

Supplementary guidelines for the Doctor of Philosophy degree (PhD) in Aquatic Biosciences pursuant to the Regulations regarding the philosophiae doctor (PhD) degree at Nord University

These supplementary guidelines have been set out pursuant to the Regulations for the Doctor of Philosophy degree (PhD) at Nord University of 16 December 2020. The supplementary guidelines were approved by the Faculty of Biosciences and Aquaculture (FBA) 13 January 2016 (and later revised 18 January 2021).

The Regulations for the Doctor of Philosophy degree (PhD) at Nord University is from here on referred to as the Regulations.

Section 1 of the Regulations: Scope of the Regulations

The supplementary guidelines by the Faculty of Biosciences and Aquaculture apply to all education culminating in the Doctor of Philosophy degree (PhD) in Aquatic Biosciences.

Section 3-1 of the Regulations: Objectives, scope and content

The PhD in Aquatic Biosciences includes required coursework comprising 30 credits (ECTS) (see also section 9-1).

Section 4 of the Regulations: Responsibility for doctoral education

The Faculty of Biosciences and Aquaculture is responsible for the PhD programme in Aquatic Biosciences. The Research Board at the faculty is the responsible body for advising the Dean on matters related to the PhD programme.

Section 6-1 of the Regulations: Admission requirements

Applicants to the PhD programme in Aquatic Biosciences must hold a Master's degree in Aquaculture or Marine Ecology or other related bioscience disciplines, depending on the nature of the proposed research project. Applicants with a grade average comparable to a Norwegian B or better at Master's level will be granted admission.

Self-financed students are normally not accepted, but applicants with documented funding from governmental or non-governmental bodies will be considered. Such candidates should contact the faculty's PhD administration for further information.

Section 6-2 of the Regulations: Application requirements

The PhD research proposal, which has to be submitted along with the application for admission, should be aligned to one of the strategic thematic research areas of the faculty. The proposal should include a working title of the research project, an initial risk assessment of the overall project, a

Gantt chart, a clear plan for dissemination of results, and intended research stays at national or international partner institutions. In addition, a concrete funding plan for the entire period of the proposed scientific project should be provided. The proposal should be prepared in the document template provided by the faculty.

Incomplete applications will not be approved and have to be revised within 30 days after the candidate has been informed by the PhD administration.

Amendments, if any, to the original proposal submitted along with the application for admission, should be submitted to the PhD administration within one month after the approval of admission and before the execution of the PhD agreement with the Faculty of Biosciences and Aquaculture.

Section 6-4 of the Regulations: Admission decision

An application for admission to the PhD programme in Aquatic Biosciences should normally be submitted within one month and no longer than three months (the latter upon agreement with the PhD administration) after the starting date of employment of the doctoral candidate, or the date of reporting at the faculty in the case of externally funded candidates. Completed applications will be forwarded to the faculty's Research Board, which advises the Dean whether or not to admit the applicant to the PhD programme.

Section 8-1 of the Regulations: Appointment of academic supervisors

A PhD supervisory committee should preferably consist of three members employed at the faculty, including one main supervisor and two co-supervisors. The main supervisor should be linked to one of the research groups, and an expert in the topic of the research project. A third external co-supervisor may be included in the team if needed.

Industry-financed PhD projects have to comply with the Regulations from the Research Council of Norway, if this industrial partner provides part of the financing. In cases where third parties collaborate in a PhD research project (e.g. in the case of industry-financed PhDs), the concerned principal investigator (PI) of the third party can serve as a co-supervisor, provided he/she has a doctoral degree. If the PI is not entitled to be a supervisor, the faculty's Research Board can suggest an alternate supervisor after consulting with the PI.

Section 8-2 of the Regulations: Content of the supervision

The supervisory committee (minimum two members) should meet with the student formally at least twice a year, ahead of the deadlines for submission of the half-yearly candidate performance review (CPR) (see section 10-1 of the Regulations). The meetings should address issues related to project operations, training components and supervision.

Section 9-1 of the Regulations: Purpose, content and scope

The Faculty of Biosciences and Aquaculture is responsible for the approval of all credit-earning courses as part of the candidate's training component within the PhD programme. The training component together with the work on the thesis shall provide a holistic education at an adequate level. The individual elements comprising the training component are to be agreed upon by the main supervisor.

