

# Rules and regulations for the PhD Programme

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PhD School  
Faculty of Science, SDU  
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**Table of Contents**

<b>1. Introduction .....</b>	<b>5</b>
1.1 General rules .....	5
<b>2. Objective and organization .....</b>	<b>5</b>
2.1 The organization of the PhD School .....	6
2.2 The Head of the PhD School .....	6
2.3 The Vice Head of the PhD School .....	6
2.4 The Faculty PhD Committee .....	7
2.5 Departmental PhD Study Boards .....	8
2.6 PhD School Secretariat .....	8
<b>3. Enrolment and employment .....</b>	<b>9</b>
3.1 Enrolment .....	9
3.2 Conditions for enrolment .....	9
3.3 Credit transfer .....	10
3.4 Part-time enrolment .....	10
3.5 Enrolment as Industrial PhD .....	10
3.6 Registration and settling of work hours .....	11
3.8 Secondary employment .....	13
<b>4. Leave of absence and termination of employment .....</b>	<b>13</b>
4.1 Termination of enrolment .....	13
4.2 Parental leave .....	13
4.3 Extension in relation to illness .....	13
4.4 Other types of leave of absence .....	14
4.5 Exceeding the period of enrolment .....	14
<b>5. Study Elements .....</b>	<b>14</b>
6. Supervision .....	15
6.1 Appointment of main supervisor and possible co-supervisor(s) .....	15
6.2 Main Supervisor .....	16
6.3 Co-supervisor(s) .....	16
6.4 The Supervisor's obligations .....	17
6.5 The PhD student's obligations in relation to supervision .....	18
6.6 Change of supervisor .....	19

7. Parts of the course.....	19
7.1 Transfer of course credits.....	19
8. Evaluation of PhD courses .....	20
8.1 Specifically, regarding the 5+3 programme.....	20
8.2 Specifically, regarding the 4+4 programme.....	20
8.3 Composition of the course programme .....	21
8.5 Approval of the academic programme and courses .....	22
9. Environmental change.....	24
10. Knowledge Dissemination.....	25
10.1 Rules for calculating knowledge dissemination hours .....	26
<b>11. Milestones .....</b>	<b>27</b>
11.1 The PhD plan .....	28
11.2 Regular assessments.....	28
11.3 Planned assessments .....	29
11.4 Mandatory conversation with the Vice Head of PhD School .....	30
11.6 Assessment of the evaluation .....	31
11.7 Re-establishment Period .....	32
11.8 The Qualifying Examination/Master's examination .....	33
<b>12. Completion of the Programme .....</b>	<b>34</b>
12.1 PhD thesis.....	34
12.2 Structure and requirements.....	34
12.3 The use of the status report in the qualifying exam.....	35
12.4 Correction in the PhD thesis after the submission .....	36
12.5 Co-author Statements .....	36
13. Submission of thesis .....	36
13.1 Two months before submission .....	36
13.2 Main supervisor's statement .....	36
13.3 Submission of thesis .....	36
14. Assessment.....	37
14.1 Assessment Committee .....	37
14.2 Appointment of the Assessment Committee .....	37
14.3 The work of the Assessment Committee .....	38
14.4 Preliminary assessment of the PhD thesis.....	38

14.5 The Defense.....	39
14.6 Procedures for the Defense of the PhD thesis .....	40
15. Award of PhD degree.....	40
15.1 PhD diploma .....	41
15.2 Documentation for completed parts of the PhD Programme.....	41
<b>16. Submission without prior enrolment .....</b>	<b>41</b>
<b>17. Communication .....</b>	<b>42</b>
<b>18. Guidelines for appeals and waivers.....</b>	<b>42</b>

## 1. Introduction

### 1.1 General rules

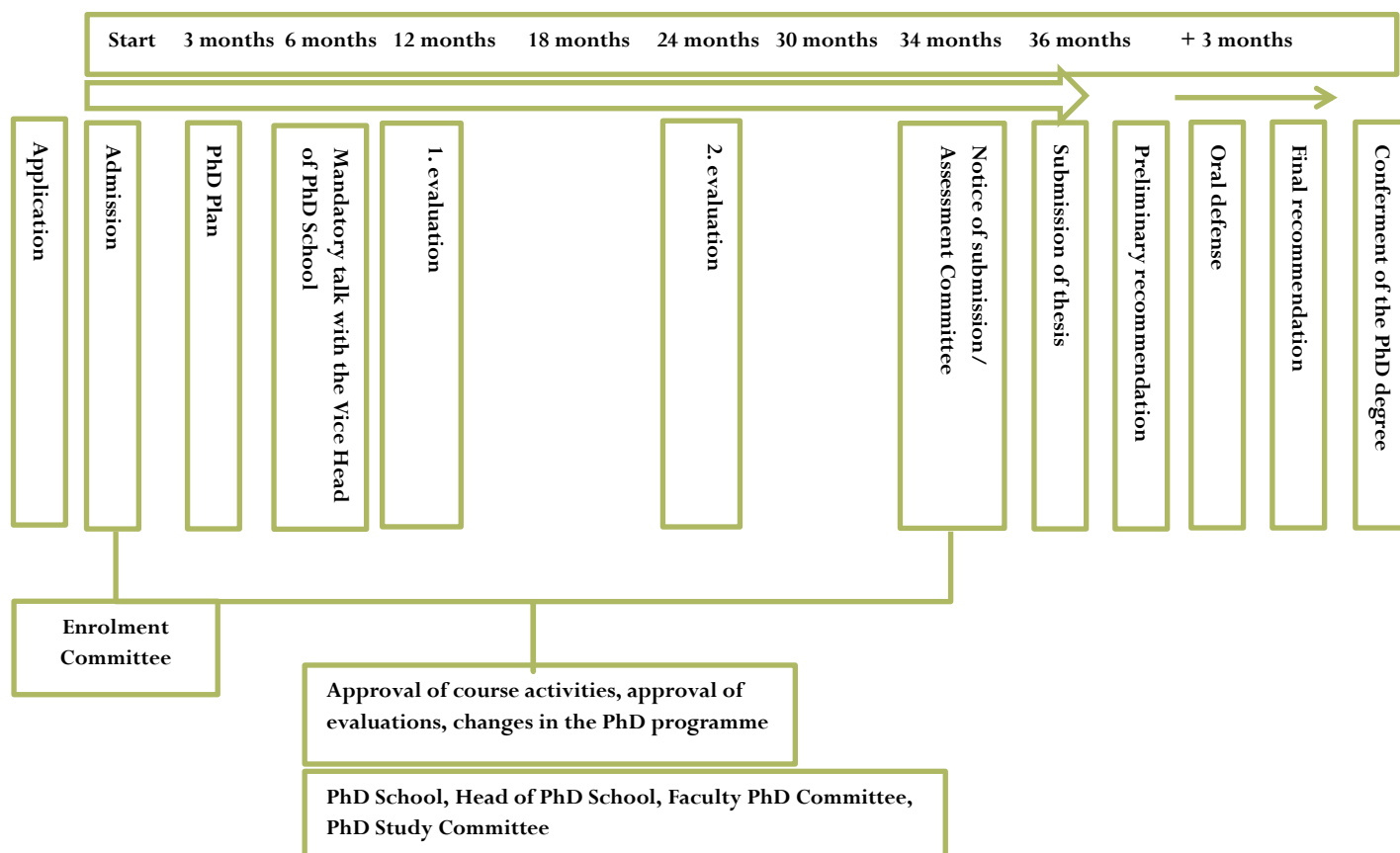
The PhD programme is organized based on:

- University Act Executive order no. 778 of / August 2019 (*please note that only the Danish version Universitetsloven is legally binding*)
- Ministerial 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 Ph.d.-bekendtgørelsen is legally binding*)
- Articles of association for SDU [http://www.sdu.dk/om\\_sdu/organisationen/vedtaegter](http://www.sdu.dk/om_sdu/organisationen/vedtaegter)

This documentation constitutes the internal guidelines for the PhD program at the Faculty of Science.

The guidelines are an elaboration of the above-mentioned provisions.

