

# Master of Science in Biology

## Molecular Biosciences, Genetics, Development & Evolution (MBGDE)

Name : \_\_\_\_\_ Student number : \_\_\_\_\_

Name of master's thesis supervisor : \_\_\_\_\_

Name of sponsor (if applicable) : \_\_\_\_\_

Department/Institution (where master's thesis will be done) : \_\_\_\_\_

Title of master's thesis : \_\_\_\_\_

Code	Course	ECTS	Semesters A/P/AN	Courses Selection	ECTS
<b>Mandatory</b> safety days ! Registration will take place in November for the autumn semester and in March for the spring semester.					
14B012	Scientific Writing and Communication ( <b>mandatory</b> )	4	A	✓	4
14B673	<b>Pré-stage</b> equivalent to 320h (pre-internship)	16	P	✓	16
<b>Core courses (6-17 ECTS)</b>					
14B672	Computer Skills for Biological Research	4	A		
14F001	Elements of Bioinformatics	5	A		
14B063A	Microscopy and Imaging	3	A		
14B057A (1)	Statistics & Probability	3	A		
14B951 (1)	Applied Statistics Practicum	2	P		
	(1) At least one of the 2 statistics courses				
<b>MBGDE Mandatory courses (17 ECTS)</b>					
14B010	Principles of Cellular and Molecular Biology	8	AN	✓	8
14B017	Master course in Genetics, Development and Evolution	9	AN	✓	9
<b>MBGDE Elective courses (6-17 ECTS)</b>					
13B013 *	Le système immunitaire	6	AN		
14B020	Classical papers in Molecular Genetics	5	P		
14B024	Understanding Biological Complexity and Diversity	6	P		
14B038	Molecular Genetics in Development and Evolution « <b>Selected Chapters</b> »	4	AN		
14B044	Electron Microscopy	4	P		
14B640	Histology and Tissue Imaging	3	P		
14C001	Biochemistry and Biophysics of Membranes	8	P		
14C003 *	Eléments d'encrinologie moléculaire	6	AN		
14CB01	Current Topics in Chemical Biology and Biochemistry	8	A		
223O305 *	La génétique dans la pratique médicale au quotidien : du laboratoire au chevet du patient	3	A		
24N01	Principles of Neurobiology I	6	A		

60

A = Automne, Autumn

P = Printemps, Spring / AN = Annuel, Annual

\* Lectures given in French

## ANNEXE 1 AU REGLEMENT de la Maîtrise en biologie Master of Science in Biology

### Registration for the Master :

To finalize registration, you must have found a supervisor for your Master's thesis ([research groups](#) are proposed on the Section's website).

It is up to the student to contact the research groups.

The supervisor of the master's thesis must be a faculty member of the Biology Section or a MER. CCs and CEs with a PhD may also be authorized by the Chair of the Biology Section to supervise master's work or to act as referees (see below).

Conducting a master's thesis outside the Biology Section is possible with the agreement of the Section Chair. However, it requires the appointment of a referee, a faculty member or MER (or CC/CE) of the Biology Section, who acts as the supervisor. The Section sponsor ensures the academic level of the host institution and the suitability of the proposed subject to the requirements of the Biology Section. The referee or his/her department may require the submission of a prior written proposal. The referee checks and co-signs the final evaluation of the Master thesis.

The registration form for the Master's thesis must be sent to the Student Secretariat of the Biology Section with all signatures by the beginning of the semester in which the Master's program starts.

The form is checked at the Section's student secretariat (credits, courses related to the master's thesis, etc.) and signed by the Section's student advisor.

A copy will be returned by e-mail to the student who will forward a copy to his/her supervisor and/or work supervisor.

### Aim of the Master's work:

- To answer a biological question through experimentation and/or data analysis.
- To become familiar with the practical and theoretical scientific approach.
- To acquire experimental/analytical skills by learning a wide range of techniques.
- To learn to report results in writing (master thesis) and orally (group seminars and master defense).

### Duration of the Master's work :

The Master's work corresponds to 60 ECTS and 45 weeks full-time (not including holidays).

### Writing the Master's thesis :

The master's thesis must be presented in the form of a written master's thesis. See the instructions on the Section's website ([Rédaction du mémoire](#)).

## Obtaining a Master's degree in biology : deadlines and conditions :

To obtain the Master in Biology, the student must acquire a total of 120 ECTS credits:

- 44 ECTS for master courses,
- 16 ECTS for the pre-internship,
- 60 ECTS for the master thesis.

