



FACULTY OF SCIENCE

Nordic Master's Programme in Sustainable Production and Utilization of Marine Bioresources, 120 credits

Nordiskt masterprogram i hållbar produktion och nyttjande av marina bioresurser, 120 högskolepoäng

Programme code: N2MAB

Second cycle / Avancerad nivå

1. Confirmation

This programme syllabus was confirmed by the Faculty Board of Science on 24-10-2018 (G 2018/392) and was last revised on 26-03-2019 (G 2018/776) by the Dean of the Faculty to be valid from 01-07-2019, Autumn semester 2019.

Responsible Department/equivalent: Department of Biological and Environmental Sciences

Participating Departments:

Department of Political Science

Academy of Design and Crafts

Graduate School

Department of Earth Sciences

Department of Law

Department of Business Administration

Department of Marine Sciences

The Master's Program is run in collaboration between four faculties at the University of Gothenburg (Natural Sciences, Social Sciences, School of Business and Law and Academy of Design and Arts) as well as two other Nordic universities: NORD University, Bodø, Norway, and Holar University, Iceland. There will also be cooperation with Chalmers University of Technology.

2. Purpose

The purpose of the Program is to integrate natural and social science as well as design aspects on production and utilization of marine bio resources, in a Nordic and global context, in order to educate the next generation of professionals (as PhD students or within the industry) within the

area of marine circular economy focusing on aquaculture and blue food production. Moreover it aims at developing students' scientific approaches as well as practical skills in the field of applicable methods and to prepare them for both postgraduate and professional careers in the private or public sector.

3. Entry requirements

A Bachelor's degree (180 credits) in natural sciences, social sciences or arts.

English B/English 6 or equivalent. Students with equivalent education may, after supplementary examination, be admitted to the program.

Admission to the Masters's programme will be possible through any of the three partner universities offering it. The selection process is based on a personal letter motivating the admission that should be attached to the application.

4. Higher education qualification and main field of study

This programme leads to a Degree of Master of Science (120 credits) with a major in Sustainable Production and Utilization of Marine Bioresources (Filosofie masterexamen med huvudområdet Hållbar produktion och nyttjande av marina bioresurser).

The Program qualifies for a Degree of Master of Science (120 credits) with a Major in Sustainable Production and Utilization of Marine Bioresources (Filosofie masterexamen med huvudområdet hållbar produktion och nyttjande av marina bioresurser).

5. Outcomes

Second-cycle study programmes shall involve the acquisition of specialist knowledge, competence and skills in relation to first-cycle courses and study programmes, and in addition to the requirements for first-cycle courses and study programmes shall:

- further develop the ability of students to integrate and make autonomous use of their knowledge,
- develop the students' ability to deal with complex phenomena, issues and situations, and
- develop the students' potential for professional activities that demand considerable autonomy, or for research and development work.

General outcomes for Degree of Master (120 ECTS)

Knowledge and understanding

For a Degree of Master (120 ECTS) the student shall:

- demonstrate knowledge and understanding in the main field of study, including both broad knowledge of the field and a considerable degree of specialised knowledge in certain areas of the field as well as insight into current research and development work, and
- demonstrate specialised methodological knowledge in the main field of study.

Competence and skills

For a Degree of Master (120 ECTS) the student shall

(N2MAB) Nordic Master's Programme in Sustainable Production and Utilization of Marine Bioresources, 120 credits / Nordiskt masterprogram i hållbar produktion och nyttjande av marina bioresurser, 120 högskolepoäng
 Second cycle / Avancerad nivå

- demonstrate the ability to critically and systematically integrate knowledge and analyse, assess and deal with complex phenomena, issues and situations even with limited information
- demonstrate the ability to identify and formulate issues critically, autonomously and creatively as well as to plan and, using appropriate methods, undertake advanced tasks within predetermined time frames and so contribute to the formation of knowledge as well as the ability to evaluate this work
- demonstrate the ability in speech and writing both nationally and internationally to clearly report and discuss his or her conclusions and the knowledge and arguments on which they are based in dialogue with different audiences, and
- demonstrate the skills required for participation in research and development work or autonomous employment in some other qualified capacity.

