This means that on successful completion of the PhD programme the PhD student may be awarded a degree from the foreign university and from SDU (double degree).

The collaboration agreement must agree on PhD training, including the assessment, defense, awarding of degrees etc. It is important that the agreement is mutually obliging and regards the PhD programme as a whole. Less formal cooperation between supervisors limited to supervision is not enough.

Before entering into a collaboration agreement:

- 1) the PhD School must make a positive assessment of:
  - a. the PhD student's academic qualifications
  - b. the foreign PhD Programme which must be comparable to a Danish PhD programme
  - c. the PhD project
- 2) the Head of the Department at the Faculty of Science, SDU where the supervisor is employed must agree on:
  - a. financing of the PhD project
  - b. possible intellectual property rights

The final decision to enter into a double PhD collaboration agreement is made by the Head of the Department where the SDU supervisor is employed.

#### 6.3.1 Application

Application for a double degree PhD programme with enrollment at a foreign university (host university) should be sent to the PhD School Secretariat. Please find the application form on the PhD School's website.

Upon receiving the application, the PhD School Secretariat sends the application to the local PhD Study Committee who makes a recommendation to the Head of the PhD School. The Head of the PhD School makes the final academic assessment.

#### 6.3.2 Conditions for entering into a collaboration agreement regarding a double PhD degree student when the main enrolment is at a foreign university

##### 6.3.2.1 The PhD School's academic requirements:

1. The candidate must be admitted as a PhD student at a foreign university
2. The academic level of the foreign PhD education must as a minimum correspond to that of the Danish PhD education
3. The candidate must be qualified for admission to a PhD programme at the Faculty of Science, SDU
4. The candidate must have a main supervisor at the foreign university and a supervisor at the Faculty of Science, SDU
5. The supervisors must support the application for enrolment as a double degree student and have the responsibility to ensure that the universities enter into a collaboration agreement

6. Application for enrolment as a double degree student at SDU (see the attached application form) must be submitted at most six months after the candidate has been admitted as a PhD student at the foreign university.
7. The PhD student's PhD programme must be comparable to a Danish PhD Programme. During a Danish PhD programme, the PhD student is required to:
  - a. Carry out independent research work under supervision (the PhD Project)
  - b. Complete PhD courses or similar study elements totalling approx. 30 ECTS points
  - c. Participate in active research environments outside SDU (this requirement is naturally fulfilled as a double degree student).
  - d. Gain experience with knowledge dissemination (for example teaching experience). SDU requires 300 hours of knowledge dissemination
  - e. Complete a PhD thesis on the basis of the PhD project
  - f. The candidate must complete a study visit of at least six months at the Faculty of Science, SDU
  - g. The PhD thesis must comply with the individual guidelines on publishing activities for obtaining a PhD degree, (see Guidelines for the PhD Programme<sup>2</sup> section 5.1.2)

#### **6.3.2.2 Financing and IPR:**

1. The candidate must be able to finance his/her living expenses while staying at the Faculty of Science, SDU so that the candidate is able to obtain a residence permit.
2. The financial conditions must be described in the collaboration agreement and they must include:
  - a. Tuition fee, if any, to Faculty of Science (supervision, access to office and IT-facilities, course fees)
  - b. Travel and living costs of the candidate, if any (accommodation, salary)
  - c. Reimbursement, if any, of travel expenses for the SDU co-supervisor during supervision visits and the collaborating university and for participation in the PhD defense
  - d. Fee and reimbursement of travel expenses, if any, for SDU Faculty member for participation in the Assessment Committee and in the PhD defense
3. If relevant, IPR must be agreed on in the collaboration agreement.

#### **6.3.3 Assessment according to the PhD Order**

The double degree programme can be concluded as the result of two defense – one at the host university in accordance with the rules and regulations of the host university and another defence at the Faculty of Science, SDU in accordance with the rules and regulations of the Faculty of Science, SDU and the PhD order - or as the result of one mutual public defense.

If a mutual public defense is arranged there are, according to the Danish PhD order, mandatory conditions for assessment and a mutual public defense as described below.

#### **6.3.4 Mandatory conditions for a public defense according to the Danish PhD order:**

- Latest a week after the thesis has been submitted the supervisor from SDU submits an opinion on the completion of the PhD programme as a whole including the completion of the individual elements of the PhD programme to the PhD School Secretariat at SDU
- The Assessment Committee comprises of three or, if it's a mutual assessment, more members. One member should be employed at the Faculty of Science, SDU and two members must be researchers outside SDU hereof one should be from abroad. All members must be at associate professor or professor level within the relevant field
- The supervisors from the host university and the co-supervisor from Faculty of Science, SDU are not allowed to be members of the Assessment Committee but assist the Assessment Committee without voting rights
- Within two months (can be longer when it's a mutual assessment) of the submission of the thesis the Assessment committee must make a preliminary assessment. If the preliminary assessment is positive, then the defense can take place

---

<sup>2</sup> Guidelines for the PhD Programme at the Faculty of Science, SDU

- The public defense must take place at earliest two weeks and at most one month after the preliminary assessment (can be longer when it's a mutual assessment).
- After the defense the Assessment Committee makes its final assessment.