On completion of the training component, the candidate has to apply to the faculty for the approval of the training component*. The approval should be obtained prior to submitting the thesis for evaluation.

Course requirements

The training component of the doctoral programme includes participation in courses in natural sciences relevant to the candidate's research theme. The candidate is expected to gain 30 ECTS - 10 ECTS from compulsory courses and 20 ECTS from elective courses. At least 10 ECTS should be gained from courses conducted at Nord University.

Compulsory courses (10 ECTS):

- Ecological and Interspecies Ethics (DR433F, 5 ECTS) and
- another course at PhD level (5 ECTS) related directly to the subject area of the thesis (Nord University or external)

Elective courses (20 ECTS):

Students can in consultation with the main supervisor choose elective courses at PhD or Master's level. At least 20 of the total 30 ECTS must be earned from PhD-level courses. The candidate must have obtained grade B or better (as per Nord University's grading scale) if the credits from Master's level are to be included as an elective course in the training component.

Candidates also have the option to choose the *Individual Special Curriculum* course at doctoral level (DR435F, 5 ECTS), which allows them to gain in-depth knowledge on a specific topic relevant to their thesis. The content of this course has to be approved by the faculty*.

Courses conducted at other universities in Norway/worldwide can also be chosen as electives.

No more than 2 ECTS will be approved from general skill-based courses.

Research-based education at accredited institutions or other academic activities, e.g. workshops/seminars that do not carry credits can be awarded with credits (max. 5 ECTS in total) based on the ECTS credit system. Special requirements apply for academic activities without final assessment*. Short academic activities (< 25 hours) will not be approved and cannot be combined.

The faculty reserves the right to calculate the scope (credits) of courses regardless of the weighting of other institutions.

Presentations

The candidate is expected to hold five presentations during the nominal study period. The presentations must be publicly announced and open for everyone to attend. The candidate and main supervisor are equally responsible for ensuring that the presentations are carried out according to the stipulated time frame. The dissemination plan should be as below.

Internal oral presentations:

- Presentation 1: This presentation should be given within the first six months from the date of employment. Background information, up-to-date scientific knowledge on the topic of the thesis, the proposed research plan and the expected contribution to advance the current state of knowledge within the research field must be presented.
- Presentation 2: This presentation is normally conducted in conjunction with the candidate's midterm evaluation (see section 10-2) and shall be given 18 months after the start of employment for the three-year PhD programme. The candidate shall present the results

obtained during the first half period of the PhD programme, highlight the research advances and indicate a plan for the remaining part of the study period.

- A member of the supervisory committee shall be present for both presentations. The presentations should normally be 30 minutes in length followed by a critical discussion.

External/internal presentations:

- Presentation 3 and 4: During the PhD education, the candidate is expected to make at least two external presentations - either an oral presentation or a poster. The candidate should be the first and the presenting author of these presentations. The candidate should be responsible for preparing and submitting the abstract.
- Presentation 5: An additional presentation is to be made – an internal oral presentation or an external presentation, in a format approved by the main supervisor and the Vice Dean of Research and Education. An outreach video of the candidate's research work is also an accepted presentation format. Of presentations 3, 4 and 5 listed above, at least one should be a public oral presentation. The candidates are encouraged to present their results either to the industry or at other public forums, highlighting the contribution of their research to the society.

Section 9-3 of the Regulations: The candidate's right in the event of a leave of absence

Candidates who have an external employer are obliged to inform the faculty's PhD administration as well as the primary supervisor about his/her leave of absence.

Section 10-1 of the Regulations: Reporting

The faculty requires the candidates to submit semester reports twice a year (candidate performance review, CPR*) that are prepared in consultation with the supervisory committee. The document should contain a realistic progress plan (see section 8-2 of the Regulations).

The progress report shall be submitted to the faculty's PhD administration no later than 1 June and 1 December every year, who have completed at least 6 months from the starting date. The reports are presented to the faculty's Research Board for approval. The preparation and submission of progress reports are an integral and mandatory part of the candidate's doctoral education.

