

# Graduate Student Handbook

Department of Neuroscience

Carleton University

**\* Updated May 2025**





Additional resources for Neuroscience graduate students

## Table of Contents

<a href="#"><u>Welcome</u></a>	3
<a href="#"><u>Your Responsibilities as a Graduate Student</u></a>	3
<a href="#"><u>Guidelines for Working with your Supervisor</u></a>	3
<a href="#"><u>Recommended Timelines for Your Degree</u></a>	
<a href="#"><u>MSc.</u></a>	4
<a href="#"><u>PhD.</u></a>	5
<a href="#"><u>Fast-Tracking Ph.D.</u></a>	6
<a href="#"><u>Potentially Equivalent Courses at Other Institutions</u></a>	8
<a href="#"><u>Thesis Advisory Committee (MSc &amp; PhD)</u></a>	8
<a href="#"><u>Progress Reports (MSc &amp; PhD)</u></a>	9
<a href="#"><u>MSc Prospectus Guidelines</u></a>	9
<a href="#"><u>MSc Final Thesis Guidelines</u></a>	11
<a href="#"><u>PhD Comprehensive Exam Guideline (NEUR 6200)</u></a>	13
<a href="#"><u>PhD Final Thesis Guideline</u></a>	15
<a href="#"><u>Sources of Funding</u></a>	17
<a href="#"><u>Teaching Assistantships</u></a>	18
<a href="#"><u>Research Assistantships</u></a>	19
<a href="#"><u>Contract Instructor Positions</u></a>	19
<a href="#"><u>Employment while Enrolled as a Full-Time Graduate Student</u></a>	19
<a href="#"><u>Society for Neuroscience – Ottawa Chapter</u></a>	19
<a href="#"><u>Library Support</u></a>	19
<a href="#"><u>Student Support Resources</u></a>	20
<a href="#"><u>Help &amp; Advice</u></a>	21

## Welcome

Welcome to the Department of Neuroscience at Carleton University. We are one of Carleton's most dynamic units, and we hope that your time with us will be stimulating, rewarding, and fun.

This document is to help you navigate successfully through your graduate degree but know that you can always seek advice from your supervisor, the Graduate Administrator, Departmental Administrator, Graduate Chair, or Departmental Chair – we are here to help you.

Information about Carleton's policies for graduate students can also be found at the Graduate Studies website: <http://gradstudents.carleton.ca>. Staff and Faculty contact information can be found at <https://carleton.ca/neuroscience/>.

## Your Responsibilities as a Graduate Student

As a graduate student, it is your responsibility to ensure that you meet all degree requirements and deadlines. This includes meeting regularly with and requesting feedback from your supervisor(s), completing your research projects in a timely manner, and organizing your thesis advisory committee, committee meetings, and thesis examination meetings. Should you need assistance in this process, please reach out to the Graduate Administrator for assistance and resources.

A detailed description of the responsibilities and expectations of both students and supervisors are found on the Graduate Studies website at <http://gradstudents.carleton.ca/thesis-requirements/graduate-supervision-responsibilities-expectations-policy/>

## Guidelines for Working with your Supervisor

**It is your responsibility to ensure that you meet with your supervisor regularly to determine whether you are making sufficient progress with your thesis and/or research project(s).**

When preparing written work (e.g., prospectus, comprehensive exam, thesis) that requires input from your supervisor(s), it is your responsibility to have an agreed timeframe for you to submit drafts of those documents, to enable feedback and time to make suggested revisions after that. This revising stage can often be quite extensive. Be mindful that your supervisor(s) have many commitments on their time and may not be able to return drafts of written work rapidly, especially if a time frame for submission of the draft has not been established in advance. It is typical that a supervisor may need at least one week (or more) to provide this feedback.

**Is your primary supervisor an adjunct professor, an affiliated member of the department, or a retired member of the department?**

If the answer to this question is yes, you will also require a co-supervisor who is a member of the Department of Neuroscience at Carleton University. It is important that you meet with your departmental co-supervisor on a regular basis to ensure that your progress is appropriate. We recommend that this is done every semester.

## Recommended Timeline for your Degree

If you do not complete your degree within the recommended time frame (i.e., two years for an MSc; four years for PhD), it can result in significant negative financial implications. Please see your Admissions Offer letter for details on funding for each year of your degree program. Furthermore, you will be required to submit an application for extension to Graduate Studies if you require a third year for a MSc or a seventh year for a PhD. For these reasons, it is in your best interests to complete your program in the recommended time frame.

