

L'institut Agro | Montpellier SupAgro
Course Offer 2021-2022
for Incoming Exchange Students

SPRING SEMESTER

L'institut Agro | Montpellier SupAgro 2021-2022

SPRING SEMESTER TRACK OFFER

Ctrl-Click on the link of the Track on which you would like more information

 French

 English

 French and  English

Sept	Oct	Nov	Déc	Jan	Fév	Mars	Avr	Mai	Juin	Juil	Août	Sept
------	-----	-----	-----	-----	-----	------	-----	-----	------	------	------	------

VINIFERA - Viticulture and Enology – 30 ECTS	Internship 4 ECTS / month
--	------------------------------

DATA MANAGER - Data Manager for environmental project ** Montpellier - 21 ECTS	JRL - Junior Research Lab 14 ECTS
--	--------------------------------------

PLANT SCIENCES - Plant Sciences ** Montpellier - 21 ECTS	JRL - Junior Research Lab 14 ECTS
--	--------------------------------------

AGROECOLOGY - Agroecology ** Montpellier - 21 ECTS	JRL - Junior Research Lab 14 ECTS
--	--------------------------------------

Mixed Track (see next page)** Montpellier - 21 ECTS	JRL - Junior Research Lab 14 ECTS
---	--------------------------------------

TED2 - Sustainable Development Policies and Strategies ** Montpellier - 21 ECTS	JRL - Junior Research Lab 14 ECTS
---	--------------------------------------

AGROALIMENTAIRE - Agri-Food Montpellier - 21 ECTS	JRL - Junior Research Lab 14 ECTS
---	--------------------------------------

DAAS Dev – Agric. and Food Systems in Southern Countries ** Montpellier - 21 ECTS	JRL - Junior Research Lab 14 ECTS
---	--------------------------------------

DAAS Agrifood – Agric. and Food Systems in Southern Countries ** Montpellier - 21 ECTS	JRL - Junior Research Lab 14 ECTS
--	--------------------------------------

Mixed Track (see next page)** Montpellier - 21 ECTS	JRL - Junior Research Lab 14 ECTS
---	--------------------------------------

EAU et AGRICULTURE 1 - Water and Agriculture (cycle and managt of water in agrosystems) Montpellier - 22,5 ECTS	JRL - Junior Research Lab 14 ECTS
---	--------------------------------------

EAU et SOCIETE 1 - Water and Society (econ-sociol-management) Montpellier - 22,5 ECTS	JRL - Junior Research Lab 14 ECTS
---	--------------------------------------

<i>If you prefer, you can combine one of the courses with an internship instead of the Junior Research Lab</i>	Internship 7 ECTS
--	----------------------

<i>If you prefer, you can combine one of the courses with the FLOW spring course instead of the Junior Research Lab</i>	FLOW Spring Course - Food, Living Organisms 8 ECTS
---	---

You can just attend the FLOW Spring Course

FLOW
Spring
Course -
Food, Living
Organisms
8 ECTS




















You can just attend the Junior Research Lab

Junior Research Lab
14 ECTS

How to Choose from the Spring Semester Track Offers?

Tracks and Teaching Units

- A Track corresponds to a line on the Track offers chart. Each Track is made up of several Teaching Units (UE). Each Track delivers 30 ECTS per semester.
- Students have two options:
 - 1) choose one track (1 line on the chart) and attend all the Teaching Units; or
 - 2) Mixed track: combine the Teaching Units (UE) of the tracks “Agroecology”, “Data Manager for environmental project”, “Plant Sciences”, “Sustainable Development Policies and Strategies”, “Agricultural and Food Systems in Southern Countries – AgriFood” and “Agricultural and Food Systems in Southern Countries” - Development (marked ** on the chart), selecting 1UE per period.

	Period 1 (February) – 7 ECTS		Period 2 (March) – 7 ECTS		Period 3 (April) – 7 ECTS	
Data Manager	Collecting Environmental Data		Environmental Data Processing and Analysis		Mobile and Web Management of Environmental Data	
Plant Science	Designing New Crops for the Future		Training in AGROPOLIS Research Community: Special Topics in Advanced Plant Sciences		Evolutionary Applications in Agriculture: Evolutionary Concepts for the Management of Agro-Ecosystems	
Agroecology	What is Agroecology?		Agroecology in Depth Knowledge		The Agroecological Transition Implementation-	
TED2 - Sustainable Development Policies and Strategies	Coping with the collapse		Sustainability and Society		Social Economy and Agroecology	 
DAAS Agrifood - Agricultural and Food Systems in Southern Countries	Analyser les filières agricoles et agroalimentaires + Comprendre les systèmes alimentaires et leurs enjeux		Dynamique et Contrôle des Procédés de Transformation		Produits, procédés, qualité + Travaux pratiques intégrés	
DAAS Dev - Agricultural and Food Systems in Southern Countries	Analyser les filières agricoles et agroalimentaires + Comprendre les systèmes alimentaires et leurs enjeux		Milieus, Agricultures et Ressources		Gestion Sociale des Ressources	

