



**Faculty of Biosciences**

# **Master in Plant Sciences**

**Specializations:  
Plant Production and Plant Protection  
Plant Biotechnology**

**Admission 2022**

## Master in Plant Sciences

Master in Plant Sciences is a 2 years fulltime study of 120 credits. The program has two specializations in English:

- Plant Production and Plant Protection
- Plant Biotechnology

For both specializations, the following applies:

- SDG302 – Sustainable plant production (5 credits, August block) is compulsory for both specializations
  - Compulsory courses in each specialization
  - Master thesis of 30 or 60 credits is compulsory
  - Minimum 30 credits at 300-level
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- The remaining credits of the 120 is elective courses
  - Courses at 200-level can be part of the elective courses in the degree
  - It is highly recommended, that students without any courses in statistics from their Bachelor's degree, attend at least one of: STAT210 or STAT220

All course codes may be looked up in the Course catalogue: <https://www.nmbu.no/courses>

## Specialization Plant Production and Plant Protection

Year	Semester	5	10	15	20	25	30
2	June bl.						
	Spring p.	Master thesis 30/60 credits					
	January bl.						
	Autumn p.	Specialization courses or master thesis 60 credits					
	August bl.	*					
1	June bl.	*					
	Spring p.	Specialization courses or elective courses					
	January bl.						
	Autumn p.	Specialization courses or elective courses					
	August bl.	SDG302					

\*It may be necessary to start field work/lab for the Master's Thesis in the Spring of the first year of study

### Compulsory specialization courses:

Choose minimum 30 credits from the list below:

Code	Name	Credits	Offered 2022/23	Offered 2023/24
PJH370	Advanced crop production for future plant products	10	Autumn p.	Autumn p.
PLV321	Plant Pathology and Resistance Breeding	10	-	Autumn p.
PLV330	Insect-Plant Relationships	5	-	Spring p.
PLV340	Weed Biology and Weed-Crop Relationships	5	Spring p.	-
BIO324	Plant Adaptation	10	Spring p.	Spring p.
PJH360	Term paper in Plant Production	5	Every term	Every term

### Compulsory: Master thesis

M30-PV/ Master thesis  
M60-PV

30 or 60 credits

### Recommended courses if you do not have similar courses in your bachelor's degree:

Code	Course	Credits	Semester	Offered
PJH212	Forage and Seed Crops	10	Autumn	Every year
PJH250	Plant production in controlled environment	10	Spring	Every year
BOT200	Plant Physiology	10	Autumn	Every year
BOT201	Physiology of Plant Production	5	Spring	Every year

## Specialization Plant Biotechnology

Year	Semester	5	10	15	20	25	30
2	June bl.						
	Spring p.	Master thesis 30/60 credits					
	January bl.						
	Autumn p.	Specialization courses or master thesis 60 credits					
	August bl.	*					
1	June bl.	*					
	Spring p.	Specialization courses or elective courses					
	January bl.						
	Autumn p.	Specialization courses or elective courses					
	August bl.	SDG302					

\*It may be necessary to start field work/lab for the Master's Thesis in the Spring of the first year of study

### Compulsory specialization courses:

Choose minimum 30 credits from the list below:

Code	Name	Credits	Semester	Offered
BIO321	Population Genetics and Molecular Evolution	10	Autumn p.	Every year
BIO327	From gene to function in plants	10	Autumn p.	Every year
BIO351	Genetically Modified Plants - Case Study	5	Autumn p.	Every year
BIO350	In situ RNA hybridization techniques	5	January bl.	Every year
BIO300	Microscopy Techniques	10	Jan., Spring p.	Every year
BIO320	Development Biology	5	Spring p.	Every year
BIO325	CRISPR genome editing	10	Spring p.	Every year
BIO324	Plant Adaptation	10	Spring p.	Every year
BIO320	Development Biology	5	Spring p.	Every year

### Compulsory: Master thesis

M30-PV/ Master thesis

M60-PV

30 or 60 credits

### Recommended course if you do not have a similar course in your bachelor's degree:

Code	Name	Credits	Semester	Offered
BIO244	Plant Biotechnology: Cell- and tissue culture and genetic modifications	5	Spring p.	Every year

## Some optional courses offered in English that may be relevant:

Code	Name	Semester	Credits
<b>Biotechnology</b>			
BIO244	Plant Biotechnology: Cell- and tissue culture and genetic modifications	Spring p.	5
BIO246	Thematic Essay in Plant Biotechnology/Plant Breeding	Spring p.	5
BIO300	Microscopy Techniques	Jan. bl., Spring p.	10
BIO301	Advanced Cell Biology	Spring p.	10
BIO325	CRISPR genome editing	Spring p.	10
BIO326	Genome sequencing; tools and analysis	Spring p.	10
BIO336	Mycology	Autumn p.	5
<b>Plants</b>			
BINT300	Internship plant sciences	Every term	10
BOT200	Plant Physiology	Autumn p.	10
BOT201	Physiology of Plant Production	Spring p.	5
BOT340	Photobiology	Autumn p.	10
PJH212	Forage and Seed Crops	Autumn p.	10
PJH250	Plant production in controlled environment	Spring p.	10
PJH251	Bedding Plant Production of Flowers and Vegetables in Greenhouses	Spring p.	5
<b>Soil</b>			
JORD330	Soil Health and Sustainable Soil Management	Autumn p.	10
<b>Sustainability and agriculture</b>			
BIN302	High throughput phenotyping for precision farming	Autumn p.	10
EDS315	Governance of Plant Genetic Resources and Seed: Laws, Policies and Practices	June block	5
EDS352	Agroecology and Development	Spring p.	10
EDS355	Climate Change and Development	Autumn p.	10
SDG300	Sustainable development goals in plant and animal food systems	January block	5
<b>Zoology and ecology</b>			
ZOOL300	Ecological Entomology	Autumn p.	10
<b>Statistics</b>			
STAT200	Regression Analysis	January bl.	5
STAT210	Design of Experiments and Analysis of Variance	August bl.	5
STAT340	Applied Methods in Statistics	Spring p.	10
STIN370	Selected topics in bioinformatics and applied statistics	Spring p.	5
STIN300	Statistical programming in R	January bl.	5
<b>Master thesis courses</b>			
MINA310	Methods in Natural Sciences	Spring p.	5
MTH300	E-learning Course: Planning and Scientific Writing of a Master's Thesis.....	Autumn p.	5

**Other courses:**

<http://www.nmbu.no/courses/> (Always check the Course catalogue.)

**Time schedule will be available here:**

<https://www.nmbu.no/en/students/administration/teaching-and-exam-schedule>