

The Master program has a normal duration of 3 semesters and comprises 90 ECTS :

**Module 1** : 15 ECTS : Compulsory courses (10 ECTS) and Optional courses (5 ECTS)

**Module 2** : 15 ECTS : First Step Project

**Module 3** : 30 ECTS : Compulsory courses (12 ECTS) and Optional courses (18 ECTS)

**Module 4** : 30 ECTS : Personal Research Project (Master Thesis)

**For specialisation Behaviour, Economics and Evolution (BEE) (30 ECTS), the student must obtain :**

18 ECTS : with Compulsory interdisciplinary courses in module 1 and 3 (marked in blue)

12 ECTS : with Optional courses in module 3 at least 3 ECTS with Disciplinary optional courses (marked in green) and  
at least 6 ECTS with Interdisciplinary optional courses (marked in blue)

**Modules 2 and 4** : have to be in behaviour, economics and evolution fields, validated by the head of BEE specialisation

**Training objectives** are available in its programme regulations.

**Specific training objectives:** At the end of the course the students will be able to:

- Interact with biologists and economists alike and thus foster and stimulate interactions between these two fields of study.
- Respond to a biological question of behaviour and / or conservation and resource management by mobilising relevant economic science concepts.

### Autumn Semester (semester 1)

	Courses / Enseignements	Hours per semester			Teaching Staff	ECTS Credits	Limited nb of students
		C	E/S	PW			
MODULE 1	<b>Compulsory Courses / Enseignements obligatoires</b>						
	Data Analysis <i>Analyses de données</i>	6	-	6	Bergmann S.	2	
	Introduction into Scientific Writing <i>Introduction à la rédaction scientifique</i>	7	9	-	Waterhouse R.	2	
	Master BEC Retreat <i>Retraite Master BEC</i>	-	-	-	Kawecki T.	-	
	Microeconomics and Game Theory (HEC) <i>Microéconomie et jeux théoriques</i>	56	-	-	Thöni C., Gizatulina A.	6	
	Subtotal	69	9	6		10	
	<b>Optional Courses / Enseignements optionnels</b>						
	Advanced Data Analysis <i>Analyses de données : niveau avancé</i>	6	-	6	Ciriello G., Delaneau O.	2.5	
	Animal Communication and Parasitism <i>Communication animale et parasitisme</i>	14	-	-	Christe P., Roulin A.	1.5	
	Introduction to Primate Behaviour, Cognition and Culture <i>Introduction au comportement, à la cognition et à la culture des primates</i>	8	6	-	van de Waal E.	1.5	
	Molecular Methods in Ecology and Evolution <i>Méthodes moléculaires en écologie et évolution</i>	18	-	42	Sanders I., Fumagalli L. Salamin N.	5	
	Phylogeography <i>Phylogéographie</i>	7	10	-	Fumagalli L.	1.5	
Population Genetics and Dynamics <i>Génétique et dynamique des populations</i>	7	10	-	Goudet J.	1.5		
Spatial Analysis and GIS in Ecology <i>Analyses spatiales et SIG en écologie</i>	7	10	-	Guisan A.	1.5		
Animal Experimentation and Wild Animals * <i>Expérimentation animale et animaux sauvages</i>	20	-	20	Rubin J.-F.	-		
Introduction to R (optional support) <i>Introduction à R (mise à niveau optionnelle)</i>				Schütz F.	-		
<b>Total</b>					15		
MODULE 2	<b>Practical Project / Travail pratique</b>						
	First Step Project <i>Travail d'initiation à la recherche</i>	-	-	224	Kawecki T., Lehmann L.	15	

Interdisciplinary courses marked in blue

\* Only students who choose a master project with animal experimentation are allowed to select this course

#### Abbreviations

C = Course

E/S = Exercise/Seminar

PW = Practical Work

Spring Semester (semester 2)