Overview of the PhD programme for a 5+3 PhD student:



## 2. 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
- research results that are publishable in internationally acclaimed scientific journals
- experience with teaching and dissemination
- a broad scientific understanding through participation in tailored PhD-courses

## 2.1 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 at which their main supervisor is employed. PhD students are also affiliated with a research training programme throughout the PhD programme.

Read more about research training programmes at the Faculty of Science:

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

## 2.2 The Head of the PhD School

The Head of the PhD School is appointed by the Dean of the Faculty of Science 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. Other responsibilities include

- appointing a main supervisor according to the recommendation of the Head of the Department
- approving enrolment of PhD students on the recommendation of the relevant PhD Study Committee representing the scientific staff
- approving PhD plans and evaluations
- The Head of the PhD School is also available to students and supervisors for guidance as well as confidential meetings

## 2.3 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
- Provides coaching for the PhD students

#### 2.4 The Faculty PhD Committee

The Faculty PhD Committee consists of four elected representatives of the scientific staff and four elected representatives of the PhD students. The role of the committee:

- Recommends its chair from among its scientific staff and its vice chair from among the committee's PhD students to the Dean for appointment
- Approves PhD courses according to recommendation of the relevant department PhD study board
- Approves applications for credit transfer and exemptions
- 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

## 2.5 Departmental PhD Study Boards

Each of the four departments at the Faculty of Science has its own PhD study board:

- [The PhD Study Board of the Department of Biology](#)
- [The PhD Study Board of the Department of Physics, Chemistry and Pharmacy](#)
- [The PhD Study Board of the Department of Mathematics and Computer Science](#)
- [The PhD Study Board of the Department of Biochemistry and Molecular Biology](#)

The departmental PhD study boards:

- Comprise of 1-5 representatives of the academic staff from the department in question
- Members are elected by the Faculty PhD Committee on the recommendation of the Head of the individual department
- Act as representatives for the scientific staff in the PhD Committee in evaluating candidates for admittance. Supervisor can in this context advise the PhD study board
- May be consulted on important academic issues, including individual cases, by the Faculty PhD Committee and the Head of the PhD School

It is possible to involve PhD students in the departmental PhD study board's work when it does not concern individual personal cases.

## 2.6 PhD School Secretariat

The administrative support and services of the PhD School are 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
- Quality checks that the elements of the PhD Programme for example PhD courses, knowledge dissemination and environmental change are met
- Completion of PhD certificates

## 2.7 Department PhD secretariat

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

- Announcement of vacant PhD-positions and administration of the employment process
- Advise and help the PhD-students with the enrolment application
- Registers maternity/paternity leave and illness



- Handling the process of long-term sickness with HR and the municipality
- Plan the annual MUS for PhD students
- Plan and advice the PhD students about vacation, leave of absence etc.
- Handling of reduced working hours and prolongations of the employment
- Plan the teaching for the PhD students
- Administration of the PhD working hours (840 hours)
- Advice the PhDs about application processes concerning courses, environmental change, knowledge dissemination etc.
- Introductory meeting with new PhD students
- Department introduction of new PhD student
- 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, planning of the defense including accommodation and transportation for the committee members, reservation of room and announcement of the defense
- Plan and run Department PhD meetings every 2nd month with relevant topics concerning the PhD program
- Introduce to, advice about and help with local PhD account

### 3. Enrolment and employment

#### 3.1 Enrolment

##### 3.2 Conditions for enrolment

To gain admission to the PhD Program, you need to have a relevant master's degree. The PhD program involves 180 ECTS, which is equivalent to three years of full-time study from the moment you start until you submit your thesis. However, it's possible to begin the PhD Program while still working on your master's degree. In the Faculty of Science, you can start the PhD Program after completing 60 ECTS of your master's program (typically in a 4+4 setup).

The assessment of your application to become a PhD student is based on your previous academic achievements, including your grades, the time it took to complete your previous degrees, and any research experience you have, like publications or other indicators of your research potential. Recommendations or statements from your supervisors and teachers will also be taken into consideration. In some cases, the faculty may also consider the distribution of PhD students across different research fields.

If you have a different educational background but possess the necessary academic qualifications, you may still be admitted. However, you may need to fulfill specific academic requirements before or during the program.

It is important to note that admission to the PhD Program requires securing a scholarship or other funding arrangements.

### 3.3 Credit transfer

When you apply for admission, you have the option to request a credit transfer for research related to your project, professional work relevant to your field that you have undertaken after completing your master's degree, and any PhD-level courses you have completed before becoming a PhD student, provided they were not part of your master's program. You can transfer courses totaling up to 10 ECTS without affecting the length of your enrollment.

These credit transfer requests are reviewed by the PhD study board specific to each department.

### 3.4 Part-time enrolment

Typically, the PhD Program is designed to be a full-time commitment, but in certain exceptional situations, it can be arranged as a part-time program. To request part-time enrollment, you must submit a well-founded personal application to the Dean through the PhD School, supported by a recommendation from the Head of Department. The specific terms of the part-time arrangement will be worked out on an individual basis at the time of enrollment.

Part-time programs are generally limited to a maximum duration of six years. The specific conditions and terms for part-time programs will be determined through an agreement between the PhD student, any external partners involved (if applicable), and the Faculty of Science.

### 3.5 Enrolment as Industrial PhD

An Industrial PhD project is a PhD program with a strong focus on industry relevance. It's a collaborative effort involving a private or public organization, the PhD student, and a university. In addition to the academic connection, which can be at the university or within the organization itself, there may also be an affiliation with a public knowledge institution, often referred to as the "Third Party."

In the case of an Industrial PhD, the student is employed by the organization, and they are concurrently admitted to the university for their PhD studies.

For more detailed information about the Industrial PhD Program, you can visit this website:

<https://innovationsfonden.dk/da/programmer>.

To apply for an Industrial PhD scholarship, you should submit your application to the Danish Agency for Science, Technology and Innovation using a specific application form available at this link: <https://innovationsfonden.dk/en/programmes/industrial-researcher>. It is recommended that you also apply for enrollment as a PhD student with external funding (without employment at SDU) alongside your application to the Danish Agency for Science, Technology and Innovation.

Approval for an Industrial PhD project is required from both the Danish Agency for Science, Technology and Innovation and the Faculty of Science before enrollment can occur and the project can begin.

To prepare your application for the Danish Agency for Science, Technology and Innovation, you should collaborate with a potential academic supervisor from the university. This supervisor must obtain consent from the Head of Department to act as a supervisor and confirm that the project aligns with the department's research strategy. You also need a recommendation from the Chairman of the local PhD Study Committee and the Head of the PhD School indicating your eligibility for enrollment.

Contact information for relevant departments and potential supervisors can be obtained from the PhD School.

Once the Industrial PhD project is approved by the Danish Agency for Science, Technology and Innovation, you should submit a copy of the application, along with written approval from the agency, to the PhD School Secretariat for final approval of your enrollment. When the PhD School Secretariat has received confirmation from the agency and the Head of the PhD School has approved your enrollment based on the recommendation from the PhD study board, you will receive a letter of enrollment as an Industrial PhD student.

Please note that the project cannot begin until the enrollment process is completed. Enrollment can take place on the 1st or 15th of the month, and retroactive enrollment is not possible.

### 3.6 Registration and settling of work hours

The required working hours, as outlined in the [Protocol](#), are typically carried out at the department where the PhD student is employed. These working hours are determined through agreements between the Head of Department, Supervisor, and the PhD student. Whenever possible, the tasks assigned should be relevant to the research project, align with the PhD student's research interests and career goals. Furthermore, the timing and allocation of these hours should be designed to accommodate the PhD plan and should not impede the student's progress in conducting research, attending courses, or pursuing study periods abroad.

The Head of Department is responsible for maintaining a continuous record of the tasks performed by the PhD student, providing a statement of the hours worked, and regularly communicating with the PhD student and main supervisor regarding scheduled and planned required work. This communication may occur during annual employee development meetings, long-term planning discussions, and when allocating work hours.

It's important to note that the calculation of work hours outlined here applies to students in the 4+4 scheme only after they have successfully passed the qualifying examination.

*Environmental change:* 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 the environmental change has 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.