Section 10-2 of the Regulations: Midterm evaluation

The midterm evaluation aims to encourage candidates to complete their research work/thesis within the study period stipulated in the PhD agreement. This can be conducted in conjunction with the candidate's second internal presentation (see section 9-1) and normally takes place 18 months after the start date of employment. A report* of the midterm evaluation has to be filled out by the supervisor and submitted to the PhD administration. Please see the designated guidelines for more detailed information about the procedures of the midterm evaluation.

Section 11-1 of the Regulations: Thesis requirements

The thesis can be delivered either in the form of a monograph, or as a unified set of several research

papers with a common introductory chapter and a general discussion. The general discussion must summarise the most important results and conclusions of the PhD project, compare and discuss the present findings in light of the existing knowledge, and clearly state the contribution of the thesis in advancing the state of the art in the field of aquatic biosciences.

A PhD thesis at FBA is normally based on at least three scientific articles/manuscripts. One of the research papers, with the student as the first author, should be published or accepted for publication in a reputed peer-reviewed internationally recognised journal in the particular area of the PhD research. If under exceptional circumstance a candidate is unable to have a published or accepted research paper at the time of submission of his/her thesis, the candidate can apply to the Research Board for a waiver of this clause. The application must be supported by a memorandum from the main supervisor, supporting the candidate's request and vouching for the quality of the particular manuscript. At least two more manuscripts of publishable standard are to be included in the thesis and the PhD candidate should be the first author in at least one of these articles.

The candidate will be responsible for obtaining copyright permission(s) from the publisher to include the articles in the thesis if these articles are not published / or intended to be published under the Open Access agreement. In the case of unpublished manuscripts, the candidate should inform the journal where the article would eventually be published that the manuscript was published as part of his/her PhD thesis.

The thesis is to be written in English. If the candidate wishes to use another language, special permission must be sought at the time of admission to the programme. The formatting guidelines for the thesis provided by the PhD administration at the faculty should be adopted.

Section 13-2 of the Regulations: Submission of the thesis

The candidate should submit 5 (five) printed copies and a PDF file of the thesis, along with the application for examination of thesis* and the agreement on Open Access publishing of the thesis*. The candidate is obliged to follow the instructions from the PhD administration on formalities related to the submission of the thesis.

The time from submission of the thesis to public defence should normally not be less than 3 months and not exceed 5 months.

Section 14 of the Regulations: Appointment of the assessment committee

The leader of the evaluation committee shall be an appointee from the faculty.

Section 15-2 of the Regulations: Correction of formal errors in the thesis

In cases where the candidate may wish to report an errata to the committee after the submission of his/her thesis, the information is to be forwarded to the PhD administration for onward transmission to the evaluation committee. Such information, if any, should be made available within 14 days prior to the committee's deadline for the delivery of their report. This communication to the committee has to be approved by the Dean based on the recommendations made by the Research Board and routed through the PhD administration.

Section 15-4 of the Regulations: Reworking of a submitted thesis

The committee may advise very minor changes/corrections in the thesis (changes below the level of

what is mentioned in section 15-4 of the Regulations), and the candidate may implement such changes directly in the thesis or in an errata section that is to be appended at the end of the final printed version of the thesis. These changes should be completed within the response period of ten working days and submitted to the PhD administration for consideration by the evaluation committee along with the candidate's response.

The faculty normally does not allow a rework of the thesis as indicated in section 15-4 of the Regulations. If the committee is of the opinion that extensive changes are required, the outcome will be a rejection of the thesis. In such a situation, refer to section 15-5 of the Regulations for information on resubmission.

Section 18-1 of the Regulations: Trial lecture

At the Faculty of Biosciences and Aquaculture the trial lecture is held on the same day, ahead of the public defence of the PhD thesis (section 18-2).

Section 18-2 of the Regulations: Public defence of the thesis (disputation)

The public defence is chaired by the Dean of the Faculty of Biosciences and Aquaculture or in his/her absence normally by the Pro Dean/Vice Dean or Rector.

It is the responsibility of the internal member of the committee to ensure a back-up plan in the case of absence of the first or second committee member (flight delay/illness etc.)

* Please use the designated form