

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

Module 1 : 15 ECTS : Compulsory (9 ECTS) and optional courses (6 ECTS)

Module 2 : 15 ECTS : First step project

Module 3 : 15 ECTS : Optional courses

Module 4 : 45 ECTS : Personal research project (Master thesis)

Training objectives are available in its programme regulations.

### 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 / 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	
	Molecular Methods in Ecology and Evolution <i>Méthodes moléculaires en écologie et évolution</i>	18	-	42	Sanders I., Fumagalli L. Salamin N.	5	
	Master BEC Retreat <i>Retraite Master BEC</i>	-	-	-	Kawecki T.	-	
	Seminars of the Dept. of Ecology and Evolution <i>Séminaires du Dept Ecologie et Evolution</i>	-	14	-	Kawecki T.	-	
	Subtotal	31	23	48		9	
	<b>Optional (at least 6 credits) Optionnel (minimum 6 crédits)</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	
Major Transitions in Evolution <i>Les grandes étapes de l'évolution</i>	14	-	-	Keller L.	1.5	12	
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>					<b>15</b>		
MODULE 2	<b>Practical Project / Travail pratique</b>						
	First Step Project <i>Travail d'initiation à la recherche</i>	-	-	224	Kawecki T.	15	

\* 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>Optional (choice -&gt; 15 credits) *</b>					
<b>Optionnel (choix -&gt; 15 crédits)</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	
	Introduction to Primate Behaviour, Cognition and Culture <i>Introduction au comportement, à la cognition et à la culture des primates</i>	10	8	-	Van de Waal E.	1.5	
	Microbiome Analysis (MSc MLS) <i>Analyse du microbiome</i>	8	16	-	van der Meer J.	1.5	
	Phylogeny and Comparative Methods <i>Phylogénie et méthodes comparatives</i>	14	14	-	Salamin N.	3	
	Plant Population Genetics and Conservation <i>Génétique des populations végétales et biologie de la conservation</i>	7	-	10	Felber F.	1.5	
	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	
	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	Sartori M., Glaizot O.	3	6
	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	
	Social Genetics <i>Génétique sociale</i>	2	12	-	Keller L., Kay T.	1.5	
<b>Optional Field Courses (Financial participation by the student required)</b>							
<b>Etudes de terrain optionnelles</b>							
	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	
<b>Total</b>						<b>15</b>	

\* Students can choose optional courses independently from this study plan for a max. of 3 ECTS credits in agreement with the head of this Master

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

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

MODULE 4			ECTS Credits
	Master Thesis <i>Travail de Master</i>	Thesis Director	

Due to the sanitary evolution related to COVID-19, the study plans may be adapted during the semester as follows:

- 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).
- adaptation 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)**