Judgement and approach

For a Degree of Master (120 ECTS) the student shall

- demonstrate the ability to make assessments in the main field of study informed by relevant disciplinary, social and ethical issues and also to demonstrate awareness of ethical aspects of research and development work
- demonstrate insight into the possibilities and limitations of research, its role in society and the responsibility of the individual for how it is used, and
- demonstrate the ability to identify the personal need for further knowledge and take responsibility for his or her ongoing learning.

Local outcomes

Overall learning outcomes for students holding a master's degree in "Nordic Master's Program in Sustainable Production and Utilisation of Marine Bioresources" are to work interdisciplinary and with transdisciplinary methods so that not only the different scientific disciplines are integrated but also different stakeholders and observers as the surrounding community, industry and government are incorporated into the learning process.

The Master program is a Nordic mobility program, which means that mobility (at least 30 ECTS) to the different partner universities is included as a goal.

Knowledge and understanding

For a Degree of Master (120 credits) the student shall have:

- a thorough knowledge of the broader perspective on sustainability of sustainable production and utilisation of marine bioresources
- a thorough knowledge of the scholarly theories and methods in the field marine bioresources
- a good insight into the theory of carrying capacities for marine production
- a good insight into marine circular models, including cycling of marine bioresources

- good insight into the farming biology and technology of different aquaculture species
- insight into socio-economic added values of local production and utilization of marine bioresources
- insight into spatial planning, cooperation/conflicts of marine activities in the coastal areas including marine/food tourism and its connection to aquaculture and fisheries
- insight into consumer concern, public attitudes towards aquaculture and there related products

Competence and skills

For a Degree of Master (120 credits) the student shall:

- know the basics of project formulation, design, and how to work in a team
- carry out an independent, limited research or development project under supervision and in accordance with applicable norms for research ethics
- present acquired knowledge as well as own analyses and syntheses, both orally and in writing
- communicate academic issues, analyses and conclusions both with specialists and the general public

Judgement and approach

For a Degree of Master (120 credits) the student shall:

- analyze and deal critically with various sources of information and use them to structure and formulate scholarly arguments
- evaluate facts from different sources, discuss them and take a stand for the pros and cons with different theories

Sustainability labelling

The programme is sustainability-focused, which means that at least one of the outcomes clearly shows that the programme content meets at least one of the University of Gothenburg's confirmed sustainability criteria. The content also constitutes the programme's main focus.

6. Content and structure

The Master's programme starts with a mandatory introductory course (15 credits). During the rest of the first year the students are free to choose from all programme courses offered by participating universities as well as Chalmers University of Technology.

An individual second-cycle degree project constituting 30 to 60 credits must be carried out during the two-year timeframe. A 60 credit project is recommended by the partner universities as it will give an possibility to gain advanced knowledge within the field of the degree.

The Master's programme is a mobility program, which means that mobility of at least 30 credits for the various partner universities is included. The appointed study counselor will, together with the student, draw up an individual study plan to ensure the fulfilment of the degree and mobility goals.

7. Guaranteed admission

Students who have been admitted to the program and follows the regulated study pace, according to the curriculum, are guaranteed a place on the mandatory introductory course. Students who have been admitted to the programme has a limited place guarantee in the elective programme courses provided that the: 1) apply according to the administrative procedures, and 2) meet the courses' eligibility requirements.

8. Other information

The Master program is a Nordic mobility program, which means that mobility of at least 30 credits for the various partner universities is included. The appointed study counselor will, together with the student, draw up an individual study plan and ensure that the 30 credits mobility requirement is achieved.

Follow-up and evaluation of the program takes place in accordance with the current *Quality assurance policy and quality development of education at the University of Gothenburg*.