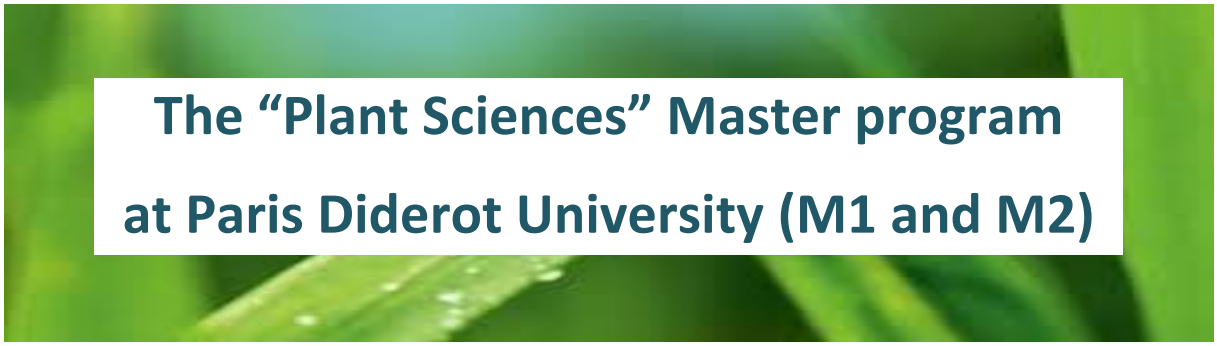
Master of Integrative Biology and Physiology



The "Plant Sciences" Master program at Paris Diderot 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 Europe, with 5 institutes of research grouped into a dedicated 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 Paris Saclay Plant Sciences Graduate School.
* located on **two modern campuses** of **Paris Diderot (Université de Paris)**, in the center of Paris and of **Paris Saclay**, 25 km South from Paris (easy connection by public transports and student accommodations and facilities).

The great majority of the "M2 Research" courses and of the educational supports of the M1 are provided in english.

Master of Integrative Biology and Physioloy

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.
* Iinitiation 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		*Plant nutrition and agronomy OR Genome engineering and Interference RNA*	4
Plant Sciences hand-on practical course OR Functionning of the innovative company	4	*Seeds : from biology to industry OR Plant developments*	
Plant Integrative Physiology OR Biotechnologies / Plants-Insects	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 "Profesionnal- Innovation and Quality of Plant Products » program.

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	7.5	**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	2.5		

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	7.5	**Internship** (6 months, private company, from march to august)	30
Key business functions	2.5		
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 informations

How to candidate ?

when : before June 17th for the M2 OR before 1st July for the M1

where : on the CAMPUS France dedicated site for some countries OR on the ecandidat site of Paris Diderot university (https://etudes-formations.univ-paris-diderot.fr/lapplication-ecandidat/, Candidature annuelle en **Master,** create your account and follow the procedure).

If you have problems to fill the form don't hesitate to contact our secretary

How to postulate to a SPS-Grant

before 1rst June 2019

all informations are given in the « SPS master grants » file that can be downloaded on the master site