

# Université Paris-Cité

## Master Biologie Intégrative et Physiologie

### The Plant Sciences master program

- \* the unique **master degree dedicated to “Plant and Crop Sciences”** in the French capital, associating Université Paris Cité (in the center of Paris) and Université Paris Saclay (20 km South from Paris, easy connections).
- \* providing expert, cutting-edge and multi-disciplinary education and training in **Plant Integrative Biology and Physiology**, in interaction with the environment and other organisms and in their innovative applications in **sustainable crop breeding and protection**, essential issues for the 21th century.
- \* two **programs in M2, M2R “Research in Plant Sciences” (100% in english) or M2Pro “Innovation in quality of plant productions”**, leading to an excellent professional insertion in laboratories (PhD, lab engineer) or in companies (R&D, marketing, homologation...) respectively..
- \* one of the most **stimulating scientific environment** in “Plant Sciences” in EU, with 5 research institutes grouped into a graduate School EUR-SPS, many technological facilities and modern equipments, a large network of private companies.
- \* the opportunity for excellent students to get a **scholarship** from University Paris Cité or from the SPS Graduate School (8 000 € per year in M1 and 6000 euros in M2). For more details, download the “SPS master grants” file on our site.

*For international students, all M1 educational supports, written exams and oral presentations are in english. Most M1 courses are given in french, except some elective ones. The “M2 Research” program is 100% in english and the M2Pro mostly in french.*



### Applications

**when ?** from March 1st to June 12th 2022

**where ?**

French and UE students :

online application on the dedicated “ecandidat” platform  
<https://ecandidat.app.u-paris.fr/sciences1/#laccueilView>

Non UE students : applications on CampusFrance  
<https://www.campusfrance.org>

### Contacts

**master’s supervisors :**

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### More information ?

[master BIP - Université Paris Cité](https://master-bip-universite-paris.fr/) : <https://master-bip-universite-paris.fr/>  
[Université Paris Cité-master BIP-parcours SV](#)

## M1 - Plant Sciences program (60 ECTS)

- \* **Common multidisciplinary courses of the Integrative Biology and Physiology master** (10 weeks): Integrative and Systems Biology, Genetics, Genomics, Bioinformatics, Biostatistics and Molecular biology
- \* **Seven teaching units dedicated to Plant Sciences** (2 weeks each, 4 elective ones)
- \* **An individual research project**
- \* **A two-month internship** in a laboratory or in a company (France or another country)
- \* Cutting-edge methodologic and practical training in link with current researches.
- \* Initiation to professional skills and entrepreneurship
- \* Teaching mainly provided in french, except for some elective units\*. For international students, educational support, oral presentations and reports will be in english.
- \* A personal follow-up and orientation tutor for each student

S1	ECTS	S2	ECTS
Integrative biology	3	Biological system physiology	3
Methods in biological analyses (biostatistics informatics for biologists, molecular biology)	6	Research project	3
English	3	Applied Genetics and plant breeding	4
Genome Expression and Organization	3	Crop genomics and bioinformatics	4
Genetics and biodiversity	3	Plant nutrition and agronomy OR Genome engineering and RNA interference*	4
Plant integrative biology workshop	4	Seed biology OR How to build a plant*	4
Practical course on plant responses to stress* OR Fonctionning of the innovative company	4		
Plant Integrative Physiology OR Biotechnologies + Plants-Insects	4	Internship (2 month minimum, mid-April to mid-June)	8

## M2 - Plant Sciences program (60 ECTS)

The master 2 is divided into two separate programs : the “Research” program (M2R) or the “Professional- Innovation and Quality of Plant Products » program (M2Pro).

### M2R “Research in Plant Sciences”

- \* a high level and pluridisciplinary education training dedicated to researches in **Plant integrative biology (from genomes to organisms)** and their applications
- \* prepares the students for working in **scientific research, higher education, research and development** (researcher or engineer), scientific communication, science and technology monitoring.
- \* **100% in english**

**S3: 6 courses** (5 ECTS each, september to december): Metabolic physiology, Signaling mechanisms, Genomics and plant breeding, Epigenetics, Cell biology, Pathogeny-symbiosis

**S4: 6-month research internship** (30 ECTS, january to june)

### M2Pro « Innovations in Quality and crop productions- IQPV »

- \* a high-level scientific education in **plant physiology, crop protection, plant breeding/seed and sustainable agronomy.**
- \* both scientific and entrepreneurship skills, allowing various professional functions in **private and public companies** (R&D, products accreditation and regulation, marketing, strategic and regulatory monitoring)
- \* an active network of professionals, companies and alumni.
- \* mostly in french

**S3: 7 courses** (30 ECTS, september to february): Plant health, Genomics and plant breeding, Agricultural practices in a changing climate, Key business functions, Strategic marketing and communication, Accreditation of plant protection products, Technological and Competitive Intelligence

**S4: 6-month internship in a private company** (from march to august)

