

Master in Biology of Organisms and Ecology

Focus Erasmus Mundus Joint Master Degree in Tropical Biodiversity and Ecosystems - TROPIMUNDO

Bloc 1 | M-BIORE | MA-BIOR

Compulsory Block 1

Choose 1 module in mobility during the second semester either at Universidad de Antioquia (Medellín, Colombia), at Université des Antilles (Point-à-Pitre, Guadeloupe), at Université de Dschang (Dschang, Cameroon), at Université d'Antananarivo (Antananarivo, Madagascar), at Université de la Réunion (Saint-Denis, La Réunion), at University of Ruhuna (Wellamadama, Sri Lanka), at Universiti Malaysia Terengganu (Kuala Terengganu, Malaysia) or at Université de la Nouvelle Calédonie (Nouméa, New Caledonia)

N.B. Provided agreement by the inter-university jury the student can choose optionnal courses outside the proposed modules, but accepting the risk of overlapping schedules. A climate-oriented course is obligatory either in Block 1 (GEOG-F400) or Block 2 (BIOL-Y044). For languages of instruction and course details, please consult <https://www.tropimundo.eu>

- BIOL-Y119 **Thesis proposal**
⌚ 3 credits [project: 30h] 📅 second term 🗨 English
- BIOL-Y174 **Geomatics**
⌚ 3 credits [lecture: 21h, tutorial classes: 33h, field trips: 24h, project: 6h] 📅 second term 🗨 English
- BIOL-Y175 **Skills and qualifications in tropical biodiversity**
⌚ 9 credits [lecture: 100h, practical work: 100h] 📅 second term 🗨 English

Module to choose

Choose 1 module in mobility during the second semester either at Universidad de Antioquia (Medellín, Colombia), at Université des Antilles (Point-à-Pitre, Guadeloupe), at Université de Dschang (Dschang, Cameroon), at Université d'Antananarivo (Antananarivo, Madagascar), at Université de la Réunion (Saint-Denis, La Réunion), at University of Ruhuna (Wellamadama, Sri Lanka), at Universiti Malaysia Terengganu (Kuala Terengganu, Malaysia) or at Université de la Nouvelle Calédonie (Nouméa, New Caledonia)

N.B. Provided agreement by the inter-university jury the student can choose optionnal courses outside the proposed modules, but accepting the risk of overlapping schedules. A climate-oriented course is obligatory either in Block 1 (GEOG-F400) or Block 2 (BIOL-Y044). For languages of instruction and course details, please consult <https://www.tropimundo.eu>

An alternative chosen from the nine following

- At Universidad de Antioquia (UDEA)
BIOL-Y410 **Tropical biodiversity and ecosystems field school: from montane to coastal ecosystems and landscapes**
(optional) ⌚ 15 credits [lecture: 20h, tutorial classes: 18h, field trips: 128h, project: 32h] 📅 second term 🗨 French
- or*
- At Université des Antilles (UdA)
BIOL-Y159 **Tropical biodiversity and ecosystems field school: Caribbean insular ecosystems**
(optional) ⌚ 15 credits [lecture: 20h, tutorial classes: 18h, field trips: 128h, project: 32h] 📅 second term 🗨 English
- or*
- At the Université de Dschang (Dschang, Cameroon) (UDsch)
BIOL-Y020 **Tropical biodiversity and ecosystems field school: Central African terrestrial ecosystems**
(optional) ⌚ 15 credits [lecture: 20h, tutorial classes: 18h, field trips: 128h, project: 32h] 📅 second term 🗨 English

or

BIOL-Y062
(optional)

At Technical University of Mombasa (TUM)

[Tropical biodiversity and ecosystems field school: East-African ecosystems](#)

⌚ 15 credits [lecture: 20h, tutorial classes: 18h, field trips: 128h, project: 32h] 📅 second term 🗨️ French

or

BIOL-Y176
(optional)

At Université d'Antananarivo (UNIVANTA)

[Tropical biodiversity and ecosystems field school: Malagasy forest ecosystems](#)