Internship (7 ECTS) or Junior Research Lab (14 ECTS)

At the end of the Tracks, students can do :

- A two-month **Internship** in a laboratory or a company (more information p.16) or
- A **Junior Research Lab** for 2 months (more information p.15)

Foreign Languages

- Before the beginning and throughout the semester Montpellier SupAgro offers **free of charge Language Courses**:

French	For all international students, except French speaking students	<i>Intensive Courses:</i> 30 hrs (3 hrs/day) + <i>Regular Courses:</i> 2hrs/week throughout the semester	<i>Admission level :</i> B1	1 ECTS + 1 ECTS
English Spanish German	For all students	1hr30mins/week throughout the semester	<i>Admission level:</i> English: B1 to C1 Spanish / German : A1 to C1	1 ECTS

Junior Research Lab – JRL

Organization and credits

The course is a full time 8-week-long course (May and June). Successful completion of this course brings 14 ECTS credits.

Teaching language

English (B2 level)

Objectives

The module is based on a research project but is not an internship under the supervision of a senior scientist who has already framed the entire project. It is a learning by researching and doing module. From seminal ideas of projects proposed by a team of experienced teachers, experts in several disciplines (plant biology, genetics and evolution, soil and water science, numeric agriculture or social sciences), small groups of 4-5 students are assembled on the basis of their complementary skills. They have to identify a scientific question from a literature review, design their own experiments, acquire and analyze data, write a scientific paper and realize a flash oral presentation. We aim to train them to work in a cooperative, open and sharing way respecting the principles of ethical, open and reproducible science.

The students are accompanied by a step-by-step process. Courses for project management, data management, data analysis, English writing, and literature management are given all along the 8 weeks consistently according to the increasing needs of the students.

Students are accompanied and taught in the different disciplines according to the needs of their project. They are asked to develop their engagement, self-learning, interculturality, curiosity, critical thinking and responsibility.

The module is hosted in a dedicated space to which they have a full-time access.

Course content

Students activities are split into a group project (50%) and transversal activities (50%).

The module is organized with three main activities:

- (i) active learning sessions providing in-depth knowledge and practical skills to manage and analyze data.
- (ii) seminars covering the diverse facets of open and reproducible research.
- (iii) scientific project: field visit, literature review, experimental design, data production, data management plan, data analysis, scientific writing and open peer review among groups. Students are mentored by teachers and expert scientists for their project.

Requirements

The course is open to Junior or Senior Students in agronomy, with at least attending a final year of bachelor in science. We expect some basics in statistics (also possibly taken at a previous module in Montpellier SupAgro). No other specific prerequisites but English B2 level.

Grades

The final mark will be a weighted average between an individual exam (peer review of another group's project article and 180' flash oral presentation) and a group project (scientific article).

Partnership

Research Units: potentially all (120) research units from MUSE

L'institut Agro | Montpellier SupAgro 2021-2022

INTERNSHIP

- International students can apply for a research internship in one of the 21 **Montpellier SupAgro Joint Research Unit (UMR)**.
 - Students must personally take steps to find the internship. For that, they should consult the list of the UMR, at the end of this document and/or consult the UMR websites
<https://en.montpellier-supagro.fr/research/scientific-policy/research-units> (English)
<https://www.montpellier-supagro.fr/recherche/dispositifs-de-recherche> (French)
 - Students should send a message to the contact persons of the chosen UMRs of interest, and indicate the period they are interested in and the topics they would like to work on.
 - The application may be accepted if the project is compatible with the work in progress and the availability of the targeted research teams.
- Internship can begin at any time of the year.
- Internship may last from 2 to 6 months. Internships of more than two months are remunerated but more difficult to obtain.
- Proficiency is required in French or in English. In some cases, other languages can be accepted.

