



# **COURSE CONTENT AND FOLLOW-UP GUIDELINES**

## **Master's in Neuroscience**

### **Edition 2022–2023**

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## 1. Calendar – Overview



**TO-DO**

Key date	Expected work	Who?
31 October (first year)	Signed internship agreement with project summary	Student Principal supervisor/close supervisor
31 January (first year)	Writing report of the work done/evaluation of supervision	Student
	Student's evaluation report	Principal supervisor/close supervisor
June (first year)	Oral/poster presentation (NeuroMasterDay)	Student
	Student's evaluation report	Principal supervisor/close supervisor
31 January (second year)	Written report on work done/evaluation of supervision	Student
	Student's evaluation report	Principal supervisor/close supervisor
June (second year)	Oral/poster presentation (NeuroMasterDay)	Student
	Student's evaluation report	Principal supervisor/close supervisor
End of the fourth/fifth semester	Write and defend thesis	Student
	Evaluation of supervision	Student

**All this work, and participation in these events, is mandatory**

Students and supervisors are informed of precise dates at the beginning of each semester.

## 2. Content of the program – 90 ECTS credits

### 2.1 Mandatory courses – 18 ECTS credits

Our mandatory courses aim to provide:

- A basic knowledge of neurobiological mechanisms
- The cerebral bases of cognitive and emotional processes
- An understanding of different methods of statistical analysis
- A knowledge and understanding of the different tools in neuroimaging
- A knowledge of psychiatric and neurological disorders
- An interdisciplinary and transversal approach

## 2.2 Optional courses – 12 ECTS credits

Optional courses allow for a deeper look at specific aspects addressed in the mandatory courses, or for the opportunity to look at complementary and new topics (machine learning, scientific writing and communication etc.).

## 2.3 Research project – 60 ECTS credits

The research projects accounts for 60 ECTS credits as follows:

- Work in the laboratory/thesis writing/defense: 42 ECTS credits
  - o First semester: 3 ECTS credits (report form)
  - o Second semester: 3 ECTS credits (NeuroMasterDay)
  - o Third semester: 3 ECTS credits (report form)
  - o Third/fourth/fifth semester: 33 ECTS credits
- Seminar attendance: 12 ECTS credits
  - o First semester: 3 ECTS (participation to 7-8 seminars)
  - o Second semester: 3 ECTS (participation to 7-8 seminars)
- Short-term internship: 6 ECTS credits

### A) Presence in the laboratory/thesis writing/defense – 60 ECTS credits

The students must be in their host lab from the first day of the academic year to the day of the defense:

- At least 2 days a week in the first year
- 4 days a week in the second year

#### *Details:*

The research project counts for 60 credits, representing 1800 hours of work, as follows:

- First two semesters: Two full days a week = 8 hours x **2 days x 37 weeks** (52 weeks – 2 weeks for studying – 13 weeks of holiday = 592 hours
- Second year: Four full days a week = 8 hours x **4 days x 37 weeks** = 1184 hours

***Official holidays during which the student is not expected to be in the lab:*** The student is free during the University's official academic holidays (two weeks at Christmas, one week at Easter, ten weeks in summer, from 1 July to 15 September). They also have one week of free study before each exam session if they are expected to take an exam.

***Lab life:*** The student is a member of a research team and is expected to participate in the life of the laboratory, by attending team meetings and regularly presenting regularly their work to their team in agreement with their supervisor. At least once during their program, the student must present their work at a seminar/conference/team meeting.

## B) Objectives of the Master's research project

The research project for the Master's in Neuroscience program is an introduction to research in neuroscience. The student has to lead an original and interdisciplinary research project in a semi-autonomous way. They must extend their bibliographic knowledge in the research domain of their project, learn to build a research protocol, to be introduced to at least one technique of data acquisition in neuroscience and learn to statistically analyze and interpret their results.