⌚ 15 credits [lecture: 14h, tutorial classes: 30h, field trips: 90h, project: 40h] 📅 second term 🗨️ English

or

BIOL-Y191
(optional)

At Université de La Réunion (UNIRÉ)

[Tropical biodiversity and ecosystems field school: Tropical forest ecosystems of Reunion Island and the South West Indian Ocean Region](#)

⌚ 15 credits [lecture: 20h, tutorial classes: 18h, field trips: 128h, project: 32h] 📅 second term 🗨️ English

or

BIOL-Y190
(optional)

At University of Ruhuna (RUH)

[Tropical biodiversity and ecosystems field school: Sri Lankan terrestrial and aquatic ecosystems](#)

⌚ 15 credits [lecture: 20h, tutorial classes: 15h, field trips: 120h, project: 30h] 📅 second term 🗨️ English

or

BIOL-Y114
(optional)

At the Universiti Malaysia Terengganu (UMT)

[Tropical biodiversity and ecosystems field school: Malaysian mangrove ecosystems](#)

⌚ 15 credits [lecture: 20h, tutorial classes: 18h, field trips: 128h, project: 32h] 📅 second term

or

BIOL-Y412
(optional)

At the Université de la Nouvelle Calédonie (UNC)

[Tropical biodiversity and ecosystems field school: biodiversity and habitats of the South-Pacific archipelago of New-Caledonia](#)

⌚ 15 credits [lecture: 30h, field trips: 80h, project: 20h] 📅 second term 🗨️ French

At ULB and VUB

At ULB

BIOL-F4005

[Social-ecological systems](#) | Farid DAHDOUH-GUEBAS (Coordinator)

⌚ 6 credits [lecture: 30h, tutorial classes: 6h, field trips: 12h] 📅 first term 🗨️ English

BIOL-F537

[Scientific presentation skills and career planning](#) | Farid DAHDOUH-GUEBAS (Coordinator)

⌚ 3 credits [lecture: 16h, project: 24h] 📅 first term 🗨️ English

At VUB

BIOL-Y007

[Analysis of Biological data](#) | Bram VANSCHOENWINKEL

⌚ 6 credits [lecture: 13h, tutorial classes: 39h] 📅 first term



Optional

At least 15 ECTS to be chosen from the ULB and/or VUB module below

A total of 15 credits chosen from the following

At ULB

- BINF-F402** (optional) **Genomics, Transcriptomics and Epigenomics** | Jean-François FLOT (Coordinator) and Matthieu DEFRANCE
⌚ 5 credits [lecture: 48h, project: 30h] 📅 first term 🗨 English
- BIOL-F1715** (optional) **Biological invasions and management** | Iris Stiers (Coordinator)
⌚ 3 credits [lecture: 16h, practical work: 6h, project: 6h] 📅 first term 🗨 English
- BIOL-F4001** (optional) **Behavioural Ecology in natural and man-made environments** | Claire DETRAIN (Coordinator)
⌚ 5 credits [lecture: 36h, tutorial classes: 12h] 📅 first term 🗨 English
- BIOL-F4002** (optional) **Pédologie et écosystèmes** | Thomas DROUET DE LA THIBAUDERIE (Coordinator)
⌚ 5 credits [lecture: 36h] 📅 first term 🗨 French
- BIOL-F417** (optional) **Marine ecology** | Anton Van De Putte (Coordinator) and Marc KOCHZIUS
⌚ 5 credits [lecture: 18h, practical work: 9h, field trips: 9h] 📅 first term 🗨 English
- BIOL-F443** (optional) **Plant responses to environmental stress** | Nathalie VERBRUGGEN (Coordinator)
⌚ 5 credits [lecture: 24h, project: 24h] 📅 first term 🗨 English
- BIOL-F444** (optional) **Plant-soil interactions** | Pierre Jacques MEERTS (Coordinator)
⌚ 5 credits [lecture: 24h, tutorial classes: 12h] 📅 first term 🗨 English
- BIOL-F448** (optional) **Bioéthique et droit de la conservation** | Bruno DANIS (Coordinator), Sonia VANDERHOEVEN and Martine VERCAUTEREN
⌚ 5 credits [lecture: 20h, tutorial classes: 40h] 📅 first term 🗨 French
- BIOL-F455** (optional) **Biology of animal societies** | Yves ROISIN (Coordinator)
⌚ 5 credits [lecture: 36h, practical work: 12h] 📅 first term 🗨 English
- BIOL-F535** (optional) **Cours ou stage d'été hors ULB**
⌚ 5 credits [practical work: 60h] 📅 third term 🗨 French
- ENVI-F409** (optional) **Economie écologique** | Thomas BAULER (Coordinator)
⌚ 5 credits [lecture: 24h, practical work: 12h] 📅 second term 🗨 French
- ENVI-F452** (optional) **Environmental impact analysis and management** | Wouter ACHTEN (Coordinator)
⌚ 5 credits [lecture: 24h, practical work: 12h, project: 24h] 📅 first term 🗨 English/French
- GEOG-F400** (optional) **The Earth system and its interactions** | François FRIPIAT (Coordinator) and Brice VAN LIEFFERINGE
⌚ 5 credits [lecture: 36h] 📅 first term 🗨 English
- STAG-F034** (optional) **Stage professionnel** | Denis FOURNIER (Coordinator)
⌚ 15 credits [work placement: 180h] 📅 academic year 🗨 French