Contacts for Students Internships Montpellier SupAgro Joint Research Units (UMR)

MPRS Department - Soils, Water, Crops and Livestock Systems Department

UMR Eco&Sols – Functional Ecology & Biogeochemistry of Soils

The aim of Eco&Sols is to use ecological engineering to propose scientifically-based practices to maintain and improve the agricultural and environmental functions of agro-ecosystems. The research undertaken by Eco&Sols seeks to describe and understand the ecological processes of primary production and the regulation of the carbon and nutrient fluxes in the agro-systems.

Information: <http://www.umr-ecosols.fr/en/>

Members: INRAE, CIRAD, IRD, L'institut Agro

Contact: claire.marsden@supagro.fr

UMR LISAH - Laboratory for the Study of Interactions between Soil, Agro-Systems and Water Systems

LISAH focuses its work on hydrology, the transfer of contaminants and erosion of highly developed and cultivated soils. It also studies the spatial proprieties of these areas, and their evolution. These studies aim at analyzing the issues of water and soils in cultivated areas.

Information: <https://www.umr-lisah.fr/?q=en>

Members: INRAE, IRD, AgroParisTech, L'institut Agro

Contact: Julien.fouché@supagro.fr ?

UMR LSTM – Tropical and Mediterranean Symbioses Laboratory

LSTM studies microbiology and biology of plants, based on a multidisciplinary and integrative approach. It aims at understanding the molecular mechanism influencing the establishing of symbioses, as well as their role in ecosystematic services. It also studies the biodiversity of symbiotic microorganisms.

Information: <https://umr-lstm.cirad.fr/>

Members: UM, CIRAD, IRD, INRAE, **L'institut Agro**

Contact: brigitte.brunel@supagro.fr

Internship offers: <http://umr-lstm.cirad.fr/offres-d-emploi-et-propositions-de-stages>

UMR SELMET – Livestock Systems in Mediterranean and Tropical Regions

SELMET works on animal production agro-ecosystems in warm climates, in normal and harsh conditions. The extreme conditions under which some of these systems function challenge the limits of ecological intensification.

Information: <http://umr-selmet.cirad.fr/en>

Members: INRAE, CIRAD, **L'institut Agro**

Contact: nathalie.agbagla@supagro.fr - charles-henri.moulin@supagro.inrae.fr

UMR ABSys - Biodiversified Agrosystems

ABSys supports the agroecological transition by producing knowledge and methods for the assessment and design of tree crop-based cropping systems, including agroforestry systems, in a wide range of Mediterranean and tropical environments.

Information: <https://www.cirad.fr/en/our-research/research-units/absys>

Members: CIRAD, INRAE, Ciheam-IAM, **L'institut Agro**

Contact: aurelie.metay@supagro.fr

BE Department – Biology and Ecology

AGAP Institute – Genetic Improvement & Adaptation of Mediterranean and Tropical Plants

AGAP Institute produces, collates and shares knowledge, methods and technologies on genetics, physiology and evolution of cultivated plants, as well as innovative and collective management strategies. Our objectives are to create a diversity of crop varieties and to promote plants adapted to the multiple challenges of Mediterranean and tropical agriculture, through interactions with our partners and various stakeholders. About 20 tropical and Mediterranean crops are studied, covering a very wide range of biological characteristics and uses. Considering the diversity of plants and their multiple uses as an opportunity to enrich our research and activities, we aim to impact the development of more efficient agroecosystems, through multidisciplinary approaches. This includes training and capacity building.

Information: <http://umr-agap.cirad.fr/en>

Members: CIRAD, INRAE, UM, **L'institut Agro**

Contact: dominique.this@supagro.fr – nathalie.pivot@cirad.fr - laurent.torregrosa@supagro.fr

Internship offers: <https://www.cirad.fr/en/jobs/internships> or <https://jobs.inrae.fr/en/news/complete-internship>

UMR PHIM – Plant Health Institute Montpellier

PHIM studies the interactions between the plant and its biotic environment that have an impact on plant health, growth and productivity. Several of our researchers are located in Kenya, Ivory Coast, French Guyana and Costa Rica. We also have research platforms in Burkina-Faso, Cambodia and China.

Information: <https://umr-phim.cirad.fr/>

Members: INRAE, CIRAD, IRD, **L'institut Agro**

Contact: claire.neema@supagro.fr - gerben-martijn.ten_hoopen@cirad.fr, - gilles.bena@ird.fr

UMR BPMP – Biochemistry and Molecular Physiology of Plants

B&PMP is defined as an Integrative Biology research department, focused on the mechanisms of plant responses and adaptation to variable abiotic environmental conditions.

