Agropolis International training and education

in the Biodiversity field

Agropolis International, proposes a complete training-education programme provided through its member institutions (universities and engineering schools, as well as vocational training institutions).

The training-education programme includes more than 80 diploma courses (from Bac +2 to Bac +8: technician, engineering degree, Master's, PhD), as well as vocational training modules (existing or developed upon request).

The tables below outline the training-education courses related to the Biodiversity domain. They specify the diploma levels, a description of the training and the institutions where the training is provided.

Training-education programmes

Level	Degree	Title	Institution
Bac +3	***Licence*** **(BSc)**	Biology	UM2
		Geoscience – Biology - Environment Scheduled to begin in September 2011	UM2
		Biology	Univ. Nîmes
		Biology - Ecology	UPVD
		Earth and environmental sciences	UPVD
	Licence professionnelle **(BSc with professional scope)**	Sustainable management of areas and resources	UPVD
		Agricultural management of rural natural areas	Montpellier SupAgro, UM3, EPLEFPA Lozère
		Environment-friendly agriculture	Montpellier SupAgro, UM3, EPLEFPA Carcassonne
		Environment-friendly viticulture	Montpellier SupAgro, UM3, CFPPA Bordeaux, CFPPA Beaune
		Coordinator of educational projects on the environment to promote sustainable development (CEEDDR)	UM3, Montpellier SupAgro
		Study and development of natural environments (EDEN) Focus integrating the BSc programme Geoscience – Biology - Environment	UM2
Bac +4	**Diplôme d'Université** ***(University certificate)***	Aquaculture and fisheries project manager	UM2
Bac +5	***Master*** **(MSc)**	Biology – Geoscience – Agroresources – Environment (BGAE) Focus 'Biodiversity, ecology, evolution' (BEE)	UM2, Montpellier SupAgro
		Biology – Geoscience – Agroresources – Environment (BGAE) Focus 'Diversity and evolution of plants and symbionts' (DEPS)	UM2, Montpellier SupAgro
		Biology – Geoscience – Agroresources – Environment (BGAE) Focus 'Parasite ecology and evolution' (EEP)	UM2
		Biology – Geoscience – Agroresources – Environment (BGAE) Focus 'Biodiversity'	UM2, University of the Aegean (Greece)
		Biology – Geoscience – Agroresources – Environment (BGAE) Focus 'Medical and veterinarian entomology' (EMV)	UM2, Univ. Abomey (Bénin)
		Biology – Geoscience – Agroresources – Environment (BGAE) Focus 'Natural and cultivated ecosystem function' (FENEC)	UM2
		Biology – Geoscience – Agroresources – Environment (BGAE) Focus 'Tropical plant biodiversity' (BVT)	UM2, Université Paris VI, Museum national d'Histoire Naturelle
		Aquaculture and fisheries project manager	UM2
		Biology – Geoscience – Agroresources – Environment (BGAE) Focus 'Microbial systems' (SM)	UM2, UM1

Level	Degree	Title	Institution
Bac +5		Biology – Geoscience – Agroresources – Environment (BGAE) Focus 'Paleontology, phylogeny and paleobiology' (PPP)	UM2, Univ. Poitiers, Univ. Rennes 1
		Biology – Geoscience – Agroresources – Environment (BGAE) Focus 'Development, interactions and evolution of living organisms' (DINEV)	UPVD
		Life and earth sciences Specialization 'Environment and biodiversity management' (EGB)	EPHE
		Rural and agrifood economics (ERA) Specialization 'Agriculture, food and sustainable development' (A2D2)	UM1, Montpellier SupAgro, IAM.M
		Human and social sciences (SHS) Specialization 'Innovation and development of rural areas' (IDTR)	UM3, Montpellier SupAgro, IAM.M
		MSc in Human and social sciences (SHS) Specialization 'Rural development stakeholders in hot regions' (ADR)	UM3, Montpellier SupAgro
		Biology, Chemistry, Environment Specializations 'Biodiversity and sustainable development' (BDD), 'Aquatic environments' (MA), 'Bioactive molecules' (MoBi)	UPVD
		Biology – Geoscience – Agroresources – Environment (BGAE) Focus 'Aquatic bioresources in Mediterranean and tropical environments' (BAEMT), 'Biotraceability, biodetection and biodiversity' (BB), 'Ecology and biodiversity management engineering' (IEGB)	UM2
		Biology – Geoscience – Agroresources – Environment (BGAE) Focus 'Infectious, vectorial and nutritional diseases' (MIVA)	CIRAD, UM2, Institut Pasteur, Kasetsart University (Thailand)
		Geoscience and marine environments Specialization 'Applied marine geoscience' (GMA)	UPVD
		Life and earth sciences Specialization 'Environment and biodiversity management' (EGB)	EPHE
	***Master d'école d'ingénieur* (Engineering MSc)**	Agronomy-food science for hot regions Specialization 'Environmental management of tropical ecosystems and forests' (GEEFT)	AgroParisTech, Montpellier SupAgro
		Agronomy-food science for hot regions Specialization 'Tropical and Mediterranean horticulture' (HORTIMET)	Montpellier SupAgro, INH Angers
		Agronomy-food science for hot regions Specialization 'Plant health'	AgroParisTech, Montpellier SupAgro, Agrocampus Rennes, INH Angers
		Agronomy-food science for hot regions Specialization 'Innovative systems and techniques for sustainable agricultural development' (STIDAD) Focus 'Mediterranean and tropical seeds and plants' (SEPMET) Focus 'Livestock production in hot regions' (PARC)	Montpellier SupAgro
	***Master européen* (European MSc)**	Sustainable tropical forestry (SUTROFOR)	AgroParisTech and four European universities
		Biology – Geoscience – Agroresources – Environment (BGAE) MSc Erasmus Mundus in Evolutionary Biology (MEME)	UM2, Universities of Groningen (Netherlands), Munich (Germany) and Uppsala (Sweden)
	***Ingénieur* (Engineering degree)**	Agricultural engineering Specializations 'Mediterranean and tropical plant improvement and engineering' (APIMET), 'Water, crop field and environmental management' (GEME), 'Sustainable crop production' (PVD), 'Territories and resources: public policies and stakeholders' (TERPPA)	Montpellier SupAgro
		Agricultural engineering Specialization 'Crop and environmental protection'	Montpellier SupAgro, AgroParisTech, Agrocampus Rennes
		Forestry engineering 'Environmental management of tropical forests and ecosystems' (GEEFT) Option 'Rural and tropical forestry' (FRT)	AgroParisTech
Bac +6	***Mastère spécialisé* (Specialized MSc)**	Forests, nature and society Tropical option	AgroParisTech
	***Ingénieur d'application* (Applications engineering degree)**	GREF engineering Honours studies 'Forests, nature and society' Tropical option	AgroParisTech