At VUB

- BING-Y001** (optional) **Tracer Isotope Biochemistry** | Marc ELSKENS (Coordinator) and Steven Goderis
⌚ 6 credits [lecture: 24h] 📅 first term 🗨 English
- BIOL-Y060** (optional) **Terrestrial ecology** | Harry OLDE VENTERINK
⌚ 6 credits [lecture: 12h] 📅 first term 🗨 French
- BIOL-Y061** (optional) **Agroecology** | Franky BOSSUYT
⌚ 3 credits [lecture: 12h] 📅 first term 🗨 French
- BIOL-Y069** (optional) **Governance and policy in development and cooperation** | Jean Hugé (Coordinator) and Karoline VAN PUYVELDE
⌚ 3 credits [lecture: 12h, tutorial classes: 12h] 📅 first term 🗨 English
- BIOL-Y147** (optional) **Global change biology** | Thomas MERCKX
⌚ 6 credits [lecture: 13h, practical work: 6h, field trips: 7h] 📅 first term 🗨 English



BIOL-Y197
(optional)

Toxins in amphibians and Reptiles | kIM ROELANTS

🕒 3 credits [lecture: 13h, project: 39h] 📅 first term 🗨️ French

BIOL-Y400
(optional)

Freshwater ecology | Iris Stiers (Coordinator)

🕒 6 credits [lecture: 24h, practical work: 12h] 📅 first term 🗨️ English

Ce cours sera dispensé par l'Université d'Anvers.

STAG-Y002
(optional)

Professional internship | kIM ROELANTS

🕒 12 credits [work placement: 190h] 📅 academic year 🗨️ French

STAG-Y003
(optional)

Professional internship | kIM ROELANTS

🕒 6 credits [work placement: 114h] 📅 academic year 🗨️ French

Master in Biology of Organisms and Ecology

Focus Erasmus Mundus Joint Master Degree in Tropical Biodiversity and Ecosystems - TROPIMUNDO

Bloc 2 | M-BIORE | MA-BIOR

Cours obligatoires

MEMO-F538 **Mémoire** | Farid DAHDOUH-GUEBAS (Coordinator)
 30 credits [mfe/tfe: 360h] first and second terms

Optionnal

N.B. Provided agreement by the inter-university jury the student can choose optional courses outside the proposed modules, but accepting the risk of overlapping schedules. A climate-oriented course is obligatory either in Bloc-1 (GEOG-F-400) or Bloc-2 (BIOL-Y-044). For languages of instruction and course details, please consult: <https://www.tropimundo.eu>

