



Fakultet for biovitenskap

**Master in
Aquaculture
(M-AA)**

Admissions 2023

Master in Aquaculture (M-AA)

A master's degree is awarded on 120 credits. Equivalent of two years full study. Students who lack knowledge about general aquaculture from their bachelor's degree need to take AQX251 in the master's degree. To obtain a master's degree in Aquaculture, the following is required:

- Minimum 30 credits courses at 300-level
- Compulsory courses at 300-level
- Optional courses at 200 or 300 level
- A compulsory master thesis of 60, 45 or 30 credits

Compulsory courses:

Code	Name	ECTS	Period
AQX251	Sustainability and welfare in aquaculture	5	August
BIO314	Fish physiology	5	Autumn
AQX300	Applied Aquaculture	10	Spring

Master thesis 60 ECTS or

Master thesis 45/30 ECTS + optional courses

Study plan examples

Year	Semester	5 ECTS	5 ECTS	5 ECTS	5 ECTS	5 ECTS	5 ECTS
1	August	AQX251					
	Autumn	BIO314					
	January						
	Spring	AQX300					
	June						
2	August						
	Autumn	60 ECTS Master thesis					
	January						
	Spring	Master thesis or courses if 45/30 ECTS thesis					
	June						

Optional courses from the two specializations area:

- **Production Biology**
 - Select courses in product quality/nutrition/feeding technology, genomics/breeding and welfare/behavior/health
- **Management and Farming Technology**
 - Select courses in economy, management, leadership and farming technology (RAS)

Production biology

Genome Biology and breeding

Code	Name	ECTS	Period
AQB250	Sustainable aquaculture – breeding and genetics	5	Autumn
BIN300	Statistical Genomics	10	Spring
BIN301	Genomic and pedigree-based prediction of genetic value	10	Autumn
BIN302	High throughput phenotyping for precision farming	10	Autumn
BIO200	Molecular Genetics in Eukaryotes	5	January
BIO322	Molecular Genomics	10	Autumn
BIO325	CRISPR genome editing	10	Spring
BIO326	Genome Sequencing; Tools and Analysis	10	Spring
HFA300*	Animal Breeding Plans*	15	Spring + June
HFA304	Theory and Application of Inbreeding Management*	5	June

* Prerequisites HFA200

Ethology, Behavioral and fish health

Code	Name	ECTS	Period
AQX301	Fish Health	5	Spring
BIO315	Behavioral biology in fishes	10	January + Spring
HET300	Scientific Methods in Ethology	10	Autumn
HET301	The Biology of Animal Stress and Its Implications for Animal Welfare	10	Spring

Nutrition, product quality and feed technology

Code	Name	ECTS	Period
AQQ253	Product Quality in Aquaculture	5	June
AQN350	Aquaculture Nutrition	10	Autumn
AQN351	Sustainable ingredients in aquafeeds	5	Autumn
HFE200	General Nutrition	10	Spring
HFE202	Kraftfôr (Norwegian)	5	Spring
HFE303	Nutrition and Optimisation of Diets for Monogastric Animals	10	Autumn
HFE305	Feed Manufacturing Technology	10	Aug + Autumn
HFE308	Optimization of Feed Processing for Different Animal Species	10	Spring
HFE314	Experimental animal nutrition and physiology	10	Spring
MVI261	Process Technology II	5	Spring
MVI310	Macronutrients, Their Structure and Functionality	10	Autumn
MVI320	Fish Processing Technology	10	Autumn

Management and Farming Technology

Code	Name	ECTS	Period
AQP311	Production technology in aquaculture	10	January + Spring
AQP350	Planning and Design of Intensive Fish Farms	10	Spring
AQT251	Laboratory course in international aquaculture	5	Autumn
AQT254	Basic Aquaculture Engineering	5	Autumn
ECN230	International Economics	10	Autumn
	Special syllabus	10	All

General courses

Code	Name	ECTS	Period
BINT302	Internship Aquaculture	5,10,15	All
KJM220	Vannkjemi (Norwegian)	10	Autumn
MTH300	E-learning Course: Planning and Scientific Writing of a Master's Thesis in Natural Sciences	5	Autumn
NATF240	Fish Ecology and Management (Norwegian)	10	Spring
LNG250	Akademisk skrivning (Norwegian)	5	Autumn
SDG300	Sustainable development goals in plant and animal food systems	5	January
STIN300	Statistical Programming in R	5	January
STIN370	Selected topics in bioinformatics and applied statistics	5	Spring