### 3.7 Teaching, knowledge dissemination and other required tasks carried out on behalf of the Department:

The PhD student is responsible for completing tasks related to teaching, knowledge dissemination, and other necessary work at the department, up to a maximum of 840 hours (for those in the 4+4 program, the maximum is 560 hours). These required tasks may, in some cases and with prior agreement from the Head of Department, be carried out within the research group, focusing on work that is relevant to research but not directly linked to the PhD student's own research project. This work is compensated separately from the regular salary.

The teaching workload of the PhD student is calculated with a minimum preparation factor of 3.5, meaning that one hour of teaching is equivalent to 3.5 working hours. If a PhD student teaches a subject within a study element that has a higher default factor according to the Teaching Load Agreement of the Faculty, this higher factor is applied.

It is important to note that the PhD student should not be assigned tasks that are typically handled by administrative employees.

In situations where there is a disagreement between the Head of Department, the PhD student, and/or the main supervisor regarding the nature, extent, or timing of required work, the Dean, in consultation

with the Head of the PhD School, has the authority to make the final decision regarding these required tasks.

### 3.8 Secondary employment

PhD students may undertake secondary employment as long as it does not affect their employment at SDU or compromise the credibility of the university's research, education, and dissemination activities. In cases of doubt, the PhD student should discuss the possibility of taking on secondary employment with the head of the department.

## 4. Leave of absence and termination of employment

### 4.1 Termination of enrolment

If a PhD student decides to withdraw from their enrollment in the PhD Program, they should formally communicate this decision in writing to both the department they are affiliated with and the PhD School.

### 4.2 Parental leave

PhD students who are employed under the 5+3 program and those in the 4+4 program who have successfully passed their qualifying examination are entitled to parental leave in accordance with the prevailing parental leave regulations.

However, PhD students in the 4+4 program who have not yet passed their qualifying exam have maternity leave rights and obligations as per Ministerial Order no. 653 of July 31, 1999, governing the allocation of SU-stipends to PhD students.

For PhD students employed by the Faculty of Science, it is important to inform the department, the personnel office, and the PhD School at least three months before the expected birth to arrange for maternity leave. You can find information about the current rules for childbirth and adoption on the personnel office website: <https://sdunet.dk/en/servicesider/hr/ansaettelsesforhold/barsel>.

If you are an enrolled PhD student but not employed by SDU, you should notify the PhD School and the department in writing via email if you need to take parental leave.

### 4.3 Extension in relation to illness

If a PhD student has been absent from their studies due to illness for a period of at least one month and can provide documentation in the form of a doctor's statement, they have the option to apply for an extension. This application should be sent to the Dean through the Head of the PhD School. If the enrollment period is extended, the department may also request an extension for the student's employment.

#### 4.4 Other types of leave of absence

In special circumstances, a leave of absence from the PhD Program can be considered upon submission of a well-supported application to the Head of the PhD School. The application should be accompanied by recommendations from the main supervisor and the Head of Department. The final decision on whether to grant the leave is made by the Dean, following consultation with the Head of the PhD School. The decision is communicated to the PhD student in writing through the PhD School. Usually, this type of leave is without salary.

#### 4.5 Exceeding the period of enrolment

In situations where the PhD project encounters significant challenges that prevent the original thesis submission deadline from being met, the Dean may authorize an extension of the deadline. In cases where you foresee that the deadline cannot be met, an application for an extension can be submitted approximately *four months* before the original submission deadline.

The processing of this application requires a minimum of two weeks from the time it is received by the PhD School.

The application for an extension must be supported by recommendations from the supervisor, the department PhD study board, and the Head of the PhD School. The final decision is made by the Dean.

The application should include a description of the issues faced and a schedule for completing the project. It's important to note that deadline extensions are granted only in exceptional cases and when there are unusual circumstances. Additionally, salary payments will not be extended beyond the stipulated employment period, and extensions exceeding three months are generally not expected.

Two months prior to the anticipated thesis submission date, the PhD School will provide the PhD student and the main supervisor with information on how and when the thesis should be submitted. If the thesis is not submitted by the specified submission date and no extension has been requested and granted, the student will be notified that their enrollment will be terminated.

### 5. Study Elements

The PhD Programme contain five elements:

- A research project, which is completed with a thesis and a public defense
- The completion of a thesis based on the research project
- Participation in coursework at PhD level (approx. 30 ECTS)
- Participation in active research environments outside the university of Southern Denmark (Environmental change)
- Teaching activity or other knowledge dissemination activities

#### 5.1 Research project

The research project of the PhD student is the main element of the training programme and is carried out under supervision by one or more supervisors. The project is concluded with the delivery of a thesis and a public defense of the thesis. A PhD thesis must as a main rule contain articles of the highest academic level, which can be published internationally. Respecting, of course, the publishing traditions of the research area.

### 5.2 PhD courses

All PhD students must complete coursework equivalent to around 30 ECTS. The courses aim at giving the student academic width as well as forming the basis of his/her project. The academic width aims at improving the job opportunities of the PhD student after being awarded of the degree.

### 5.3 Knowledge dissemination

According to the PhD Order, the PhD student should gain experience in teaching or other forms of knowledge dissemination.

### 5.4 Environmental change

The PhD Order states that the PhD student should participate in active research environments, including stays at other, mainly foreign, research institutions.

## 6. Supervision

### 6.1 Appointment of main supervisor and possible co-supervisor(s)

The process of appointing supervisors for PhD students involves several steps and considerations.

Appointment of main Supervisor:

The Head of the PhD School appoints a main supervisor based on the recommendation of the Head of the Department. The Head of Department, with the approval of the main supervisor, should assess their capacity, both in terms of professional and supervisory skills and available time, to effectively supervise the PhD student. This is important to ensure that the student receives adequate support and guidance.

Co-supervisors:

In addition to the main supervisor, one or more co-supervisors can also be appointed. The recommendation for appointing co-supervisors may come from the department PhD study board, the Head of Department, or may be initiated by the Head of the PhD School. Co-supervisors provide additional expertise and support to the PhD student.

Supervision for Industrial PhD Students:

For PhD students enrolled in the Industrial PhD Program, there must be a supervisor from the Faculty of Science and a co-supervisor affiliated with the company where the PhD student is employed. The co-

supervisor from the industry should have relevant research experience in the specific discipline of the project.

The appointment of supervisors and co-supervisors is a critical aspect of the PhD program to ensure that students receive the necessary guidance, expertise, and support for their research projects.

## 6.2 Main Supervisor

The main supervisor in the PhD program must meet specific criteria:

*Recognized researcher:* The main supervisor should be an established and recognized researcher in the relevant field. This typically means that they have a strong track record of research contributions in their area of expertise.

*Qualifications:* The main supervisor should have qualifications equivalent to the level of a professor or associate professor, indicating a high level of expertise and knowledge in the field. Assistant Professor with a positive assessment of their qualifications as associate professors may serve as main supervisors. In such cases, a co-supervisor, who must be an associate professor or professor, is required to ensure the PhD student receives the best possible support throughout the PhD programme.

*Employment:* They should be employed by SDU (University of Southern Denmark) and be affiliated with the PhD School. This affiliation ensures that they are part of the academic environment that supports and guides the PhD student.

*Supervision qualifications:* The main supervisor should possess relevant supervision qualifications. This often includes having completed specific training, such as SDU's PhD supervisor course and the internal PhD supervisor course offered by their faculty. These courses equip them with the skills and knowledge required to effectively supervise PhD students.

These criteria are in place to ensure that the main supervisor is well-qualified to guide and support the PhD student throughout their research journey.

## 6.3 Co-supervisor(s)

Co-supervisors must have research qualifications in a relevant discipline. In appointing the co-supervisor, the Head of Department must consider 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 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.

#### 6.4 The Supervisor's obligations

The main supervisor has several key responsibilities:

*Overall responsibility:* The main supervisor is responsible for the entire PhD program, ensuring that all formalities and regulations outlined in the PhD Order, as well as local faculty and departmental regulations, are adhered to.

*PhD Plan:* The main supervisor must ensure that the PhD plan can be approved by the Head of the PhD School within three months of enrollment. It is recommended that the PhD plan be completed and submitted for approval within two months of enrollment.