The regulatory duration of studies is 4 semesters, but an extension is possible upon justified request (maximum of 8 semesters in total). For more information on deadlines and conditions, please consult the Biology Section website, [Master](#) link.

## Evaluation and submission of the Master's thesis :

The Master's thesis is evaluated by two assessors, the Master's supervisor and a juror with at least a doctoral thesis, according to the criteria mentioned below. For work directed by a professor who is not a member of the Section, the referee within the Section acts as a juror.

An oral defense, in the presence of at least two assessors, is organized after the submission of the thesis. The mark is transmitted by the Master supervisor, with both signatures, using the official form of the Biology Section.

The mark may also be awarded by the faculty of the department concerned.

Evaluation criteria :

Personal reflection / Comprehension / Independence, creativity / Personal commitment / Practical skills / Content of the work: state of research, results, interpretation / Writing and written presentation of the work / Oral defense.

Once the Master thesis has been accepted by the supervisor, the procedure is as follows:

- 1.) A complete pdf version must be sent to the student secretariat of the Biology Section (send by e-mail to <mailto:secretariat-biologie@unige.ch>). A pdf version without figures and bibliography must also be sent for submission to the anti-plagiarism software.
- 2.) After validation of the master thesis (dissertation and oral defense) and receipt of the grade, the secretariat will send a confirmation to the student by e-mail.
- 3.) The student must then deposit the thesis (in electronic version) in the Open Archive (<http://archive-ouverte.unige.ch>) and send the official confirmation (including the link) of the deposit in the Open Archive to the Biology Section's student secretariat.
- 4.) The Student Secretariat of the Biology Section will forward the grade to the Faculty. In order for the master's degree to be formally awarded, this process must be completed before the end of the examination session of the last semester of the master's degree. Depending on the arrangements of the department concerned, hard copies may also be required for the director (and referee if applicable) and/or the department. By signing below, you confirm that you have read this Annex 1 to the regulations of the Master in Biology and that you have registered for the courses of your chosen orientation.

### Signatures :

**Academic advisor to the section**

**Director of work**

**Student**

**Responsible for the work (if applicable)**

**Name and responsible for the orientation**

## ANNEXE 2 **Mandatory** security training

### Security Day :

The STEPS department organizes different types of safety training: first aid, defibrillator use, fire fighting, laboratory safety (chemicals, biologicals, electricity, radioactivity).

Registration will take place in November for the autumn semester and in March for the spring semester.

You will find the information below.

Safety training MANDATORY!

<https://www.unige.ch/steps/prestations/formation/>

### Compulsory courses according to the entities - Faculty SCIENCE

	Section Chimie Biochimie	Section Physique	Section Biologie	Section SC Terre Enve	Section Maths	Unité Anthropologie	Dpt Info	Section SC Pharma
Accueil sécurité	X	X	X	X	X	X	X	X
Info générales	X	X	X	X		X		X
Chimie	X	X	X	X				X
Biologie	X (seulement CHIBI)		X	X (Forel)				X
Gaz	X	X	X	X				X
1ers secours	X	X	X	X		X		X
Déchetsspéciaux	X	X	X	X				X
Radioacti-vité	X (seulement CHIBI)	X	X					
CMR	X	X	X	X (Forel)				X
Théorie du feu	X	X	X	X		X		X
Pratique du feu	X	X	X	X		X		X

Home Safety - General information - Chemical hazard training - Biological hazard training - Gas hazard training - First aid training - Special waste management - Radioactivity hazard training - CMR training - Fire theory training - Practical fire training.

The other courses are optional.

An e-mail will be sent to you via Uniliste in October and February to provide you with the necessary information for online registration.

## ANNEXE 3 AU FORMULAIRE D'INSCRIPTION AU MASTER EN BIOLOGIE

### Plagiarism :

By my signature, I certify that I am aware that "plagiarism and attempted plagiarism are serious violations of the University's ethics and research integrity" (Directive on student plagiarism; <http://www.unige.ch/apropos/en/policy/plagiarism>) and that the penalties can be very severe (see Art. 18 of the General Study Regulations of the Faculty of Science).

Please note that the Biology Section subjects all master's papers to an anti-plagiarism check.

By signing below, you certify that you have read and understood Annexes 2 & 3 to the Regulations of the Master in Biology.

### Signature :

<b>Student</b>
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Date : .....