



UNIVERSITÀ  
DEGLI STUDI  
DI MILANO

# Master's degree programme in **Plant science**

FACOLTÀ DI  
**Scienze e Tecnologie**

Welcome to our Plant Science Master's program, where we're all about nurturing your passion for plants! Our goal? To equip you with top-notch expertise in plant molecular and cell biology, alongside hands-on technical skills. Through immersive internships in diverse international labs, you'll not only deepen your scientific understanding but also refine your practical abilities.

Our program is a unique collaboration between the University of Milan (UNIMI) and the University of Grenoble-Alpes (UGA), France. You'll kick off your journey with a semester at UGA, followed by another at UNIMI. In the second year, the choice is yours-Grenoble or Milan-where you'll further explore your studies and internships.

Financial support? We've got you covered. From assisting with your initial semester at UGA to facilitating your internships abroad, funding is available to ensure you can focus on your academic and professional growth.

## Applications and admissions

With mandatory access test.

## Admission requirements

The requirement for admission entails possessing a thorough and proficient understanding of the fundamental principles within the biological disciplines.

- Graduates of class L-13 Biological Sciences, who are recognized as fully satisfying the curriculum requirements (a certain number of credits in specific scientific-disciplinary sectors specified in the Master's program description: Manifesto degli Studi) and provided they have completed a training course consistent with the indications of the CBUI (Collegio Biologi Università Italiane) as adequately stated by a certificate.
- Other graduate students in class L-13 but who have not followed a training course according to CBUI indications, or in other classes (including class 12: Biological Sciences, ex DM 509/99), may be admitted provided they have acquired at least 90 ects in the scientific-disciplinary sectors (SSD) specified in the Manifesto degli Studi.
- Graduates in the class Agricultural and Forestry Science and Technology (Scienze e tecnologie agrarie e forestali - L-25) and related classes: the credits acquired in scientific-disciplinary sectors specified in the Manifesto degli Studi are going to be considered for admission.

Candidates must possess a robust educational foundation and demonstrate proficiency in English communication if they want to get into the program. These criteria will be evaluated during the admission interview to ascertain suitability for the program.

## English language

Admission requires English proficiency at a B2 level or higher according to the Common European Framework of Reference for Languages (CEFR). Candidates may be also accepted provided their level of English proficiency is unmistakably good.

## Objectives

The Master's in Plant Science program is designed to empower professionals with a robust understanding of basic biology, tailored specifically for the realm of plants! Our focus revolves around providing you with comprehensive scientific knowledge and improving your skills, with a particular emphasis on molecular and cellular components, while also highlighting their practical implications in areas like plant breeding and conservation.

But here's the exciting part: as you journey through our program, you won't just be learning theory—you'll be rolling up your sleeves and getting hands-on with cutting-edge technologies. Picture yourself analyzing complex plant systems like a pro by the time you graduate!

Our program has an international flair, emphasizing English proficiency and providing opportunities for international experience. Why? Because we believe these attributes open doors to a world of career possibilities beyond your wildest dreams!

## Career prospects

Ever dreamed of a career in Plant Science that knows no borders? Look no further! Our Master's program, delivered entirely in English and in close collaboration with UGA, opens doors to both domestic and foreign job markets, giving you a passport to global opportunities.

Dive deep into the molecular and cellular intricacies of plants, from model organisms to agricultural essentials, and explore their dynamic interactions with the environment. By the time you graduate, you'll be armed with cutting-edge insights and skills to tackle high-responsibility roles across various professional domains.

Picture yourself:

- Spearheading groundbreaking research in university labs, research institutions, or industry
  - Pioneering scientific methodologies in plant biology
  - Leading environmental protection initiatives or delving into biotech and food industries
  - Sharing your expertise through scientific outreach or teaching
- Graduates not only qualify for the biologist profession and membership in the National Order of Biologists but also gain access to PhD programs, specialization schools, and other advanced degrees.

So where can this journey take you? From universities and research institutions to biotech industries and beyond, the possibilities are endless. Whether you see yourself as a biologist, biotechnologist, botanist, researcher, or communicator in the field of life sciences, our program sets you on a path to success in diverse sectors, from agro-food to international cooperation and beyond!