Short training-education programmes

Institution	Title
CIRAD	Wood knowledge and effective usage (2 d)
	Training on GIS and open source software (upon request)
	Wildlife and development (10 d)
	Locust expertise: pest locust control (upon request)
	Identification of vegetable crop pests in tropical periurban areas (5 d)
	Observatories and geographical information systems for rural development and environmental management (4 weeks)
	Tropical aquaculture (10 d)
	Fruit crop diversification (15 d)
	Seed production techniques (10 d)
	Technique for breeding and management of good cultivars of different fruit crop species (5 d)
	Plant architecture: a posteriori appraisal of growth and environmental constraints (8 x ½ d)
	Observatories and geographical information systems for rural development and environmental management (20 d)
Montpellier SupAgro	Tropical and Mediterranean starchy products
	Tropical fruits and vegetables
	Environment-friendly practices: Insects on farms
	Heritage conveyed through tales
	Agroforestry
	Cultural promotion of wild and edible plants
	Phytophagous mites and predators in tree cropping systems
	Agriculturally important insects—laboratory identification practices
	Benthic macroinvertebrates and river quality
	From angling flies to stream ecology—aquatic invertebrates and their habitat
	Water quality and river ecology
	Outdoor activities and the environment—a multidisciplinary approach
	Agriculture and biodiversity—a case study of segetalis plants
UM2	Aquatic microbiology (undergraduate STE module – Geoscience, pollution treatment and prevention)
	Dolphins and whales (phylogenesis of cetaceans, species, anatomy, biology, adaptations, behaviour and preservation)

▲ *Student training at the University of Maha Sarakham, Thailand, on ecological parasitology assessment. CERoPath project.*

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A PhD diploma is obtained after 3 years of laboratory research. PhD students are de facto attached to a PhD institution. PhD institutions host research units and laboratories working on major themes.

Their mission is twofold: 1) to ensure direct scientific support for PhD students; 2) to provide additional training throughout the 3 years. The purpose of these modules is to improve the scientific education of the PhD students and help them prepare their professional future. Only one graduate school focuses on the 'Biodiversity' theme:

Graduate school *'Integrated Systems* in Biology, Agronomy, *Geoscience, Hydroscience* and Environment' *(SIBAGHE)*

The SIBAGHE graduate school is affiliated with UM2 for social and earth sciences. It has joint accreditation with Montpellier SupAgro, AgroParisTech and the Université d'Avignon for Agricultural and Environmental Sciences, with the university for genomics, botany, microbiology and parasitology, the ecology of emerging diseases and water sciences.

The SIBAGHE graduate school hosts around 400 PhD students and is supported by 40 affiliated research units, 450 training supervisors and several associated external research teams. Every SIBAGHE PhD student must successfully complete two scientific training modules and two professional introduction modules. The graduate school manages thesis registrations, PhD student supervision, ensures that the thesis charter is respected and organises thesis courses and professional guidance. It is assisted by a council and managed by an office.

In the biodiversity field, the SIBAGHE graduate school hosts PhD candidates focusing thesis research on ecology, evolution, animal and plant ecophysiology, the biology of communities and ecosystems, paleontology, phylogeny, paleoecology, microbiology, ecology and the evolution of disease transmission and emergence, and on earth and water science.

Graduate school *'Territoires,* Temps, Sociétés et *Développement' (TTSD)*

The TTSD graduate school (territory, time, society and development) is affiliated with UM1, UM3 and UPVD. It groups 15 research units, 95 research directors and around 500 PhD candidates. It offers PhD degrees in 20 fields, including 'Population biology and ecology'. Some of the main lines of research are:

- rural area, sustainable development, risk prevention and conservation of natural areas
- relationships between society (human groups, institutions, companies, etc.) and the environment (territories, resources, etc.)
- physical features and resources (natural or technological) of rural or urban areas, etc.

In the biodiversity field, the TTSD graduate school hosts PhD candidates focusing thesis research on the impact of agroecological factors on the population dynamics of pest species, the development of molecular markers in orthopteran insects, etc. ■

Contacts

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