*Project Supervision:* The main supervisor is responsible for project supervision, including the following aspects:

- Ensuring that supervision and advice are relevant and adequate
- Scheduling regular meetings (typically at least once a week, unless there are specific reasons otherwise)
- Involving other supervisors as needed
- Ensuring that the PhD project is feasible within the allocated time
- Assessing whether the project can lead to new results of a high international standard suitable for a PhD thesis.
- Confirming that there is enough time for the PhD student to realistically submit the thesis on time.

*Evaluations:* Before each regular evaluation of the PhD program, the main supervisor, along with any co-supervisors, should evaluate the student's progress in following the PhD plan satisfactorily. Continuation may be recommended unconditionally or, if necessary, the student may be given three months to address any issues. The supervisor should also assess whether the PhD plan should be modified if circumstances require.

*Environmental change:* The main supervisor is responsible for planning an environmental change in consultation with the student, typically within two years before the end of the study.

*Other responsibilities:* The main supervisor should maintain regular contact with the PhD student, serve as a resource for the research project, offer guidance on relevant courses and conferences, facilitate connections with research centers, provide advice on managing work commitments and knowledge dissemination, review and comment on the PhD project, prepare the final statement when the PhD thesis is submitted, and participate in the assessment process and the PhD defense.

A successful PhD program hinges on a strong working relationship between the student and the main supervisor. Mutual expectations and demands should be outlined from the beginning, including the form and extent of supervision, and documented in the PhD plan.

Co-supervisors support the main supervisor and their tasks are determined upon appointment. They typically involve academic discussions related to specific aspects of the research project.

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

The PhD student is responsible for several important tasks in their academic journey, including:

*Contacting the main supervisor:* It is crucial to initiate contact with the main supervisor in a timely manner during the preparation of the PhD plan and regular evaluations.

*Course descriptions and certificates:* Providing course descriptions for courses that are not pre-approved to the department PhD study board for approval and sending certificates for courses passed to the PhD School.

*Project updates:* Keeping the supervisor(s) informed about the progress of the research project.

*Supervision meetings:* Arranging and coordinating supervision meetings, setting meeting agendas, adhering to deadlines, and submitting texts for feedback.

*Communication about project issues:* Promptly contacting the main supervisor and, if necessary, the Head of Department, in case of project-related problems that cannot be resolved within a reasonable timeframe.

*Collaborative planning:* Collaborating with the supervisor(s) to plan various aspects of the PhD program, including the research project, a timeline, courses, environmental changes, knowledge dissemination, participation in international meetings, thesis writing, and agreements regarding intellectual property rights.

*Entitlement to supervision:* The PhD student has the right to a reasonable amount of relevant supervision and advice from supervisors, with regular meetings, typically at least once a week, unless there are valid reasons for a different arrangement.

*PhD plan:* The PhD plan is a dynamic document that should be updated if needed. This includes updates in response to significant changes in the project, modifications to the time spent at other research environments or institutions, leave of absence, and other relevant developments.

These responsibilities ensure that the PhD student remains actively engaged in their research and receives the necessary support and guidance from their supervisors. The PhD plan, in particular, serves as a flexible roadmap for their academic journey, allowing for adjustments as required.

## 6.6 Change of supervisor

The Head of the PhD School has the authority to make changes to the supervisory team of a PhD student. This can include the replacement of the main supervisor or co-supervisors, as well as the appointment of additional co-supervisors.

If a PhD student requests a change in their supervisory team, they must provide evidence in form of and email that the following parties have accepted the change:

- The PhD student themselves
- The Head of Department
- The previous supervisor (if there is a change in the main supervisor)
- The new main supervisor (if there is a change in the main supervisor)

This process ensures that all relevant parties are in agreement with the changes to the supervisory team, maintaining a smooth transition and continuity in the PhD student's research and guidance.

## 7. Parts of the course

### 7.1 Transfer of course credits

PhD courses taken before the student's enrollment in the program can potentially be transferred to their PhD studies, provided they meet certain conditions:

*Relevance to the PhD:* The courses must be relevant to the specific PhD program of the student and must be accepted as such.

*Not part of another degree:* The courses should not have been used as part of another degree the student has completed.

There are specific credit transfer limits for different program types:

- For the 5+3 program, the maximum credit transfer is for courses that exceed 300 ECTS credits.
- For the 4+4 program, the maximum credit transfer is for courses that exceed 240 ECTS credits.

In the case of courses taken from foreign programs, the student must demonstrate that the requested course credits are beyond the requirement for the degree they obtained. This can be done, for example, by providing a certificate from the foreign university showing that the degree could have been achieved without taking these specific courses.

These conditions ensure that any credit transfer of courses aligns with the student's PhD program and does not overlap with previous degrees.

## 8. Evaluation of PhD courses

In a PhD program, all PhD courses must go through an evaluation process and have documented evidence of successful completion. Here are some key points related to PhD courses:

*Completion of PhD courses:* PhD students are typically required to complete a set of PhD courses totaling approximately 30 ECTS credits.

*Preapproval:* PhD courses must be preapproved by the department PhD study board. However, if a course is already preapproved, it does not need to go through this approval process. The PhD School's website contains a list of preapproved courses.

*Assessment process:* When PhD students participate in courses, they cannot be assessed solely by their supervisor. In such cases, the assessment process should involve the assistance of an internal or external examiner. This ensures a fair and impartial evaluation of the student's performance in the course.

These procedures help ensure the quality and integrity of the PhD program and the courses within it. Successful completion of PhD courses is a crucial part of the student's academic journey.

### 8.1 Specifically, regarding the 5+3 programme

In the year leading up to the submission of the PhD thesis, it is typically expected that the PhD student will have completed approximately 30 ECTS credits of PhD courses. However, there is a specific requirement for students in the 5+3 program. They should have passed at least 15 ECTS credits after the first year of their program. This helps ensure that the student has acquired the necessary knowledge and skills to successfully complete their PhD and contribute to their field of research.

### 8.2 Specifically, regarding the 4+4 programme

For students in the 4+4 program, the course requirements are as follows:

- At least 10 ECTS credits of PhD courses should be passed within the first year
- By the time of the qualifying exam, at least 22.5 ECTS credits must be passed

In the year leading up to the submission of the PhD thesis, it is expected that the PhD student will have completed approximately 30 ECTS credits of PhD courses.

These requirements ensure that students in the 4+4 program make steady progress in their course work and are well-prepared for the research and thesis-writing phases of their PhD program.

### 8.3 Composition of the course programme

PhD courses are an essential part of a PhD program, designed to provide students with academic breadth and enhance their job prospects after earning their PhD. Research courses in a PhD program should generally be at a higher academic level than a qualifying Master's degree. However, Master's level courses can be included in a PhD student's plan if they align with the overall research objectives.

PhD students are required to complete a mandatory course package in their first year, which consists of the following:

- An introductory course with the PhD School (0.5 ECTS)
- Responsible Conduct of Research (2 ECTS)

### 8.4 Other courses

PhD courses can be sourced from various avenues, including:

- Courses offered by the Faculty of Science and SDU
- Courses from research education programs affiliated with the faculty, whether in Danish or foreign institutions, subject to approval by the PhD Study Committee
- The Danish Agency for Science, Technology, and Innovation's Business Course for Industrial PhD students
- Other relevant courses, such as IT or statistical methods
- Summer / Winter Schools that involve active participation
- Participation in conference which may count as a course activity, with an opportunity for knowledge dissemination through presentations or posters. The conference must have a minimum duration of 1 full day and maximum 5 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 5 ECTS credits. 1 ECTS per day and up to twice participation and in total 7 ECTS
- SDU's course in communication for PhD students

- Individual study activities (ISA) under the guidance of a lecturer, with a maximum of 10 ECTS credits. These activities should include some form of evaluation or examination.
- Active participation in relevant seminars at the university, with each seminar providing 1.5 ECTS credits. A presentation is typically required for each seminar.

The courses are tailored to the student's project and research interests.

*ECTS credits:* ECTS credits are awarded based on the specific course's contact hours. One ECTS credit is typically awarded for every 10 contact hours, with courses rounded to 0.5 ECTS credits. Courses cannot exceed 15 ECTS credits to maintain academic diversity.