# Degree syllabus

I year

COMPULSORY LEARNING ACTIVITIES	ECTS
<b>I semester</b>	
Evolutionary Biology of Plants (UGA)	6
Introduction to Plant development and Signal transduction (UGA)	6
Strategies in Experimental Biology (UGA)	12
<b>II semester</b>	
Plant development (UNIMI)	6
Plant signal transduction (UNIMI)	6

I/II year

FURTHER ELECTIVES	ECTS
<p>The student must choose one of the following courses:</p> <p><b>I semester</b></p> <ul style="list-style-type: none"> <li>- EvoDevo in the green lineage (UGA)</li> </ul> <p><b>II semester</b></p> <ul style="list-style-type: none"> <li>- Plant ecology (UNIMI)</li> <li>- Plant-Environment interactions (UNIMI)</li> </ul>	6
<p>The student must choose one of the following courses:</p> <p><b>I semester</b></p> <ul style="list-style-type: none"> <li>- Chemistry and Cellular Biochemistry (UGA)</li> <li>- Epigenetics and cell differentiation (UGA)</li> <li>- Functional genomics (UNIMI)</li> <li>- Molecular bioinformatics (UNIMI)</li> <li>- Molecular genetics and epigenetics of the cell (UGA)</li> <li>- Photobiology and bioenergy (UNIMI)</li> </ul> <p><b>II semester</b></p> <ul style="list-style-type: none"> <li>- Advanced Plant Cell Biotechnology (UNIMI)</li> <li>- Molecular Plant Breeding and Genetics (UNIMI)</li> </ul>	6
<p>The student must choose one of the following courses:</p> <p><b>I semester</b></p> <ul style="list-style-type: none"> <li>- Biostatistic, Bioinformatics and Modeling (UGA)</li> <li>- High-throughput Biology (UGA)</li> <li>- Patenting and technology transfer (UNIMI)</li> </ul>	6

FURTHER ELECTIVES	ECTS
<p>The student must choose one of the following courses:</p> <p><b>I semester</b></p> <ul style="list-style-type: none"> <li>- Basic statistics and experimental design (UNIMI)</li> <li>- Development of Crop Idiotypes (UNIMI)</li> <li>- Molecular and cellular imaging (UNIMI)</li> </ul> <p><b>II semester</b></p> <ul style="list-style-type: none"> <li>- Environmental Plant Biochemistry and Physiology (UNIMI)</li> </ul>	6
<p>The student must choose one of the following courses:</p> <p><b>I semester</b></p> <ul style="list-style-type: none"> <li>- Communication tools and Scientific English (UGA)</li> <li>- Entrepreneurship and science and scientific English (UGA)</li> </ul>	6

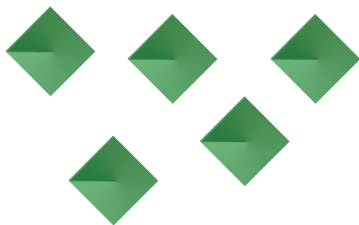
### Elective activities

- Open choice courses (12 ects)

### Compulsory internships

- Laboratory stage (6 ects)
- Internship I (12 ects)
- Final dissertation (24 ects)

# INFO



🎓 **Disciplinary classification:** Biology (LM-6)

🕒 **Duration:** 2 years (120 ects)

📅 **Attendance:** highly recommended for courses held at UNIMI. Attendance at all internships is compulsory, as is attendance at UGA courses.

📍 **Locations:**

- Department of Biosciences - via Celoria, 26 - Milan
- Biology Buildings - via Celoria, 26 - Milan
- Teaching Sector - via Celoria, 20 - Milan
- Golgi Sector - via Golgi, 19 - Milan
- Teaching Sector - via Colombo, 62 - Milan
- Departments of Agricultural and Environmental Sciences  
Production, Landscape, Agroenergy - via Celoria, 2 - Milan

📧 **For information:**

[plant.science@unimi.it](mailto:plant.science@unimi.it)

🌐 **Websites:**

[plantscience.cdl.unimi.it/en](http://plantscience.cdl.unimi.it/en)

[Youtu.be/Hq2XO25wWHQ](https://youtu.be/Hq2XO25wWHQ)



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