

## Master of Science in Biology

### Bioinformatics and Data Analysis in Biology (BIADB)

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

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

Responsible within the Section (if the Master's project is not in the Section) : \_\_\_\_\_

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	Pré-stage equivalent to 320h (pre-internship)	16	P	✓	16
<b>BIADB Mandatory courses (11.5 ECTS + 12 ECTS from core courses = 23.5 ECTS)</b>					
14B672*	Computer Skills in Biological Research (core course)	4	February	✓	4
14F001	Elements of Bioinformatics (core course)	5	A	✓	5
14B057A	Statistics and Probability (core course)	3	A	✓	3
14B637	Molecular Population Genetics	5	A	✓	5
14B057P	Statistics and Probability	3	P	✓	3
12X020 *	Programmation (*sauf si ce cours (ou équivalent) a été validé pendant le BA)	3.5	A		
<b>BIADB Elective courses (to bring to a total of 60 ECTS)</b>					
14B072	Introduction to Glycobiology	3	P		
14B657	Phylogeny and Molecular Evolution	5	AN		
14B751	Research Methodology in Biology	3	P		
14B951	Applied Statistics Practicum	2	P		
11X001 *	Introduction à la programmation des algorithmes	6	A		
14F012	Elements of Proteomics and Metabolomics: Translation to human diseases	3	P		
14X015	Modeling and Simulation of Natural Phenomena	5	P		
					<b>60</b>

\*Pre-registration required with the course instructor. Please check the "programme des cours" website for registration details.

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 the registration, students must find a supervisor for their master's thesis. ([research groups](#) are suggested 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 professor 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 of the Biology Section is possible with the agreement of the Section's 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 Secretary's office 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 secretary's office (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.

### Elective courses

In the event of an average of less than 4, the student is authorized to choose only one other elective course and is entitled to one final attempt at this new course.

Students are authorized to choose only one elective course outside of the list proposed by their academic study plan

### 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 the 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 grade may also be awarded by the college of professors 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 secretary office of the Biology Section (send by e-mail to [secretariat-biologie@unige.ch](mailto:secretariat-biologie@unige.ch)) before the 31<sup>st</sup> of August for the autumn semester (or before the 31<sup>st</sup> of January for the spring semester, if an extension has been accepted). 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 secretary's office 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 secretary's office.
- 4.) The Student Secretary's office 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 orient

### Signatures :

<b>Academic advisor to the section</b>
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<b>Director</b> of work
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<b>Student</b>
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<b>Responsible for the work</b> (if applicable)
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<b>Name and responsible for the orientation</b>
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## 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 dufeu	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 a serious violation of the University's ethics and research integrity" ([Directive on student plagiarism; http://www.unige.ch/apropos/en/policy/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 :

Student
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Date : .....