Information: <https://www1.montpellier.inra.fr/wp-inra/bpmp/en/>

Members: INRAE, CNRS, UM, **L'institut Agro**

Contact: pierre.berthomieu@supagro.fr - anna.medici@supagro.fr

Internship offers: <https://www1.montpellier.inra.fr/wp-inra/bpmp/en/>

UMR CBGP - Centre for Biology and Management of Populations

CBGP carries out research in the fields of systematics, genetics and ecology of natural populations and communities of animals (mainly arthropods and small mammals), for the purposes of agriculture, public health and biodiversity. It aims to characterize the diversity of these organisms, and to understand and predict their evolution in a context of global changes. CBGP leads academic researches while making so that the results of some research programs can drive to the elaboration of scenarios or decision-making tools dedicated to the management of pest and diseases or the conservation of endangered species.

Information: <https://www.cirad.fr/nos-recherches/unites-de-recherche/cbpg>

Members: CIRAD, INRAE, IRD, **L'institut Agro**

Contact: marie-stephane.tixier@supagro.fr - serge.kreiter@supagro.fr – jean-francois.martin@supagro.fr

UMR LEPSE – Ecophysiology Laboratory of Plants under Environmental Stress

LEPSE produces methods and knowledge to help maximizing crop production with less input, essentially water. This objective was initially assigned in the context of the necessity to limit water use by agriculture. Ongoing climate change, with global temperature elevation, increased probability of heat waves and drought episodes have led us to widen our domain of research.

Information: https://www6.montpellier.inrae.fr/lepse_eng/

Members: INRAE, **L'institut Agro**

Contact: anne.pellegrino@supagro.fr

Internship offers: <https://www6.montpellier.inrae.fr/lepse/Travailler-et-etudier-avec-nous/M2-Ingenieur>

CEFE – Centre for Functional and Evolution Ecology

CEFE is currently the largest French research center in Ecology and Evolutionary Biology. Its mission is to perform independent, fundamental scientific research on the dynamics and evolution of biodiversity, planetary environmental change, and sustainable development. The CEFE works at a great variety of field sites around the world, but developed particular expertise in Mediterranean and tropical ecosystems. Its main objectives are to understand the dynamics and functioning of ecological systems, and to develop scenarios on their evolution as well as strategies for their conservation and their restoration

Information: <http://www.cefe.cnrs.fr/fr/>

Members: UM, CNRS, UM3, IRD, EPHE, INRAE, **L'institut Agro**

Contact: elena.kazakou@supagro.fr

Internship offers: <http://www.cefe.cnrs.fr/fr/emploi-stage-2/offres-de-stages>

SABP Department - Department of Sciences for Agro-Bio-Processes

UMR G-EAU - Water Management, Actors, Uses

G-EAU conducts researches on hydrosystems, from physical description to integrated water management; it contributes to the design and evaluation of facilities to develop innovating solutions and policies for improved water management. The unit is strongly involved in the UNESCO water center ICIREWARD and hosts many students from the MSc programme Water Sciences ('Water and Agriculture' and 'Water and Society') for their research internships

Information: <http://www.g-eau.fr/index.php/en/>

Members: INRAE, CIRAD, IRD, AgroParisTech, BRGM, **L'institut Agro**

Contact: gilles.belaud@supagro.fr, francois.colin@supagro.fr - armand.crabit@supagro.fr

Internship offers: <http://www.g-eau.fr/index.php/en/jru-g-eau/recruitment>

UMR IATE – Agro-Polymer Engineering and Emerging Technologies

IATE is active in the field of agrifood and green chemistry. It comprises seven research teams who generate knowledge regarding the structural-functional properties of plant-based products upon transformation to food, biomaterials, biomolecules and bioenergy. Societal challenges, such as food security and a transition towards a bio-based society, serve as fuel for creativity and new research activities.

Information: <https://umr-iate.cirad.fr/en>

Members: INRAE, UM, **L'institut Agro**

Contact: maeva.subileau@supagro.fr – eric.dubreucq@supagro.fr

UMR ITAP – Technologies and methods for the agriculture of tomorrow

With the aim of developing equipment for a more sustainable agriculture and for services related to the environment, UMR ITAP develops the scientific and technical bases of the following topics: information and associated systems (optical measurements, decision support systems), eco-technologies for sustainable agricultural production (including equipment for crop protection and maintenance), environmental and social assessment based on life cycle assessments.