If the final assessment is positive the Academic Council at the faculty of Science may award the PhD degree.

## 7 Communication

The aim is that all written communication between PhD students, supervisors, the Faculty PhD Committee and the PhD School Secretariat should be electronic.

All PhD students must register with a valid email address. All PhD students must be subscribed to the PhD distribution list at the department. The list is to be an effective communication channel for PhD students with regard to new rules, regulations and other relevant information.

The distribution list is administered by the department PhD secretary.

It is expected that members of the Faculty PhD Committee, the PhD Study Committees, the Heads of Departments and PhD supervisors subscribe to the distribution list.

It is the department PhD secretary's responsibility to unsubscribe from the distribution list when the PhD student's study is completed.

## 8 Guidelines for appeals and waivers

The university's decisions following these guidelines for the PhD Programme at the Faculty of Science may be referred to the Danish Agency for Higher Education, where the complaint concerns legal issues. The deadline for appeal is two weeks from the day the decision is communicated to the complainant. Those entitled to appeal are PhD students at the Faculty of Science, SDU and authors who have had their PhD thesis accepted for assessment according to PhD Order § 15 paragraph. 2.

Appeals must be submitted to the Dean, who will make a statement which the complainant should have the opportunity to comment on within one week. The university will then forward the complaint to the Danish Agency for Higher Education with the attached statement and any other comments.

The university may grant exemptions from the regulations in the guidelines for the PhD Programme at the Faculty of Science, which are set by the Faculty, where there are special circumstances. Application for an exemption should be sent to the Faculty PhD Committee and forwarded to the PhD School Secretariat.

Approved by the PhD Committee of the PhD School at the Faculty of Science, February 11, 2015.

Approved by the Dean of the Faculty of Science, March 10, 2015.

Approved by the Vice-Chancellor of the University of Southern Denmark, April 20, 2015.

Changes to the guidelines March 2016:

Section 3.2.5	PhD students may now choose supplementary courses up to 15 ECTS instead of 10 ECTS.
Section 3.2.5	The PhD Committee has decided that the project management course shall no longer be mandatory for students starting April 1, 2016 or later.
Section 5.2.3	Handing the thesis in per e-mail as a pdf-file
Section 5.2.4	Popular Scientific summary omitted
Section 6.2 and 6.3	Double PhD degrees new.

Approved by the PhD Committee of the PhD School at the Faculty of Science, January 20, 2016.

Approved by the Dean of the Faculty of Science, February 25, 2016.

Approved by the Vice-Chancellor of the University of Southern Denmark, March 9, 2016.

Latest changes to the guidelines May 2016:

Section 5.1.2 Publication requirements for science and mathematics education

Approved by the PhD Committee of the PhD School at the Faculty of Science, April 12, 2016.

Approved by the Dean of the Faculty of Science, May 27, 2016.

No approval needed by the Vice-Chancellor as they do not concern the University Act or the PhD order.

Latest changes to the guidelines March 2017:

Section 3.2.5 Composition of the PhD students course programme

Approved by the PhD Committee of the PhD School at the Faculty of Science 3 May 2017.

Approved by the Dean of the Faculty of Science, 4 September 2017.

No approval needed by the Vice-Chancellor as they do not concern the University Act or the PhD Order.

Latest changes to the guidelines October 2018:

Section 3.3 Stays at other research institutions

Approved by the Faculty PhD Committee at the Faculty of Science 12 September 2018.

Approved by the Dean of the Faculty of Science 12 October 2018.

No approval needed by the Vice-Chancellor as they do not concern the University Act or the PhD Order.

Latest changes to the guidelines August 2019:

Section 1.1.2 The Faculty PhD Committee

Approved by the Faculty PhD Committee at the Faculty of Science 21 June 2019.

Approved by the Dean of the Faculty of Science August 2019.

No approval needed by the Vice-Chancellor as they do not concern the University Act or the PhD Order.

Latest changes to the guidelines August 2019:

Section 1.1 The organization of the PhD School

Section 1.4 The PhD Study Committee

Section 3.2.2 Evaluation of PhD courses

Approved by the Faculty PhD Committee at the Faculty of Science 20 May 2020.

Approved by the Dean of the Faculty of Science 29 January 2021.

No approval needed by the Vice-Chancellor as they do not concern the University Act or PhD Order.