To maximize your chances of completing your degree on time, it is strongly recommended that you follow the timeline described below. Note that all students are eligible to defend their thesis at any earlier timepoint if all requirements are met:

### Recommended Timeline: Master's of Science

Year One	
Fall Semester	<ul style="list-style-type: none"> <li>• NEUR 5100 Fundamentals in Neuroscience</li> <li>• NEUR 5201 Foundations in Statistics for Neuroscience</li> <li>• NEUR 5909 Thesis</li> <li>• Determine thesis project, learn techniques, data collection</li> </ul>
Winter Semester	<ul style="list-style-type: none"> <li>• NEUR 5100 Fundamentals in Neuroscience</li> <li>• Eligible 0.5 credit course</li> <li>• NEUR 5909 Thesis</li> <li>• Learn techniques, data collection</li> <li>• Identify members of your thesis advisory committee (TAC)</li> </ul>
Summer Semester	<ul style="list-style-type: none"> <li>• NEUR 5909 Thesis</li> <li>• Data Collection</li> <li>• Complete and submit <b>Progress Report Year 1</b> to your TAC by May 31<sup>st</sup></li> <li>• Have <b>first TAC meeting</b> by Aug 31<sup>st</sup> at latest</li> <li>• Last term for a student to fast-track to the PhD</li> </ul>
Year Two	
Fall Semester	<ul style="list-style-type: none"> <li>• NEUR 5909 Thesis</li> <li>• Data Collection</li> <li>• Write and defend <b>Prospectus</b> by end of semester</li> </ul>
Winter Semester	<ul style="list-style-type: none"> <li>• NEUR 5909 Thesis</li> <li>• Data Collection</li> <li>• Write thesis</li> </ul>
Summer Semester	<ul style="list-style-type: none"> <li>• NEUR 5909 Thesis</li> <li>• Complete thesis</li> <li>• Defend thesis</li> </ul>

Please note: At the time of admission, your supervisor may recommend additional coursework if he/she feels it will benefit you in the completion of your MSc.

## Recommended Timeline: Doctor of Philosophy

Recommended Timeline: Doctor of Philosophy

Year One		
Fall Semester	<ul style="list-style-type: none"><li>• NEUR 6100 Advanced seminar in Neuroscience</li><li>• NEUR 5201 Foundations in Statistics in Neuroscience (unless taken previously, in which case substitute with different 0.5 credit course)</li><li>• NEUR 6909 Thesis</li><li>• Determine thesis project, learn techniques, data collection</li></ul>	
Winter Semester	<ul style="list-style-type: none"><li>• NEUR 6100 Advanced seminar in Neuroscience</li><li>• Eligible 0.5 credit course</li><li>• NEUR 6909 Thesis</li><li>• Learn techniques, data collection</li><li>• Identify members of your thesis advisory committee (TAC)</li></ul>	
Summer Semester	<ul style="list-style-type: none"><li>• NEUR 6909 Thesis</li><li>• Data collection</li><li>• Identify members of your thesis advisory committee</li><li>• Complete and submit <b>Progress Report 1</b> to your TAC by May 31<sup>st</sup></li><li>• Have <b>first TAC meeting</b> by Aug 31<sup>st</sup> at latest</li></ul>	
Year Two		
	<ul style="list-style-type: none"><li>• NEUR 6200 (<b>Comprehensive Exam</b>; see page 8) is to be completed ideally by the end of the sixth term but no later than the 7<sup>th</sup> term. Enroll for the semester in which you plan to complete your oral candidacy exam.</li><li>• NEUR 6909 Thesis</li><li>• Data collection</li><li>• No TAC meeting required</li></ul>	
Year Three		
	<ul style="list-style-type: none"><li>• NEUR 6909 Thesis</li><li>• Data collection</li><li>• Complete and submit <b>Progress Report 2</b> to your TAC by May 31<sup>st</sup></li><li>• Have <b>second TAC meeting</b> by Aug 31<sup>st</sup> at latest</li></ul>	
Year Four **PhD students are strongly encouraged to defend their thesis in Year 4		
	<b>Students defending in Year 4:</b> <ul style="list-style-type: none"><li>• NEUR 6909 Thesis:</li><li>• Data collection</li><li>• Write thesis</li><li>• Defend thesis</li></ul>	<b>Students continuing to Year 5:</b> <ul style="list-style-type: none"><li>• NEUR 6909</li><li>• Data collection</li><li>• Complete and submit <b>Progress Report 3</b> to your TAC May 31<sup>st</sup></li><li>• Have <b>third TAC meeting</b> by Aug 31<sup>st</sup> at latest. This final TAC meeting will include discussing plans to write up and defend thesis</li></ul>
Year Five **if required		
	***Please note that some financial support may be lost in Year 5 (i.e., departmental scholarships, etc.). Please refer to your Admissions Offer letter for further details.	
	<b>Students defending in Year 5:</b>	<b>Students continuing to Year 6:</b>