*Supplementary courses:* Up to approximately 15 ECTS credits of supplementary courses can be approved as research courses. These are typically courses outside the student's discipline and may include up to 5 ECTS credits of relevant Bachelor level courses, provided there are strong academic reasons for choosing them.

*Approval:* Usually, the department PhD study board approves the recommended ECTS credits for each course. If the course description does not specify ECTS credits, the department PhD study board assesses and determines the appropriate ECTS credits.

*Course announcements:* PhD courses offered by the faculty are announced on the University's website.

The goal is to offer a comprehensive range of courses that support the PhD student's research and academic development, ensuring a well-rounded and enriching educational experience.

### 8.5 Approval of the academic programme and courses

The individual PhD student's course program is an integral part of the PhD plan. While preapproved courses are available, the specific course program for each PhD student may not be fully detailed in advance. This is because research courses are often offered on relatively short notice. Therefore, it is the responsibility of the main supervisor and the PhD student to regularly identify and select relevant courses to fulfill the requirements of the PhD plan.

Departments provide a range of preapproved courses for all PhD students at the Faculty of Science of SDU. These courses have been preapproved by the Faculty PhD Committee and can be found on the PhD School's website.

If a department wishes to offer new courses that have not been preapproved, they must seek approval in advance from the Faculty PhD Committee. The application for approval should include the following information about the course:

- Course title

- Extent (number of hours and ECTS credits)
- Aims
- Description
- Evaluation method
- Teaching method
- Responsible lecturer(s)
- Literature
- A statement from the Department's PhD study board regarding the course's suitability as a PhD course

It's important to note that seeking approval is not necessary for preapproved research courses offered by one's own department. However, the PhD School must be notified when the course is successfully completed to ensure proper documentation of the student's progress. This flexibility allows for a dynamic and tailored approach to course selection within the PhD program.

### 8.6 Approval of individual courses

PhD students are required to seek approval for various activities such as summer schools, external courses, and self-study initiatives before enrolling in and completing these activities. Final approval is contingent on successfully completing the course or activity. Here is the process for seeking and obtaining approval:

*Course application:* Prior to enrolling in a course or activity, the PhD student and the main supervisor must complete a course application form. This form should specify the provider of the activity and propose the number of ECTS credits to be awarded.

*Documentation:* The application should include a course description or relevant documentation demonstrating that the activity has been completed or passed. It should also indicate the duration of the activity.

*Approval by the department PhD study board:* The course application is submitted to the department PhD study board for approval. The board will decide on the number of ECTS credits to be awarded for the activity based on established principles and guidelines.

The Faculty PhD committee has predefined rates for different types of activities:

- 1 week of activity is awarded 4.5 ECTS credits
- 2 weeks receive 7.5 ECTS credits
- 3 weeks are granted 10.5 ECTS credits
- 4 weeks are assigned 13.5 ECTS credits

- 5 weeks can earn 15 ECTS credits
- Summer schools are typically awarded 4.5 ECTS credits for the first week and 3 ECTS credits for each subsequent week, up to a maximum of 15 ECTS credits. If the duration is less than 40 contact hours, the credits are adjusted proportionately
- Conference participation requires a minimum duration of 1 full day and maximum 5 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 5 ECTS credits. 1 ECTS per day and up to twice participation and in total 7 ECTS
- Danish language course. Foreign students can receive 3 ECTS credits for a Danish language course, either inside or outside SDU
- Research education programs. For courses offered by research education programs in which the faculty participates, the ECTS credits set by the research program should be used
- Specific requirements. Some subject areas may have specific requirements for the composition of the course program, including mandatory courses.

It's important for PhD students to follow these procedures and guidelines when participating in activities and courses, ensuring that they are properly documented and approved as part of their PhD program.

## 9. Environmental change

Under § 7, subsection 2 of the PhD Order, PhD students 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).

Length and location of environmental change:

- Normally, this change should be a lengthy stay of 2 to 6 months at a foreign research institution relevant to the PhD program or a minimum length of 3 consecutive weeks

The main supervisor is responsible for ensuring that the student can establish contacts with active research environments outside of SDU. The supervisor will use their national and international networks to plan the student's environmental change.

The environmental change must be included in the PhD plan. If the stay is not finalized in connection with the PhD plan, the plan should indicate when the environmental change is expected to be planned.



If a prolonged stay abroad is not possible or appropriate, reasons for this should be provided in the PhD plan, along with plans for how the requirement for an environmental change will be fulfilled.

Under certain circumstances, the environmental change can be conducted in Denmark. For instance, if the student has a Master's degree from abroad, the environmental change can be in Denmark. PhD student with a Danish Master's degree can apply the PhD School to have their environmental change in Denmark, but the application must contain academic reasons for why this would be beneficial for the PhD project.

If the place of employment for an industrial PhD student has an active research environment, the PhD School can decide that the environmental change can take place there.

PhD students can be credited with a certain number of working hours for the environmental change. This is handled by the departments.

*ECTS points for the environmental change:* Alternatively, instead of working hours, students can obtain ECTS points for the environmental change if they receive training in new methodologies, theories, or other educational activities during the stay. Students can earn 1 ECTS point per week for a maximum of 15 ECTS in total. To obtain ECTS points, the student must write a short report (5-10 pages) or give an oral presentation in the presence of an internal censor. More than 6 ECTS requires both the report and the oral presentation.

The report from the environmental change can be included in the PhD thesis as a chapter. When including it, clearly state in the thesis that the report is reused material and provide appropriate references.

Students cannot receive both ECTS points and working hours for the same environmental change. The options are mutually exclusive.

These guidelines ensure that PhD students have the opportunity to gain valuable international experience and research exposure during their studies.

## 10. Knowledge Dissemination

Knowledge dissemination, as outlined in § 7 of the PhD order, is an important aspect of a PhD student's training and development.

Knowledge dissemination activities may include teaching, public outreach, giving lectures, organizing events, or other ways of sharing knowledge with the broader community. Each department have a list of what counts as knowledge dissemination hours.

The Faculty PhD Committee has established that the extent of knowledge dissemination should be at least 300 working hours. These hours are part of the total working hours required for employed PhD students, which is typically 840 hours.

Knowledge dissemination hours are registered locally at each department through a system like SmartReg. The registration must be approved by the Head of the department or the chairman of the department PhD study board.

PhD students must complete the required 300 hours of knowledge dissemination at least 3 months before the PhD thesis is to be submitted. This allows students to fulfill this requirement well in advance of their thesis submission.

Overall, knowledge dissemination is an integral part of a PhD program, ensuring that students not only advance their research but also develop skills in communicating and sharing their findings with a broader audience. It's a valuable component of doctoral education that contributes to a student's professional growth and development.

### 10.1 Rules for calculating knowledge dissemination hours

The allocation of knowledge dissemination hours based on the format and location of the presentations and posters is as follows:

- Posters and short presentations (less than 40 minutes). Each instance of a poster or a short presentation held outside the academic institution is counted for 30 knowledge dissemination hours
- External longer presentations (at least 40 minutes) count for 50 knowledge dissemination hours
- Internal presentations held within the academic institution are counted for 5 knowledge dissemination hours

If the PhD student repeats the same presentation, the allocation of hours decreases as follows:

- The 2nd time: 50% of the hours received for the first presentation
- The 3rd time: 25% of the hours received for the first presentation
- The 4th time: 10% of the hours received for the first presentation

This system encourages diversity in knowledge dissemination activities and rewards students for presenting their work externally to a wider audience. It also takes into account the potential for diminishing returns when giving the same presentation multiple times.

PhD students should keep a record of their knowledge dissemination activities and hours to ensure proper documentation and reporting for approval by the department PhD study board.

*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
- 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 (each department has a list of dissemination tasks)

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

In accordance with the PhD Order, teaching and knowledge dissemination activities for PhD students should be relevant to the student's field of study but should not be directly linked to their specific research project. These activities may include:

- Work duties for the department. PhD students can be assigned tasks or responsibilities by the Head of the Department that are performed for the department
- Work duties for the research group. PhD students can also be given tasks by the Head of the Department that are carried out for the specific research group to which they are affiliated

The amount of time dedicated to teaching and knowledge dissemination is calculated based on the principles for determining working hours for PhD students.