The research project must include the following components:

- a. Theoretical elaboration of a research question in a precise framework
- b. Collection and analysis of empirical data
- c. Participation in research seminars, conferences and lab meetings
- d. At least one oral presentation of the results during a conference, seminar or journal club
- e. An additional short-term internship (between 2 weeks and 6 months) in another laboratory
- f. Individual writing of a Master's thesis
- g. An individual oral defense

## C) Principal supervisor/close supervisor

While the legal supervisor is the group leader, the students should have a close supervisor (PhD student, post-doc, senior researcher) to guide them in their readings, experiments and analysis. Please do not forget that the Master's students are not autonomous at the beginning of their research project and that they need to be shown how to acquire and analyze data.

## D) Seminar and conference attendance

Students have to attend at least **15 neuroscience-related seminars**. 12 ECTS credits are acquired for seminar attendance.

Teaching point: Seminar attendance is part of the job of the researcher. The student must keep abreast of all recent advances in their research domain. Attending seminars aims at:

- Deepening and updating theoretical knowledge learned from courses
- Providing an update on recent research in your field
- Assessing your work critically and helping you progress
- Helping you in your thesis writing

Seminars have to be attended throughout the whole program, meaning that you must attend 7–8 seminars in the first year and 7–8 seminars in the second year.

Seminars taken into account are:

- UNIGE seminars (e.g. Brain and Cognition seminar, every Tuesday at 12:15 at Campus Biotech; Department of Basic Neurosciences seminar, every Monday at 12:00 at CMU; Neuroclub; Jean Piaget conference; Department of Linguistics seminars; seminars organized by the NCCR; any other related seminar)

- All WorldWideNeuro Seminars: <https://www.worldwideneuro.com/>
- Seminars of any other academic institution provided that the topic fits the neuroscience field and/or your research project topic (please send an email to [delphine.jochaut@unige.ch](mailto:delphine.jochaut@unige.ch) to confirm that an external seminar can be taken into account)

Events with a **large audience** (such as talks at the *Semaine du Cerveau* or talks offered by UNIGE in the evening) **are not taken into account**.

One conference (full-day or several-day) counts for two seminars, meaning that you can fill in only one form when attending a conference and it will count for two seminars, as long as you provide a certificate of attendance for the whole event (ask the organizers for this certificate).

Please bear in mind that at least two-third of the seminars attended have to be in English. You will be informed of seminars by email via the NeuromasterList and via the Neurocenter newsletter of the. Please do not hesitate to look at our agenda as well: <https://neurocenter-unige.ch/agenda/>



TO-DO

#### HOW DO I GET INFORMED ABOUT SEMINARS?

- Subscribe to the NeuromasterList mailing list to get information about seminars, otherwise you will miss a lot of information (see Welcome Guide for the procedure)
- <https://neurocenter-unige.ch/agenda/>

#### WHEN DO I ATTEND SEMINARS?

Seminars have to be attended throughout the whole program, meaning that you must attend 7–8 seminars in the first year and 7–8 seminars in the second year.

You will also have to **present your work** during a lab meeting or a seminar. You can use a form for that purpose and fill in the summary mentioning when and where you presented your work. The form will be sent to your supervisor for validation.



### HOW DO I VALIDATE MY SEMINAR ATTENDANCE?

- 1- Fill in the [form](#) after attending a seminar on-site or online. ONE FORM = ONE SEMINAR OR ONE CONFERENCE. You are asked to provide basic information about the seminar, a brief summary and a question/answer. For this last part, you must think of a relevant question related to the talk, and answer it in a few lines. You can ask your lab, colleagues, etc. to help answer the question. It should not take more than 1 hour.  
[Download the form](#)
- 2- Name your form according to this model:  
LastName\_Date\_HostLastName\_SeminarSeries  
(Seminar series = B&C, Neufo, Neuroclub etc.)
- 3- Upload your form in the Master\_Seminars&Conferences\_Attendance **at the latest two weeks after the seminar dates** on the [shared drive](#).
- 4- Once signed by the host, your participation appears in the recap table.
- 5- **Please keep all your forms until the end of your cursus.**

### E) Short-term internship

You have to complete an **internship in research and/or development** in another laboratory/institution (different from where you conduct your main research). You can do this internship in a research laboratory or with a private company using recent advances in neuroscience to develop neurotechnologies.

Minimum duration: 10 days

Maximum duration: 6 months (one semester).

