

Master of Integrative Biology and Physiology

The “Plant Sciences” Master program Paris University (M1 and M2)

- * a **master degree dedicated to “Plant and Crop Sciences” in Paris**, the French capital
- * providing expert, cutting-edge and multi-disciplinary education and training in:
 - **Plant Integrative Biology and Physiology**, in interaction with the environment and other organisms
 - **Sustainable crop breeding and protection**, essential issues for the 21th century.
- * one of the most **stimulating scientific environment** in “Plant Sciences” in EU, with 5 research institutes grouped into a graduate School EUR-SPS, more than 50 teams, many technological facilities and modern equipments, a large network of private companies
- * opportunity for excellent students to obtain a **scholarship of 8 000 € per year in M1 and 6000 euros in M2**, as well as a **PhD grant** (file “SPS master grants” to be downloaded on the master site) thanks to the SPS Graduate School.
- * located on **two modern campuses of Paris : Universit  Paris Cit **, in the center of Paris, and **Paris Saclay**, 25 km South from Paris (easy connection by public transports and student accommodations and facilities).

All courses of the “M2 Research” program, as well as most of the educational supports and three teaching units of the M1 year, are provided in english.



Master of Integrative Biology and Physiology

Master 1 « Plant Sciences » program (M1, 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)
- * An individual research project
- * A two-month internship in a laboratory or in a company (France or other country)
- * Cutting-edge methodologic and practical training in link with current researches.
- * Initiation to professional skills and entrepreneurship
- * Teaching mainly provided in french but with most educational supports and several oral presentations and reports in english, one english course (30 h)
- * A personal follow-up and orientation support for each student (pedagogic tutor)

M1 training program			
semester 1	ECTS	semester 2	ECTS
Integrative Biology	3	Physiology of systems	3
Methods in biological analyses (biostatistics, bioinformatics, molecular biology)	6	Research project	3
English	3	Applied Genetics and plant breeding	4
Genome Evolution et Organization	3	Crop genomics and bioinformatics	4
Biodiversity and Genetics	3		
Plant Integrative Biology workshop	4	Elective courses	4
Elective courses		<i>Plant nutrition and agronomy OR Genome engineering and Interference RNA</i>	4
<i>Plant Sciences hand-on practical course OR Functioning of the innovative company</i>	4	<i>Seeds : from biology to industry OR Plant developments</i>	
<i>Plant Integrative Physiology OR Biotechnologies / Plants-Insects</i>	4	Internship (minimum 2 months)	8

grey = common courses of the BIP master

green : courses specific to the « Plant Sciences » program (shared with the BIP master of Paris-Saclay university)

1 ECTS generally corresponds to 10h to 12 h of teaching



“Plant Sciences” M2 training (60 ECTS)

The master 2 is divided into two separate programs : the “Research” program or the “Professionnal-Innovation and Quality of Plant Products » program. Both programs are entirely shared with Paris Saclay University.

1- RESEARCH PROGRAM

- * a high level education training dedicated to Plant Sciences,
- * prepares the students for working in scientific research, higher education, research and development, scientific communication, science and technology monitoring.
- * an individual follow-up (one teacher tutor per student)
- * open to international students and research (teaching mainly in english)
- * **Semester 1** : 6 scientific courses in Plant Sciences (2 weeks each)
- * **Semester 2** : a 6-month research internship

M2 « Research » program			
semester 1	ECTS	semester 2	ECTS
Plant genomics and breeding	5	Research internship 6 months, from january to june	30
Cellular biology : from imaging to function	5		
Metabolic physiology	5		
Signaling mechanisms in plants	5		
Pathogenesis and symbiosis	5		
Plant epigenetics	5		

2 PROFESSIONNAL - « Innovations en Qualité et Productions végétales » programme

- * a high-level scientific education with various career openings in private and public companies, mainly in crop protection, plant breeding and sustainable agronomy.
- * both scientific and entrepreneurship skills, allowing various professional functions (research and development, products accreditation and regulation, marketing, strategic and regulatory monitoring)
- * an active network of professionnals, companies and alumni.
- * **Semester 1** : 6 units teaching units (from september to february)
- * **Semester 2** : a 6-month internship in a private company (from march to august)

M2 Professionnal program			
semester 1	ECTS	semester 2	ECTS
Plant genomics and breeding	5	Internship (6 months, private company, from march to august)	30
Key business functions	5		
Strategic Marketing and Communication	5		
Plant protection	5		
Accreditation of plant protection products	5		
Sustainable agronomy	2.5		
Technological and Competitive Intelligence	2.5		



Contacts and application

How to apply to the master:

1-For students residing inside EU or in countries not affected by CAMPUS France :

For the M1 year : apply on the “**Mon master**” national platform , from March 22th to April 18th 2023

For the M2 year : apply on the “**e-candidat**” platform (accessible from the Paris University website), <https://ecandidat.app.u-paris.fr/sciences1/#!accueilView> , from March 1st to June 14th 2023

2-For students residing in non-EU countries (list of 43 countries) :

apply online on **CAMPUS France** <https://www.campusfrance.org/fr->
from October 2022 to January 2023

Apply to a SPS- master Grant:

when ? before April **18th 2023**

Where? https://www6.inrae.fr/saclay-plant-sciences_eng/Focus-on/SPS-Scholarships-for-master-students

Contacts:

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If you encounter any problem or need more information, don't hesitate to contact us by mail..