For PhD students enrolled in the Industrial PhD program, it's possible to agree upon teaching and knowledge dissemination activities with the collaboration partner.

These plans for teaching experience and knowledge dissemination should be outlined in the PhD plan. While it may not always be possible to provide a detailed plan right from the start, it is understood that these plans can evolve over time. The main supervisor and the PhD student are expected to work together to periodically update and adjust the plan based on the student's progress and changing opportunities for teaching and knowledge dissemination. This flexibility allows for adaptability in the student's development.

## **11. Milestones**

The PhD Programme consists of a series of milestones throughout the duration of the PhD programme.

### 11.1 The PhD plan

The PhD plan is a vital document for the PhD project and the overall PhD Program. It serves to clarify expectations and responsibilities between the PhD student and the main supervisor, ensuring a structured and productive research and study period.

The PhD plan should be developed and approved within the first three months of the enrollment period.

The PhD Plan must include the following elements:

- Information about the study area, department affiliation, and research training program connection
- A timetable covering the entire PhD Program, including the completion of various course components
- An agreement on the form of supervision, specifying the expected hours of supervision per semester and roles of multiple supervisors
- A plan for the PhD project, detailing research questions, theory, methodology, sub-projects, and milestones
- A plan for PhD courses, determined in consultation with the main supervisor
- A plan for participation in active research environments, including stays at other research institutions, often abroad
- A plan for knowledge dissemination
- An agreement on copyright and data rights, especially if the research is collaborative
- A financial plan concerning enrollment

While the PhD Plan should be as precise as possible initially, it can be periodically adjusted and clarified during the program. This flexibility allows for adaptability to evolving circumstances. The PhD Plan must be approved by the Head of the PhD School no later than three months from the PhD student's enrollment start.

The approved PhD plan forms the basis for ongoing evaluations of the PhD project's progress and the PhD student's studies.

The PhD Plan is crucial for ensuring a structured and successful PhD journey, and it provides a roadmap for the entire program. It establishes clear expectations, promotes transparency, and guides both the student and the supervisors throughout the research and study process.

### 11.2 Regular assessments

Regular assessments and adjustments to the PhD Plan are essential elements of the PhD program, as outlined in accordance with PhD Order § 10.

There should be ongoing, regular assessments during the PhD program to determine whether the PhD student is adhering to the PhD Plan. These assessments are necessary to ensure that the student's progress aligns with the plan's objectives.

If it is found that the PhD student is not following the PhD Plan or that adjustments are necessary for various reasons, the plan can be modified to accommodate changes in the research project or other circumstances.

If, despite adjustments to the PhD Plan, the Head of the PhD School assesses that the PhD student is still not following the plan, the student must be given the opportunity to reestablish the PhD project. This reestablishment period can last for up to three months.

It is important to note that the reestablishment period should not extend the overall duration of the PhD. This period is provided to help the student realign with the PhD Plan and overcome any difficulties that may have arisen. The opportunity for reestablishment may be granted only once during the PhD project.

The regular assessments and the possibility of reestablishment are mechanisms designed to ensure that the PhD student's progress remains on track and that any issues or deviations from the original plan can be addressed effectively without significantly prolonging the overall PhD program.

### 11.3 Planned assessments

The assessments during the PhD program are essential for monitoring progress and ensuring the successful completion of the program. Here's an outline of the planned assessments for both 5+3 and 4+4 PhD students:

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)
6 months	Mandatory conversation (oral)
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)
6 months	Mandatory conversation (oral)
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)

#### 11.4 Mandatory conversation with the Vice Head of PhD School

The mandatory conversation with the Vice Head of the PhD School that occurs after the first six months of a PhD program is an important step to assess and support the well-being and motivation of PhD students.

After the initial six months of the PhD program, each PhD student is required to have a confidential conversation with the Vice Head of the PhD School. During this conversation, the primary focus is on the well-being and motivation of the PhD student. It provides an opportunity to address any concerns, challenges, or issues that may have arisen during the early stages of the program.

The conversation is confidential, ensuring that the student can openly discuss any personal or professional matters that may be affecting their well-being or motivation. This confidentiality is crucial in creating a safe and supportive environment for the student.

Following the mandatory conversation, students are welcome to schedule additional conversations with the Vice Head of the PhD School at any time during their PhD study. This open-door policy allows students to seek support, guidance, or address any emerging issues as they progress through their program.

The goal of these conversations is to promote the overall well-being and success of PhD students by providing a forum for them to express their thoughts, concerns, and challenges. It demonstrates the institution's commitment to the personal and academic development of its students and ensures that they have the necessary support structures in place to thrive during their PhD journey.

#### 11.5 Extraordinary assessments

The regular assessments in a PhD program are essential for monitoring the progress and adherence to the PhD plan. The main supervisor plays a key role in ensuring that the student is following the plan and promptly addressing any deviations.

The main supervisor is required to maintain regular contact with the PhD student, typically on a weekly basis. These meetings serve as an opportunity to discuss the progress of the research, address any issues, and ensure that the PhD student is following the PhD plan.

If the main supervisor observes that the PhD student is not following the PhD plan, especially in cases involving significant changes or delays, an extraordinary assessment is initiated. Significant changes could include alterations to the research design, data, theory, timetables, the form of the thesis, environmental change details, course program, or knowledge dissemination activities.

The extraordinary assessment is a formal process where the deviations from the PhD plan are thoroughly evaluated. This procedure aims to understand the reasons behind the changes, assess their impact on the overall project, and determine if any corrective actions are necessary.

In cases where the Head of the PhD School assesses that the PhD plan cannot be followed despite adjustments, the student is given the opportunity to reestablish the PhD project. This reestablishment period typically spans three months and is intended to help the student get back on track. It may only be granted once during the PhD program.

These assessment mechanisms provide a structured and supportive framework for monitoring a student's progress and ensuring that they stay aligned with their PhD plan. If deviations or challenges arise, they can be addressed promptly to support the successful completion of the PhD project.

### 11.6 Assessment of the evaluation

Based on 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 evaluation.

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 programme hereunder problems relating to supervision, planning, or other issues of educational or personal nature as well as carrier options.

### 11.7 Re-establishment Period

The re-establishment process in a PhD program allows students who are not meeting the requirements of the PhD Plan to have an opportunity to get back on track.

If the Head of the PhD School concludes that the PhD student is not meeting the requirements of the PhD Plan despite any adjustments, the PhD student must be offered a three-month re-establishment period. This three-month period should not lead to an extension of the total PhD program.

The student has two weeks to accept the offer for re-establishment. If the student does not accept the offer within this timeframe, the enrollment will be terminated.

If the student accepts the offer for re-establishment, the Head of the PhD School will appoint an assessment committee. This committee includes two expert assessors and the main supervisor. The committee's role is to set specific goals for how the student can re-establish their course of study within three months, assess whether changes to the PhD Plan are necessary, and describe the type of support the student needs during the re-establishment period.

At the end of the three-month re-establishment period, the assessors will conduct a new evaluation within one month. This evaluation determines whether the student has met the set goals and whether the course of study can continue.

If the assessment is positive at the end of the three months, the Head of the PhD School approves the assessment, and the PhD program can continue. The Head of the PhD School notifies the student and the main supervisor in writing about this decision.

If the assessment remains negative at the end of the three months, the enrollment will be terminated. The Head of the PhD School will inform any other employer that the enrollment has been terminated and will notify the student and the main supervisor in writing about this decision.

The student has two weeks to submit comments to the Dean regarding the decision of the Head of the PhD School. The final decision in this case will be made by the Dean.

This process ensures that students are given the opportunity to correct course if they are not meeting the requirements and expectations of their PhD Plan.



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

For 4+4 PhD students, the qualifying examination is a crucial milestone in their academic journey, as it serves as both a master's examination and an evaluation of their research progress.

A 4+4 PhD students are initially enrolled as both master's and PhD students for the first two years of their program.

After two years, these students must take a qualifying examination, which also serves as a master's examination. The purpose of this examination is to demonstrate that the student has attained a skill level equivalent to a master's degree. The master's examination is assessed based on learning objectives at the master's level, ensuring the student has reached the appropriate level of knowledge and skills.