An alternative chosen from the three following

At the Sorbonne Université (Paris, France) and the Muséum National d'Histoire Naturelle (Paris, France)

A total of 30 credits chosen from the following

Recommended

- BIOL-Y071 (optional) **Diversité et histoire des lignées chlorophylliennes (DIVEG)**
 6 credits [lecture: 40h, tutorial classes: 20h] first term French
- BIOL-Y072 (optional) **Floristique Tropicale (FLORATROP)**
 3 credits [lecture: 20h, tutorial classes: 6h, project: 4h] first term French
- BIOL-Y073 (optional) **Xylogie-paléoxylogie: systématique et paléoécologie**
 3 credits [lecture: 10h, tutorial classes: 15h, practical work: 15h] first term French
- BIOL-Y076 (optional) **Initiation aux techniques avancées de collecte et d'inventaire systématique**
 3 credits [field trips: 32h, project: 4h] first term French
- BIOL-Y110 (optional) **Ecologie tropicale (ECOT)**
 6 credits [lecture: 48h, tutorial classes: 12h, project: 10h] first term

Other courses to choose

- BIOL-Y010 (optional) **Climat et biotope (c/o Grandes Questions Environnementales)**
 3 credits [lecture: 24h, project: 6h] first term French
- BIOL-Y039 (optional) **Sciences de la nature et de l'homme: histoire des idées**
 6 credits [lecture: 30h] first term French
- BIOL-Y040 (optional) **Droit du patrimoine naturel in situ et ex situ**
 3 credits [lecture: 22h, tutorial classes: 8h] first term French
- BIOL-Y074 (optional) **Biodiversity informatics**
 6 credits [lecture: 15h, tutorial classes: 15h, project: 30h] first term English
- BIOL-Y075 (optional) **Exploration et description de la biodiversité**
 3 credits [lecture: 22h, project: 8h] first term French

BIOL-Y077 (optional)	Taxinomie et nomenclature 🕒 3 credits [lecture: 30h] 📅 first term 🗨 French
BIOL-Y079 (optional)	Formalisation des connaissances en systématique et paléobiodiversité 🕒 3 credits [lecture: 10h, tutorial classes: 15h, project: 5h] 📅 first term 🗨 French
BIOL-Y080 (optional)	Morphologie cladistique informatisée 🕒 3 credits [lecture: 16h, tutorial classes: 8h, project: 4h] 📅 first term 🗨 French
BIOL-Y081 (optional)	Modélisation des formes et analyse des données morphométriques 🕒 3 credits [lecture: 10h, tutorial classes: 10h, project: 10h] 📅 first term
BIOL-Y083 (optional)	Enjeux patrimoniaux, économiques et scientifiques de la connaissance des espèces 🕒 3 credits [lecture: 30h] 📅 first term 🗨 French
BIOL-Y084 (optional)	Partenaires institutionnels et associatifs de la gestion et de la conservation de la biodiversité 🕒 3 credits [lecture: 30h] 📅 first term
BIOL-Y111 (optional)	Phylogénie moléculaire 🕒 6 credits [lecture: 60h] 📅 first term 🗨 French
BIOL-Y148 (optional)	Biogéographie Paléobiogéographie 🕒 3 credits [lecture: 30h] 📅 first term 🗨 French
BIOL-Y149 (optional)	Enjeux professionnels en Ingénierie écologique et biologie de la conservation 🕒 3 credits [lecture: 30h] 📅 first term 🗨 French
BIOL-Y150 (optional)	Gestion des populations et écosystèmes 🕒 6 credits [lecture: 60h] 📅 first term 🗨 French
BIOL-Y151 (optional)	Origines de la vie 🕒 3 credits [lecture: 30h] 📅 first term 🗨 French
BIOL-Y152 (optional)	Structure et histoire paléontologique des grands clades de Métazoaires 🕒 3 credits [lecture: 30h] 📅 first term 🗨 French
BIOL-Y153 (optional)	Phylogénie des Métazoaires: évolution des plans d'organisation 🕒 3 credits [lecture: 10h, tutorial classes: 12h, project: 9h] 📅 first term 🗨 French
BIOL-Y154 (optional)	Les crises biologiques: comprendre le passé et l'actuel 🕒 3 credits [lecture: 30h] 📅 first term 🗨 French
BIOL-Y155 (optional)	Écologie moléculaire et génétique évolutive des organismes marins 🕒 6 credits [lecture: 30h, practical work: 40h] 📅 first term 🗨 French
BIOL-Y172 (optional)	Anatomie comparée 🕒 3 credits [lecture: 24h, tutorial classes: 6h] 📅 first term 🗨 French
BIOL-Y178 (optional)	Tropical biodiversity and ecosystems field school: Malagasy forest ecosystems 🕒 3 credits [lecture: 30h] 📅 first term
BIOL-Y179 (optional)	Fonctionnement et dynamique des socio-écosystèmes 🕒 6 credits [lecture: 48h, tutorial classes: 12h, project: 10h] 📅 first term
BIOL-Y180 (optional)	Ethnoécologie 🕒 3 credits [lecture: 30h] 📅 first term 🗨 French
BIOL-Y192 (optional)	Evolution des cycles de vie 🕒 6 credits [lecture: 60h] 📅 first term 🗨 French
BIOL-Y193 (optional)	Ecologie et évolution des interactions hôte-parasite 🕒 6 credits [lecture: 60h] 📅 first term 🗨 French
BIOL-Y194 (optional)	Morphométrie et analyses des formes 🕒 3 credits [lecture: 30h] 📅 first term 🗨 French
BIOL-Y195 (optional)	Morphologie fonctionnelle: évolution et adaptation 🕒 3 credits [lecture: 30h] 📅 first term 🗨 French