MODULE 3	Courses / Enseignements	Hours per semester			Teaching Staff	ECTS Credits	Limited nb of students
		C	E/S	PW			
		<b>Compulsory Courses / Enseignements obligatoires</b>					
	Behaviour, Economics and Evolution Lecture Series (HEC) <i>Séminaires BEE</i>	10	10	50	Lehmann L., Santos-Pinto L.	6	
	Environmental Economics (HEC) <i>Economie environnementale</i>	56	-	-	Houde S.	6	
	Subtotal	84	10	50		12	
<b>Disciplinary Optional Courses / Enseignements optionnels disciplinaires *</b>							
	Applied Ecology <i>Ecologie appliquée</i>	14	-	28	Pellet J.	3	
	Biological Invasions <i>Invasions biologiques</i>	14	-	-	Bertelsmeier C.	1.5	
	Co-evolution, Mutualism, Parasitism <i>Co-évolution, mutualisme, parasitisme</i>	14	-	-	Sanders I.	1.5	
	Comparative Genomics : from Thousands of Genomes to Single Cells <i>Génomique comparative : des milliers de génomes aux cellules individuelles</i>	7	7	-	Arguello R.	1.5	
	Current Problems in Conservation Biology <i>Problèmes actuels en biologie de la conservation</i>	14	14	-	Wedekind C.	3	10
	Ecology of the Fishes of Switzerland <i>Ecologie des poissons de Suisse</i>	7	-	10	Rubin J.-F.	1.5	
	Honeybee Ecology, Evolution and Conservation <i>Ecologie des abeilles, évolution et conservation</i>	14	-	-	Dietemann V.	1.5	
	Integrated course Mountain Ecosystems - Ecology & Evolution <i>Cours intégré écosystèmes de montagne - écologie et évolution</i>	14	-	-	Guisan A.	1.5	
	Integrated course Mountain Ecosystems - Geo-Environmental Sciences <i>Cours intégré écosystèmes de montagne - sciences géo-environnementales</i>	14	-	-	Guisan A.	1.5	
	Phylogeny and Comparative Methods <i>Phylogénie et méthodes comparatives</i>	14	14	-	Salamin N.	3	
	Scientific Communication - Scientific Hands-on Workshop Module (in French only) <i>Médiation scientifique - module atelier scientifique</i>	14	14	-	Kaufmann A., Reymond P., Ducoulombier D., Trouilloud S., Ythier M.	3	8
	Scientific Mediation and Communication - Museum Module <i>Communication et médiation scientifique - module musée</i>	6	-	22	Glaizot O.	3	6
	Sex, Ageing and Foraging Theory <i>Théories et modèles de l'évolution de la reproduction sexuée, la sénescence et la consommation de ressources</i>	9	-	9	Mullon C.	1.5	
	Spatial Modelling of Species and Biodiversity <i>Modélisation spatiale des espèces et de la biodiversité</i>	14	14	-	Guisan A.	3	
	The Evolution of Cooperation : from Genes to Learning and Culture <i>L'évolution de la coopération : des gènes à l'apprentissage et la culture</i>	28	-	-	Lehmann L.	3	
<b>Optional Field Courses (Financial participation by the student required)</b>							
	<b>Etudes de terrain optionnelles</b>						
	Biological Conservation of the Mediterranean Region <i>Biologie de la conservation dans les régions méditerranéennes</i>	-	-	40	Roulin A., Christe P., Fumagalli L.	2	
	Drivers of Invertebrate Biodiversity along Ecological Gradients <i>Facteurs déterminant la biodiversité des invertébrés le long de gradients écologiques</i>	7	-	49	Schwander T.	3	20
	Evolution and Biogeography of Semi-arid and Island Floras <i>Evolution et biogéographie des flores insulaires en zone semi-aride</i>	-	-	40	Pannell J.	2	14
	Integrated Practical Work Mountain Ecosystems in the Alps ** <i>Travaux pratiques intégrés écosystèmes de montagne dans les Alpes</i>	-	-	52	Guisan A.	3	

Interdisciplinary courses marked in blue

Disciplinary courses marked in green

\* - Before choosing an optional course, please check the "programme requirement" (prerequisites for the course) in the course description  
- To complete the acquisition of the credits, it is possible to take optional courses from the module 1 during the third semester depending on their availability and only with the approval of the head of the Master

\*\* To follow Integrated Practical Work Mountain Ecosystems in the Alps : do one of the two courses Integrated course Mountain Ecosystems

MODULE 3	Courses / Enseignements	Hours per semester			Teaching Staff	ECTS Credits	Limited nb of students
		C	E/S	PW			
		<b>Interdisciplinary Optional Courses / Enseignements optionnels interdisciplinaires *</b>					
	Heuristic Decision Making Strategies <i>Stratégie heuristique de prise de décision</i>	56	-	-	Neth H.	6	
	Neuro Economie (HEC - in french) <i>Neuro économie</i>	56	-	-	Villa A.	6	
	Organizational Behavior (HEC - in french) <i>Comportement organisationnel</i>	28	-	-	Bastardoz N., Kleinbauer T., Dietz J.	3	
	Political and Institutional Economics (HEC) <i>Economie politique et institutionnelle</i>	56	-	-	Rohner D.	6	
	Behavioral Economics (HEC - autumn) <i>Comportement économique</i>	56	-	-	Santos-Pinto L.-P.	6	
	Development Economics (HEC - autumn) <i>Economie de développement</i>	56	-	-	Esposito E.	6	
	General Approach to Management (HEC - in french - autumn) <i>Approche générale du management</i>	28	-	-	Castaner X., Conti A., Bienz P.	3	
	Human Behavior and Evolutionary Inference (HEC - autumn) <i>Comportements humains et évolution</i>	56	-	-	Efferson C.	6	
	Leadership Development (HEC - autumn) <i>Le développement du leadership</i>	28	-	-	Bendahan S.	3	
	Managerial Decision Making (HEC - autumn) <i>Prise de décision managériale</i>	56	-	-	Armaos K.	6	
	Organizational Theory and Decision Making (HEC - autumn) <i>Théorie et prise de décision organisationnelle</i>	56	-	-	Zehnder C.	6	
<b>Total</b>						<b>30</b>	

Interdisciplinary courses marked in blue

\* - Students can choose other HEC optional courses independently from this study plan with the approval of the head of BEE specialisation  
- To complete the acquisition of the credits, it is possible to take optional courses from the module 1 during the third semester depending on their availability and only with the approval of the head of the Master

### Spring semester (semester 2) and Autumn Semester (semester 3)

MODULE 4	Course / Enseignement		ECTS Credits
	Master Thesis BEE <i>Travail de Master BEE</i>	Thesis Director <i>Directeur du travail de Master</i>	30

The pandemic has shown us that circumstances beyond our control may require us to make the following adjustments / adaptations to study plans during the semester:

- possibility to switch from one mode of teaching to another (face-to-face <-> distance, synchronous <-> asynchronous, switch to co-modal teaching where it was not initially planned).
- change / modification of evaluation modalities, without inducing derogations from the Study Regulations (oral <-> written, exam <-> validation, individual work <-> group work, practical work <-> theoretical work, face-to-face evaluation <-> online evaluation, etc.)
- alternative or time-shifted modalities for teachings, internships, practical work, fieldworks and camps that could not take place or teachings that could no longer take place in the form initially planned.

**Students are invited to consult this document regularly (Study Plan & Evaluation Procedure)**