As part of the qualifying examination, the PhD student is required to prepare a written status report. This report should resemble a research article, approximately 30 pages long, outlining the results achieved thus far and presenting future research plans. Additionally, articles, reports, or other materials co-authored by the student should be included as part of the examination.

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 qualifying examination includes an oral component, lasting approximately 1 to 1½ hours. It involves a 30-minute presentation by the PhD student, followed by a question-and-answer session. The examination typically covers the presentation content, general academic questions within the field, and a discussion of future research plans.

The oral examination is conducted by the supervisor, with an external examiner present. Both the supervisor and the external examiner provide a comprehensive written assessment of the qualifying examination, which culminates in a grade according to the Danish grading system ("7-trinsskalaen").

The student is informed orally of the examination result immediately after the examination.

The examination protocol is sent to the exam office, where the grade is officially registered. Upon passing, the student completes the master's degree and receives the title of "cand. Scient." or "cand. scient. pharm."

The written assessment, approximately one A4 page in length, is submitted to the PhD School, confirming that the qualifying examination has been successfully passed. The Head of the PhD School gives the final approval of the examination.

After the Head of the PhD School approves the qualifying examination, the PhD student receives an employment contract for the remaining two years of the PhD program.

PhD students who fail the qualifying examination cannot continue their research training and must allocate additional time to complete a thesis to obtain the master's degree.

If a PhD student decides to leave their studies *before* passing the qualifying examination, any coursework or work completed during the PhD study may be transferred to the Master's education, following the current procedures for credit transfer.

## 12. Completion of the Programme

### 12.1 PhD thesis

The PhD thesis is a comprehensive document that must demonstrate the PhD student's ability to conduct research and apply scientific methods at an internationally recognized level required for doctoral degrees in the relevant field. It should contribute new knowledge and advance the state-of-the-art within the discipline. The thesis will be assessed against international standards, focusing on originality, scientific rigor, and the contribution it makes to the field.

To avoid self-plagiarism, PhD students should not directly copy text from their own manuscripts or published papers into the thesis. Nevertheless, method descriptions and results (including figures and tables) may be reused, provided they are appropriately cited and marked.

### 12.2 Structure and requirements

The PhD thesis should be written in English.

The PhD thesis at the Faculty of Natural Sciences should generally be structured as a synopsis that integrates your published research articles and/or unpublished manuscripts, while concisely summarizing and discussing the research findings presented in those contributions. In certain cases, for theoretical physics and IMADA students, a monograph may be an acceptable option (see guidelines). The synopsis is generally expected to be around 30-60 pages, excluding manuscripts/publications and references. This serves as a guideline rather than a strict rule. The emphasis should be on producing a thorough and clear scientific argument, with the final length determined by the complexity of the research.

The synopsis may include the following sections:

- **Title:** A clear and concise representation of the research topic
- **Summaries:** In both Danish and English
- **Introduction:** Establishing the background, context, and significance of the research

- **Contextual analysis:** Describe the research project in light of current international state-of-the-art research by addressing research gaps
- **Objectives:** Clearly stated research questions, hypotheses, and aims
- **Methodology:** Summary of methods used in the research
- **Results summary:** Discussion of key results from the manuscripts, their relevance, and their impact on international research standards within the field
- **Ethical considerations:** Information on any ethical and legal approvals required for the research
- **Conclusions and future perspectives:** A summary of the contribution the research makes, its significance in the field, and potential directions for future research
- **References:** Complete list of sources cited throughout the thesis
- **Chapters of papers/manuscripts:** All included manuscripts should be organized into chapters at the end of the thesis, with each clearly tied to the thesis' overall narrative and objectives

Within theoretical physics and IMADA it is also possible to structure the PhD thesis as a monograph.

The monograph is typically 100 pages long, but the number of pages can vary. The monograph should include the following elements:

- Summaries in Danish and English
- Objectives
- Methodology: This chapter should briefly summarize the methods used
- Description of the research project placed in the context of international state-of-the-art research within the subject area
- Description of the research carried out (including materials, methods, and results)
- If required for the studies, information on ethical and legal permits and approvals
- Discussion of results
- Conclusions and perspectives for further research
- References

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

You can use material from the status report in your PhD thesis, but it's essential to clearly indicate which parts of the thesis have been reused to prevent self-plagiarism.

For more information on ensuring original content, understanding plagiarism, and preventing it, you can refer to the [University Library's website](#).

#### 12.4 Correction in the PhD thesis after the submission

Once the PhD thesis has been submitted for assessment, no corrections can be made directly to the thesis itself. However, if the PhD student wishes to address errors, omissions, or make improvements, they can prepare a separate document describing these issues. This document should outline the errors and omissions in the PhD thesis, as well as the improvements the student intends to make.

This document can be linked to the PhD thesis in Pure, allowing for a clear record of the changes and updates that the student wishes to implement.

#### 12.5 Co-author Statements

Articles included in the thesis may be created in collaboration with other individuals, provided that the contributions of the co-authors are clearly indicated. It's crucial that there is a written co-author statement from the first author and/or senior author specifying the proportionate share of the work completed by the PhD student.

The specific form for co-author statements can be accessed on the PhD School's website. It is recommended that co-author statements are collected in an ongoing manner.

### 13. Submission of thesis

#### 13.1 Two months before submission

To ensure compliance with the deadlines for assessment and defense, the PhD student will receive a notification from the PhD School approximately 2 months before the expected submission date of the thesis. This advance notice will help the student prepare for the submission and subsequent evaluation process.

#### 13.2 Main supervisor's statement

The main supervisor is required to create a statement about the entire PhD program, which encompasses the execution of the individual components outlined in the PhD Plan. This statement should be included with the thesis, as specified in PhD Order § 9. The main supervisor should engage any co-supervisors and other supervisors in the preparation of this statement. Importantly, this statement must be in English.

The PhD School provides a specific form for this purpose, which can be downloaded from the PhD School's website. This form should be used to facilitate the creation and submission of the statement.

#### 13.3 Submission of thesis

The PhD thesis must be uploaded to Pure where it will be checked for plagiarism by SDUB. After the check SDUB will on the behalf of the PhD student submit the PhD thesis for assessment to the PhD

School. Along with the PhD thesis the PhD student must also upload co-author statements and the supervisor statement.

It is the PhD student's own responsibility to acquaint oneself with the rules, procedure and requirements for the PhD submission.

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.

## 14. Assessment

### 14.1 Assessment Committee

The thesis is evaluated by a committee of experts composed of three members:

- The members should be professors, full-time associate professors, or possess equivalent professional qualifications in the relevant field
- Of the committee members, two must be external to the institution. Additionally, at least one of these external members must be based internationally, unless there are academic reasons that make this requirement unsuitable.

Each assessor is responsible for ensuring that there are no conflicts of interest when assessing the PhD thesis. Assessors must contact the PhD School and the other committee members to disclose any prior involvement in the thesis or related matters. Additionally, none of the members should have published or collaborated on research projects with the PhD student.

For PhD students enrolled in the Industrial PhD Programme, at least one committee member must have research experience relevant to the business field in question, as outlined in PhD order § 26, paragraph 2. The representative from SDU serves as the committee chair. The student's supervisors cannot be committee members, but the main supervisor is linked to the committee without voting rights.

The faculty aims to ensure that both genders are represented in the assessment committee.

### 14.2 Appointment of the Assessment Committee

The Dean appoints the assessment committee based on a recommendation from the Head of Department.

When the submission warning is sent, the PhD School requests the Department to provide a suggestion for the assessment committee.

The Head of Department submits a proposed list for the assessment committee to the PhD School. Before doing so, the Head of Department must ensure that the nominated members of the Assessment committee are willing to serve. Curriculum vitae (CVs) of the external examiners should be included.

Once the Dean approves the Assessment committee, the PhD School informs the thesis author about the committee's composition. The author has one week to raise any objections to the committee members. If no objections are received within one week, the PhD School forwards the thesis to the Assessment committee and the main supervisor.