- BIOL-Y196 (optional) **Conservation ex-situ**
3 credits [lecture: 30h] first term French
- BIOL-Y202 (optional) **Gestion et conservation des ressources marines exploitées**
3 credits [lecture: 30h] first term French
- BIOL-Y203 (optional) **Ecologie et fonctionnement des écosystèmes côtiers**
6 credits [lecture: 48h, tutorial classes: 12h, project: 10h] first term French

or

At the Università degli Studi di Firenze (Florence, Italy) (UNIFI)

- BIOL-Y088 (optional) **Ecosystem services and climate change**
6 credits [lecture: 18h, tutorial classes: 6h] first term English
- BIOL-Y181 (optional) **Applied Conservation Biology**
6 credits [lecture: 18h, tutorial classes: 18h, practical work: 12h] first term English
- BIOL-Y183 (optional) **Advances in tropical botany**
6 credits [lecture: 18h, tutorial classes: 6h] first term English

Courses to choose

At least 12 ECTS to be chosen from:

A total of 12 credits chosen from the following

- BIOL-Y044 (optional) **Tropical climatology**
6 credits [lecture: 18h, tutorial classes: 6h] first term English
- BIOL-Y091 (optional) **Methods in animal ecology and evolution**
6 credits [lecture: 20h, tutorial classes: 4h] first term English
- BIOL-Y182 (optional) **Landscape Analysis**
6 credits [lecture: 32h, tutorial classes: 16h] first term English

or

At the Université de Guyane (UdG)

Compulsory

- BIOL-Y138 **Introduction à l'environnement tropical**
8 credits [lecture: 59h, tutorial classes: 14h, field trips: 15h, project: 15h] first term French
- BIOL-Y139 **Origine et maintien de la biodiversité**
4 credits [lecture: 37h, tutorial classes: 1,5h, field trips: 3h] first term French
- BIOL-Y141 **Analyse des données biologiques**
4 credits [lecture: 50h] first term French
- BIOL-Y142 **Botanique évolutive et écologie fonctionnelle**
7 credits [lecture: 32h, tutorial classes: 9h, field trips: 12,5h] first term French
- BIOL-Y144 **Gestion des forêts tropicales**
5 credits [lecture: 30h, project: 15h] first term French
- BIOL-Y145 **Professionnalisation**
2 credits [lecture: 15h] first term French