

# PLANT SCIENCE

## Master's degree program

Master of Science: MSc in Plant Science

Within the Basel life science program, the Department of Environmental Sciences offers a comprehensive 1.5 year Master's course in Plant Science for graduates with a background in biology (B Sc in biology or equivalent). The cornerstone of this course is an individual research project in one of the areas of plant science of about one year duration. The project ends with a written Master's thesis. The practical part is complemented by lectures, seminars, and excursions. The course builds upon the strength of the Department in the areas of physiological plant ecology, plant-microbe interactions, ecosystem sciences and sustainable land use. The program benefits greatly from the leadership of the Zurich-Basel Plant Science Center, a network integrating more than 600 scientists interested in plant science.

### Focal area of teaching and research

The core of the program is the Master's thesis. Here you participate actively with your own research project in current research efforts of a team of plant scientists. You will combine your practical research project with courses designed to broaden your knowledge in plant- and ecosystem sciences and ecology. With a M Sc degree in Plant Science, you will have acquired cutting-edge research capabilities in your chosen field of specialization, as well as broad general knowledge in plant- and ecosystem biology. This will enable you to enter a PhD program in all areas of biology, and to grasp opportunities in the agro-, pharma- and biotech-industries as well as in public research units and private enterprises in the domains of ecology and life sciences.

Main topics include:

- Physiological plant ecology: Plant water relations - plant responses to drought – carbon balance and plant growth.
- Ecosystem sciences: Biodiversity and ecosystem services – stable isotope biogeochemistry – sustainable land use.
- Plant-microbe interactions: Microbial ecology in the soil and rhizosphere – mycorrhizal symbiosis.

### Course structure Master studies

The Master of Science degree is a postgraduate degree that requires a successfully completed Bachelor's program. The program awards 90 ECTS credits in total. The Master's degree program Plant Science is a so-called «mono-course» consisting of only one core subject. Supervised practical work over the course of one year constitutes the core of the studies.

Curriculum Master's Degree in Plant Science	KP
Master's thesis	50
Master's examination	10
Courses (of which 18 ECTS must be taken within the Plant Science course offerings)	30
Total	90

One ECTS credit point roughly equals 30 hours of study.

### Course language

The language of instruction is English. The Master's thesis is generally written in English.

### Exams

Student performance is assessed through course accompanying certificates, proof of course participation according to study contracts, a Master's thesis and a final Master's examination.

### Language stays / Internships

No language stays or internships are required.

### Combination of subjects

The degree programs at the Faculty of Science are generally mono-courses with the possible addition of an in-depth subject and an elective subject.

### Start of program

The program is to be started preferably in fall but can also be started in the spring semester.

### Duration of study

The Master's program lasts three to four semesters. There are no restrictions on the duration of study.

### Further degrees

**Teaching diploma for secondary schools:** The teaching diploma enables teaching within the general school system at the Secondary Level II and is based on the academic degree at Master's level of a university in one or two subjects. In addition, two semesters of vocational training at the school for teacher education at FHNW have to be completed. The diploma does not require a Master's degree in a second subject; however, it is advisable due to better career options later after graduation. Details can be found in UNI INFO «Lehrdiplom für Maturitätsschulen».

Also see: [www.fhnw.ch/de/studium/paedagogik/sekundarstufe-2](http://www.fhnw.ch/de/studium/paedagogik/sekundarstufe-2)

**Doctorate:** A Master of Science in Biology qualifies for a doctorate in biochemistry, biophysics, botany, computational biology, genetics, microbiology, molecular biology, neurobiology, structural biology, cell biology or zoology. Trans-faculty doctorates are possible in the fields of epidemiology, history of the sciences, medical-biological research and pharmacology. The doctoral studies last roughly three years. After the acceptance of the dissertation there follows an oral examination covering the postgraduate studies in the doctoral subject.

### Career opportunities

After successfully completing their Master's degree the graduates can study further for a doctoral qualification or follow a profession in all fields of life sciences. Biology is a subject that covers many disciplines and the career opportunities include research and related activities in the fields of medicine, biotechnology and pharmaceutical industries. The practical advantages of the subject are found not only in basic research but also, increasingly, in business, society and politics. Numerous jobs are available for biology graduates, within the university and also in private industry, government service, schools and organizations, be it as researchers, communicators, teachers or advisors.

## Admission

The following degree allows for direct admission to the Master's degree program Plant Science: Bachelor of Science (BSc) in Biology from the University of Basel. Other Swiss or foreign degrees from an education institution recognized by the University of Basel require approval by the examination commission of the Faculty of Science.

Binding information under: [www.unibas.ch/admission](http://www.unibas.ch/admission)

## Application

Application under [www.unibas.ch/application](http://www.unibas.ch/application); the application fee amounts to CHF 100.-. Application deadline for the fall semester is April 30, for the spring semester 30 November.

## Enrollment

The letter of admission also informs students on the procedure of enrollment. In general, students with a Swiss educational background do not have to be present in person for enrollment.

## Tuition fees and scholarships

**Tuition fees** per semester (also for examination semesters): CHF 850.-

Individual costs of living etc. are not included. Costs for excursions and visits of other labs will have to be covered by the students.

**Scholarships and student loans:** Applications should be sent to the responsible office of the canton in which the parents are eligible to pay their taxes.

## Mobility

Semesters abroad are possible and supported by scholarship programs. The mobility programs facilitate the stay at other Swiss universities or foreign universities. Further Information: Student Exchange, Petersplatz 1, 4001 Basel, T +41 61 207 30 28, [mobility@unibas.ch](mailto:mobility@unibas.ch)

## Further information

**Guidelines and regulations** of the Master's Degree in Plant Science see [www.bio.unibas.ch/en/regulations](http://www.bio.unibas.ch/en/regulations)

## Information about the University of Basel

- The course directory can be found under: [www.unibas.ch/en/Studies/Course-Directory.html](http://www.unibas.ch/en/Studies/Course-Directory.html)
- Basler Studienführer: [www.studienberatung.unibas.ch](http://www.studienberatung.unibas.ch)
- Website: [www.unibas.ch](http://www.unibas.ch)

## Student advice

Questions regarding the study of Plant Science can be discussed with the Study Counselor for the Master Program Plant Science.

## Contacts

### **Study Counselor for the Master Program Plant Science**

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### **Studies Secretariat Biology**

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### **Office of the Dean of Studies of the Faculty of Science**

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### **Student Administration Office of the University of Basel**

Petersplatz 1, 4001 Basel  
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### **Student Advice Center Basel**

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