#### 14.3 The work of the Assessment Committee

The chair of the Assessment committee is responsible for taking the lead in establishing the assessment timeline and agreeing on a tentative defense date as soon as the committee is appointed. The defense date must be mutually agreed upon by the assessment committee, the main supervisor, and the PhD student. The PhD School is informed of this date when it is decided, but it is not publicly disclosed until a positive recommendation is received from the assessment committee.

The chair of the assessment committee has the duty to involve the main supervisor in the process. This includes ensuring that the main supervisor is invited to the assessment committee's meetings, kept in the loop regarding email communications, and similar matters. The main supervisor's participation in the assessment committee's work is important to provide insights into the underlying PhD Program and the academic progress of the research project, among other things.

The chair is responsible for ensuring that the main supervisor is informed about the preliminary assessment of the thesis. The main supervisor should have the opportunity to provide input on the preliminary assessment and address any potential misunderstandings before it is sent to the PhD School.

#### 14.4 Preliminary assessment of the PhD thesis

Within 2 months after the thesis submission, the assessment committee is required to provide a preliminary recommendation, which must be signed by all its members. This preliminary recommendation determines whether the current form of the thesis is suitable for awarding the PhD degree. It is the responsibility of the department secretariat to ensure that the assessment committee meets this deadline. Please note that the month of July is not included in the deadline for the preliminary recommendation.

The preliminary recommendation typically consists of 1-2 pages and should serve as a basis for the expected final recommendation. It must address the quality, self-conduct, and international standard of the thesis. The preliminary assessment should cover any significant critical points raised by the assessment committee. The recommendation should be justified, and the decision should be either

unanimous or by a majority vote. The recommendation is sent to the department's PhD secretary, who forwards it to the PhD School. After approval from the Head of the PhD School, a copy of the recommendation is sent to the author.

If the recommendation is positive, the assessment committee, along with the recommendation, submits a proposal for the title of the defense lecture and suggests a time and location to the department secretary. The author should have the opportunity to explain key 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 proceed. However, if the thesis is not recommended as suitable, the assessment committee will indicate in its recommendation whether the thesis can be resubmitted in a revised form and, if so, within what time frame.

The author and the main supervisor should be given two weeks to provide comments on the recommendation.

Based on the comments from the assessment committee, and possibly those from the author and main supervisor, the Dean, in consultation with the Head of the PhD School, makes one of the following decisions:

1. The defense cannot take place.
2. The thesis may be resubmitted in a revised form within a period of at least three months. If resubmitted, the thesis will be assessed by the same assessment committee, unless there are specific circumstances that apply.
3. The thesis is to be re-assessed by a new assessment committee.

#### 14.5 The Defense

The thesis defense is a public event and must occur within three months following the thesis submission, as outlined in PhD order § 20, paragraph 2. The chair of the Assessment committee collaborates with committee members, the main supervisor, and the author to set a suitable date for the defense and informs the department's PhD secretary.

In cases of exceptional circumstances, the Head of the PhD School can decide to postpone the defense. Any such postponement requires an agreement among the author, chair of the Assessment committee, and the Head of the PhD School, including an agreement on the duration of the postponement, per PhD order § 20, paragraph 3.

The defense takes place at SDU. In extraordinary situations, the Dean may permit the defense to occur outside SDU.

The chair of the assessment committee is responsible for ensuring that a suitable room is reserved for the defense, which is coordinated with the departmental PhD secretary. The department handles practical tasks related to the defense, such as room reservations and sending invitations.

The PhD School sends notifications of the defense, including the lecture topic, to the author, members of the assessment committee, the University Library, and the department.

The department is responsible for promoting the defense. Additionally, the PhD thesis is made publicly accessible at the University Library of SDU well in advance of the defense.

#### 14.6 Procedures for the Defense of the PhD thesis

During the defense, the author is expected to present their work and defend the PhD thesis in front of the assessment committee. Prior to the defense, the assessment committee has already informed the author about the lecture topic.

The defense should not exceed a total duration of 3 hours, with approximately 30-45 minutes allocated for the author's lecture.

The defense follows this general plan:

1. The chairman of the assessment committee (moderator) introduces the author and committee members and conducts the defense proceedings
2. The author delivers a 30–45-minute presentation
3. The moderator may allow questions from the audience specifically related to the lecture given
4. Each of the three Assessment committee members comments on the thesis and poses questions to the author. The moderator ensures that this phase does not exceed 1 hour and 30 minutes, with the time divided among the members as per their internal agreement. The questions should focus on key topics in the thesis
5. The moderator concludes the defense proceedings, and before doing so, may allow the author to make a brief comment

The supervisor may not contribute with comment during the oral presentation by the PhD student.

#### 15. Award of PhD degree

After the defense, the assessment committee provides its final written recommendation, which should be well-justified, and the decision should be reached either unanimously or by a majority vote. The final recommendation should be based on both the preliminary recommendation and the oral defense.

The final recommendation generally aligns with the preliminary assessment but also assesses the quality of the oral defense. The evaluation typically spans around 1½ - 2½ pages and must bear the signatures of all assessment committee members.



The final recommendation should be sent through the department to the PhD School within two weeks after the public defense.

The PhD degree can be granted with a positive recommendation from a unanimous assessment committee or from a majority of its members.

If the final recommendation is positive, it is forwarded to the Academic Council. The Academic Council has a two-week period to raise any objections. If no objections are raised, the PhD School informs the author that they have been awarded the PhD degree.

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

### 15.1 PhD diploma

The PhD School provides the PhD diploma in both Danish and English. The diploma specifies the field in which the PhD degree has been earned and includes the title of the PhD thesis. The diploma is signed by the Dean. Additionally, a summary in English detailing completed courses, knowledge dissemination hours, and any environmental changes will be appended to the diploma.

Please note that, as of January 2021, the PhD diploma is exclusively issued in [digital format](#).

### 15.2 Documentation for completed parts of the PhD Programme

For PhD students who discontinue their studies without completing the PhD degree, they can request documentation in English for the portions of the PhD Program that they successfully completed. This documentation will be provided by the PhD School upon receiving a written request.

## 16. Submission 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.

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.

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 PhD Committee proposes 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.

## 17. Communication

The objective is to have all written communication between PhD students, supervisors, the Faculty PhD Committee, and the PhD School Secretariat conducted electronically:

1. All PhD students must register with a valid email address.
2. All PhD students are required to be subscribed to the PhD distribution list within their department. This list serves as an effective communication channel for disseminating information regarding new rules, regulations, and other relevant updates.
3. The administration of the distribution list is the responsibility of the department's PhD secretary.
4. It is expected that members of the Faculty PhD Committee, the PhD study board, the Heads of Departments, and PhD supervisors also subscribe to the distribution list to stay informed about important matters.
5. Once a PhD student's studies are completed, it is the responsibility of the department's PhD secretary to unsubscribe them from the distribution list.

This electronic communication approach aims to streamline and enhance the flow of information within the PhD program.

## 18. Guidelines for appeals and waivers

Decisions made by the university in accordance with the guidelines for the PhD Program at the Faculty of Science can be appealed to the Danish Agency for Higher Education, specifically when the complaint pertains to legal matters. The deadline for filing an appeal is two weeks from the date the decision is communicated to the complainant.

Those eligible to appeal are PhD students at the Faculty of Science, SDU, and authors whose PhD theses have been accepted for assessment according to PhD Order § 15, paragraph 2.

To initiate an appeal, individuals should submit their appeal to the Dean. The Dean will provide a statement, and the complainant will have the opportunity to respond within two weeks. Subsequently, the university will forward the complaint to the Danish Agency for Higher Education, along with the attached statement and any additional comments.

The university has the authority to grant exceptions from the regulations outlined in the guidelines for the PhD Program at the Faculty of Science, which are established by the faculty, in cases involving special circumstances. Applications for exemptions should be directed to the Faculty PhD Committee and then 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.

*Latest change to the guidelines February 2025:*

*Section 3.8 Secondary employment*

*Section 4.5 Exceeding the period of enrolment*

*Section 6.2 Main supervisor*

*Section 12.1 PhD thesis*

*Section 12.2 Structure and requirements*

*Section 14.6 Procedures for the defense of the PhD thesis*

Approved by the Faculty PhD Committee at the Faculty of Science 20 January 2025

Approved by the Dean of the Faculty of Science 6 February 2025

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