This internship has three main goals:

- To complete your knowledge in research – the topic of your internship can be linked to your main research project, but it doesn't need to be. For example, you can acquire knowledge about a technique you did not use in your main project;
- Or open your knowledge to entrepreneurship based on strong scientific ideas;
- And to help you develop your professional contacts.



**TO-DO**

#### **I WANT TO DO MY INTERNSHIP AT UNIGE**

Use this [form](#) and ask your supervisor (group leader) to sign it at the end of your training.

#### **I WANT TO DO MY INTERNSHIP OUTSIDE UNIGE**

- You can do it in a research laboratory in Switzerland or elsewhere
- It can last up to 1 semester
- You are allowed to acquire up to 6 credits of optional courses at your host institution
- Use this [internship agreement](#) and ask your supervisor to sign it

### 3. Follow-up and documents to be filled in and sent

#### 3.1 Internship agreement

Our internship agreement is called a “research contract” and aims to:

- Establish a legal framework for the research project
- Determine the topic of the research project and the activities of the student
- Facilitate communication between the student, the host laboratory and the Neurocenter

The students will be given this research contract at the information meeting at the beginning of the program and will be asked to get it signed and return it before the end of October.

The research contract includes a half-page description of the research project. The idea is to ensure the student is able to understand their research project. The student should then be given the key articles of the framework of your lab in the first days of their research project. **The description of their research project has to be validated by the close supervisor** (PhD student, post-doc, etc.).

Direct supervisors’ contacts are collected in the research contracts. Graduate student supervision guidelines are sent to all direct supervisors.

[Download the internship agreement](#)

## 3.2 Written report

At the end of the first and the third semesters, the student will have to send a report (one page) explaining their progress in the research work, outlooks and how they feel about the supervision in the laboratory.

At the end of each semester, the supervisors (PI and/or close supervisor) will have to fill in and send a follow-up sheet on the student's activities (evaluation report).

A reminder (with the follow-up sheet and a table of evaluation criteria) will be sent at the beginning of each semester.

[Download the report form for students](#)

[Download the evaluation report form for supervisors](#)

Students will get 3 credits from this evaluation of their work in their laboratory (in the same conditions as the validation of courses, credits are obtained with a minimum grade of 4/6).

## 3.3 NeuroMasterDay

This event aims to provide each Master's student in Neuroscience at UNIGE with feedback about their research and to offer them training in different scientific communication abilities (poster, talk, teamwork). This event is mandatory each year for all students enrolled in the program and is awarded with 3 credits.

The event includes:

- A core part with poster and/or oral presentation for all students
- A flexible part with, for example the organization of work groups on a particular topic

The format is subject to change and precise information is given at the beginning of the spring semester.

Students will get 3 credits from this evaluation of their work in their laboratory (in the same conditions as the validation of courses, credits are obtained with a minimum grade of 4/6).

## 3.4 Tutoring/Mentoring

We can provide you with a list of PhD students at the Lemanic Doctoral School, and post-doctoral researchers who are interested in offering tutoring to Master's students. In case you want to get an external view on your own work, on a methodological issue, or even have a question about career development, we will try to get you in touch with the right person to help you.

[Download the list of PhD tutors \(coming soon\)](#)





## TO-DO

Key date	Expected work
31 October	Fill in and ask your supervisor to sign the internship agreement, and send it to <a href="mailto:delphine.jochaut@unige.ch">delphine.jochaut@unige.ch</a>  <a href="#">Download the internship agreement</a>
31 January (first year)	Fill in and send the written report form to <a href="mailto:delphine.jochaut@unige.ch">delphine.jochaut@unige.ch</a>  <a href="#">Download the report form</a> (3 ECTS)
June (first year)	Take part in the NeuroMasterDay in accordance with the terms set out at the beginning of the first year (3 ECTS)
31 January (second year)	Fill in and send the written report form to <a href="mailto:delphine.jochaut@unige.ch">delphine.jochaut@unige.ch</a>  <a href="#">Download the report form</a> (3 ECTS)
June (second year)	Oral/poster presentation (NeuroMasterDay) Evaluation report
End of the fourth/fifth semester	Write and defend thesis  <a href="#">Download Master thesis writing guideline</a>  Evaluation of supervision