Information: <https://itap.inrae.fr/>

Members: INRAE, **L'institut Agro**

Contact: bruno.tisseyre@supagro.fr

Internship offers: https://itap.irstea.fr/?page_id=59

UMR MISTEA – Mathematic, Computing & Statistic for Environment and Agronomy

The activities of MISTEA concern the development of mathematical, statistical and computer science methods dedicated to analysis and decision support for Agronomy and Environment, with particular emphasis on the temporal dimension and complexity.

Information: https://www6.montpellier.inrae.fr/mistea_eng/

Members: INRAE, **L'institut Agro**

Contact: benedicte.fontez@supagro.fr

Internship offers: <http://www6.montpellier.inrae.fr/mistea/Offres-de-stage-these-emploi>

UMR QUALISUD – Integrated Quality Food System

QUALISUD aims at developing an integrated approach for production and preservation of products and food with optimum organoleptic, health and nutritional optimal qualities.

Information: <http://umr-qualisud.cirad.fr/en/the-research-unit>

Members: CIRAD, UM, Avignon Université, IRD, Université de la Réunion, **L'institut Agro**

Contact: manuel.dornier@cirad.fr - antoine.collignan@supagro.fr

UMR SPO – Sciences for Enology

SPO is one of the most important organizations involved in research in enology worldwide. It comprises 3 research teams: Adaptation, Diversity, Ecology of yeasts (ADEL), Alcoholic fermentation: Yeasts, Aromas, Metabolism (FLAM), Biomolecules of enological interest (BIO). Close interactions with the INRAE Experimental Unit of Pech Rouge-Narbonne (UE PR) allow the development of research projects up to pilot or pre-industrial scale and provide unique opportunities for innovation and transfer.

Information: https://www6.montpellier.inrae.fr/spo_eng/

Members: UM, INRAE, **L'institut Agro**

Contact: bruno.blondin@supagro.fr

SESG Department - Sciences Economiques, Sociales et de Gestion

UMR INNOVATION – Innovation and Development in Agriculture and Agri-Food Sector

The mission of INNOVATION is to inform private and public actors' decision-making by producing knowledge on the processes of innovation and development in agricultural and food systems. Its research focuses on innovation processes, ranging from understanding the objectives of the actors wanting to innovate to analyzing innovations' impact on development. Its research also covers the methods required to support the actors who innovate.

Information: <https://umr-innovation.cirad.fr/en>

Members: CIRAD, INRAE, **L'institut Agro**

Contact: stephane.de-tourdonnet@supagro.fr

UMR CEE-M – Center of Environmental Economics- Montpellier

CEE-M aims at developing a plurality of works through specific tools (Market Econometrics, behavioral economics, experimental economics, public economics, history of economics thought, micro economy, social economy, game theory). The targeted areas are as follow: Risks, Preferences and behaviors; Public decision, collective actions and social ethic; Competition, regulations and network industry and finally Environment, natural resources and biodiversity.

Information: <http://www.cee-m.fr/>

Members: INRAE, CNRS, UM, L'institut Agro

Contact: pauline.lecole@supagro.fr

UMR MoISA – Montpellier Interdisciplinary center on Sustainable Agri-food systems (Social and nutritional sciences)

MoiSA gathers researchers and lecturers in social sciences and nutrition from CIRAD, INRAE, IRD, Montpellier Supagro and Ciheam-IAMM, under Muse (Montpellier University of Excellence). We research stakeholders' strategies and behaviour in the agri-food systems of Mediterranean and tropical areas, and their results in terms of food security and sustainable development. The main disciplines of research are in social sciences: micro-economics, economics of organization, management, sociology, anthropology, political science); and public nutrition.

Information: <http://umr-moisa.cirad.fr/>

Members: CIRAD, INRAE, IRD, CIHEIAM-IAMM, L'institut Agro

Contact: lucie.sirieix@supagro.fr

Internship offers: <http://umr-moisa.cirad.fr/offres-stages-theses-post-doc>

UMR SENS – Savoirs, Environnement, Sociétés

SENS is structured around the following objectives: 1) to produce knowledge on the mechanisms underlying the relations and tensions that make up the society-environment nexus; 2) to accompany social and institutional initiatives and innovations aimed at sustainably influencing, at different scales, the trajectories of ecological and social systems; 3) to consolidate reflexive approaches to our role as scientists with regard to the complexity of the phenomena studied, their ethical and political dimensions, and the necessary co-construction of knowledge and practices oriented towards sustainability.

Information: <https://umr-sens.fr/>

Members: IRD, UM3, L'institut Agro

Contact: pascale.maizi@supagro.fr - marie-jeanne.valony@supagro.fr

