

Action plan for doctoral education in Marine Sciences at the Faculty of Science and Technology

Brief background

The review panel's mandate was to evaluate doctoral education in Marine Sciences at the Faculty of Science and Technology, based on the University's criteria for educational evaluation. The review panel consisted of: Kari Lehtilä, Professor, Department of Natural Science, Environment and Technology, Södertörn University (chair); Sunniva Samson Sigurdardóttir, Department of Chemistry and Molecular Biology, University of Gothenburg (doctoral student representative); Jan van Stam, Professor, Department of Engineering and Chemical Sciences, Karlstad University; and Eva Forssell-Aronsson, Professor, Department of Clinical Sciences, University of Gothenburg.

The Department of Marine Sciences has developed an action plan that follows the structure of the review panel's statement. The text begins with a summary of the panel's statement, followed by a table with the panel's suggested measures, and planned department actions, time plan and responsibility.

Summary of the review panel's statement

The review panel considers that the programme generally meets the objectives of the Higher Education Ordinance, but nevertheless makes observations regarding aspects that could be improved. One shortcoming concerns the range of courses, which does not cover all objectives in the doctoral education objectives matrix in the Higher Education Ordinance. The Faculty's introductory course is short and could be further developed to include, among other things, topics in philosophy of science and research ethics. In addition, other credit-bearing activities are not documented satisfactorily in doctoral students' Individual Study Plans (ISPs), and it is often unclear how they contribute to the fulfilment of learning outcomes.

Supervision was generally perceived as good. Doctoral students provide a positive picture, with scheduled meetings, engaged co-supervisors and examiners. External funding of doctoral positions is not seen as a problem, and management follows doctoral students' working situation to ensure clarity on what is included in doctoral education within the framework of a research project. A shortcoming highlighted is that the ISP is not experienced as a living document and that it can take a long time between updates.

Supervisors at the Department are active and have high scientific competence and experience within their subject areas, and generally meet the requirements for completed university pedagogical training at the University of Gothenburg. Doctoral students have sufficient access to supervision, with structured and scheduled supervision time. A shortcoming is that there are differing views among supervisors regarding the need for co-supervisors.

Doctoral education in Marine Sciences provides good opportunities for doctoral students to establish themselves on the labour market, and doctoral students perceive the programme as socially relevant. One shortcoming mentioned by external stakeholders interviewed by the review panel was that doctoral students' research is often located elsewhere in the world rather than in Sweden and its surrounding areas, and that training in leadership, project management and grant writing are valuable competencies. Another shortcoming identified by the review panel was that career planning varies and is often not documented in the ISP.

Both management and doctoral students raised that doctoral students' perception is that communication with management has been inadequate. To promote communication, management has held recurring meetings with the doctoral student council. Other communication channels include doctoral days and work environment representatives. The Department is in the process of introducing development/performance dialogues with doctoral students.

The infrastructure and interdisciplinary contacts within the Department are positive, but the course offering and the associated credit allocation are insufficient. The review panel sees it as a shortcoming that the same course can yield different numbers of higher education credits depending on the decision of the individual examiner. In addition, travel and accommodation for external courses—and for courses offered only in Gothenburg—are not funded, which is very serious and must be corrected immediately. Another shortcoming is that only another doctoral student serves as opponent at mid-term and final seminars, which prevents doctoral students from receiving feedback on their research from external researchers. The final seminar is held in close connection to the public defence and therefore functions as a preparation for it, but could also be scheduled about six months earlier to enable discussion of the thesis draft.

The panel assesses that structures and processes for follow-up and development of the programme are in place. The quality of courses did not receive criticism in the material or interviews, but the course offering is limited, and a structural shortcoming lies in how courses are organised. Teachers receive no compensation for teaching at doctoral level, which reduces incentives to take on the assignment.

An important factor currently affecting the Department is financial difficulties, which risk reducing the number of doctoral positions in the near future. Internal support for doctoral education has also decreased, including travel for mandatory courses between Gothenburg and the field stations, which is not appropriate.

Suggested improvement areas, planned activities and timetable

Abbreviations: Pro = Deputy Head of Department responsible for doctoral education; MarFUB = Doctoral Education Committee at the Department of Marine Sciences; FUAdm = Doctoral Education Administrator; exam/hand = examiners and supervisor group; FUB = Doctoral Education Committee at the Faculty of Science and Technology.

Category	Review panel's suggested action	Planned activity	Start	Completed	Responsibility
Courses	Ensure that the objectives matrix in the Higher Education Ordinance can be fulfilled with the course offering provided	1. Discussions in FUB to make the Faculty's introductory course more extensive to also include research ethics and philosophy of science. Alternatively include these subjects in a second separate course arranged by them.	2026	2026	Pro
	Find alternative ways to achieve learning outcomes that are not met through the course offering	2. Make sure the sporadic Journal clubs where research articles are discussed become a regular event through appointing the already established Marine colloquium to be in charge and provide the support needed. See also items 4, 5, 6.	2026	2026	Pro, MarFUB, exam/hand
	Develop courses so that they include generic competencies included in the learning outcomes in the Higher Education Ordinance	3. Establish recurring generic Department-level courses such as research communication and leadership/project management. Investigate possible cooperation with other UGOT departments and Chalmers regarding generic courses.	2026	2028	Pro, FUAdm, MarFUB
	Develop career planning so it covers both an academic career and a career outside academia	4. Approach other life science departments to suggest a collaborative credit-bearing workshop with teachers from the departments and invited external stakeholders (recurring every other year). Discussions on the faculty level (FUB) to expand the career day to include PhD-students. Propose to also there or separately arrange panel discussions with invited stakeholders and alumni. Assess	2026	2027	Pro, MarFUB, exam/hand

		possibilities for credit-bearing internships in e.g. industries and authorities.			
	Course or other competence development in leadership and project management	5. See item 3 above.	2026	2028	Pro, MarFUB, exam/hand
	Encourage doctoral students to apply for research funding for their own project from funders that award grants to doctoral students	6. See item 3 above. Grant-writing can be included in a course on research communication. Establish and post a regularly updated list with available research grants.	2026	2027-2028	Pro, FUAdm, MarFUB, exam/hand
	Develop the course offering and ensure it can be followed by all doctoral students, both in terms of language and location	7. Work to ensure courses are given in English and that components can be followed online.	2026	Constantly ongoing	Pro
	Create a uniform credit allocation for all courses	8. This was identified as a very minor problem which can be mitigated through recurring discussions with examiners.	2026	Constantly ongoing	Pro, exam/hand
	Develop structures to increase the course offering	9. Discussion with Department management on how incentives for teachers can be increased (e.g. using course budget for salary). Specifically talk to and encourage teachers within the disciplines offering least courses.	2026	2026	Pro
	Ensure that doctoral students can participate in approved courses without personal cost	10. Reimburse travel and accommodation costs for doctoral students with their main workplace outside Gothenburg when attending mandatory courses.	2026	Completed	-
Communication	Safeguard the good contact between doctoral students and supervisors	11. Introduction of annual development dialogues where this is followed up.	2026	Completed	-
	Develop and define tasks and roles for main and co-supervisors	12. Discussions with examiners/supervisors regarding the role of co-supervisors. Make sure the respective supervisors' roles are described in the ISP. Establishment of an assignment agreement between external co-supervisors and our department.	2026	2027	Pro, exam/hand
	Develop career planning so it covers both an academic	13. See item 4	2026	2027	Pro, MarFUB, exam/hand

	career and a career outside academia				
	Continue to develop interfaces between the doctoral student collective and Department management	14. Recurring meetings between Department management and the chair of the doctoral student council. The Deputy Head for doctoral education attends doctoral days if desired	2026	Constantly ongoing	Pro
Other	Develop the use of the Individual Study Plan so it becomes a living planning document and not only a tool for retrospective control	15. Recurring discussions with examiners/supervisors. Arrange a yearly workshop on the use of the ISP. Discuss changing update of plans from yearly to twice a year. Facilitate working with the ISP by highlighting sections that require more regular updates, provide good examples of completed forms, and refer to the faculty ISP-handbook.	2026	2026	Pro, exam/hand
	Include waters in Sweden and nearby areas to a greater extent in doctoral education	16. We cannot influence what the research projects are about, or which courses the doctoral students will take. No activities planned	-	-	-
	Discuss possible changes to seminar formats	17. Initiate a discussion with examiners/supervisors/doctoral students/management on introducing a senior (possibly external) examiner at the mid-term seminar, and on moving the final seminar earlier (6 months) as suggested. Implement eventual changes.	2026	2027	Pro