	<ul style="list-style-type: none"> <li>• NEUR 6909 Thesis:</li> <li>• Data collection</li> <li>• Write thesis</li> <li>• Defend thesis</li> </ul>	<ul style="list-style-type: none"> <li>• NEUR 6909</li> <li>• Data collection</li> <li>• Complete and submit <b>Progress Report 4</b> to your TAC by May 31<sup>st</sup></li> <li>• Have <b>fourth TAC meeting</b> by Aug 31<sup>st</sup> at latest. This final TAC meeting will include discussing plans to write up and defend thesis</li> </ul>
<b>Year Six **if required</b>		
	<p>***Please note that PhD students do not receive formal funding from the University in Year 6 (i.e., TAs, etc.). Please refer to your Admissions Offer letter for further details.</p> <p>*** If Year 6 is required, please see deadlines below:</p> <ul style="list-style-type: none"> <li>• NEUR 6909 Thesis due:</li> <li>• Data collection</li> <li>• Write thesis</li> <li>• Defend thesis</li> </ul>	

### Recommended Timeline: Doctor of Philosophy, Fast-track from MSc program

Year One (MSc)	
Fall Semester	<ul style="list-style-type: none"><li>• NEUR 5100 Fundamentals in Neuroscience</li><li>• NEUR 5201 Foundations in Statistics for Neuroscience</li><li>• NEUR 5909 Thesis</li><li>• Determine thesis project, learn techniques, data collection</li></ul>
Winter Semester	<ul style="list-style-type: none"><li>• NEUR 5100 Fundamentals in Neuroscience</li><li>• Eligible 0.5 credit course</li><li>• NEUR 5909 Thesis</li><li>• Learn techniques, data collection</li><li>• Identify members of your thesis advisory committee</li><li>• Students interested in fast-tracking should discuss with their supervisor at the <i>beginning</i> of the winter term to meet the application deadline</li></ul>
Summer Semester	<ul style="list-style-type: none"><li>• NEUR 5909 Thesis</li><li>• Data Collection</li><li>• Complete and submit <b>Progress Report Year 1</b> to your thesis advisory committee (TAC) by May 31<sup>st</sup></li><li>• Have <b>first TAC meeting</b> prior to fast-track application</li><li>• Last term for a student to <b>fast-track to the PhD</b></li></ul>
Year Two (PhD)	
Fall Semester	<ul style="list-style-type: none"><li>• NEUR 6100 Advanced seminar in Neuroscience</li><li>• Advanced standing will be provided for NEUR5201 and any additional 0.5 credit courses completed in master's studies).</li><li>• NEUR 6909 Thesis</li><li>• Determine thesis project, learn techniques, data collection</li></ul>



Winter Semester	<ul style="list-style-type: none"> <li>• NEUR 6100 Advanced seminar in Neuroscience</li> <li>• NEUR 6909 Thesis</li> <li>• Learn techniques, data collection</li> </ul>				
Summer Semester	<ul style="list-style-type: none"> <li>• NEUR 6909 Thesis</li> <li>• Data collection</li> <li>• Identify members of your thesis advisory committee</li> <li>• Complete and submit <b>Progress Report 1</b> to your TAC by May 31<sup>st</sup></li> <li>• Have <b>second TAC meeting</b> by Aug 31<sup>st</sup> at latest</li> </ul>				
<b>Year Three</b>					
	<ul style="list-style-type: none"> <li>• NEUR 6200 (<b>Comprehensive Exam</b>; see page 8) is to be completed ideally by the end of the sixth term but no later than the 7<sup>th</sup> term. Enroll for the semester in which you plan to complete your oral candidacy exam.</li> <li>• NEUR 6909 Thesis</li> <li>• Data collection</li> <li>• No TAC meeting required</li> </ul>				
<b>Year Four</b>					
	<ul style="list-style-type: none"> <li>• NEUR 6909 Thesis</li> <li>• Data collection</li> <li>• Complete and submit <b>Progress Report 2</b> to your TAC by May 31<sup>st</sup></li> <li>• Have <b>third TAC meeting</b> by Aug 31<sup>st</sup> at latest</li> </ul>				
<b>Year Five **PhD students are strongly encouraged to defend their thesis in Year 5</b>					
	<p>***Please note that some financial support may be lost in Year 5 (i.e., departmental scholarships, etc.). Please refer to your Admissions Offer letter for further details.</p> <table> <tr> <th><b>Students defending in Year 5:</b></th><th><b>Students continuing to Year 6:</b></th></tr> <tr> <td> <ul style="list-style-type: none"> <li>• NEUR 6909 Thesis due August 31<sup>st</sup></li> <li>• Data collection</li> <li>• Write thesis</li> <li>• Defend thesis</li> </ul> </td><td> <ul style="list-style-type: none"> <li>• NEUR 6909</li> <li>• Data collection</li> <li>• Complete and submit <b>Progress Report 3</b> to your TAC by May 31<sup>st</sup></li> <li>• Have <b>fourth TAC meeting</b> by Aug 31<sup>st</sup> at latest. This final TAC meeting will include discussing plans to write up and defend thesis</li> </ul> </td></tr> </table>	<b>Students defending in Year 5:</b>	<b>Students continuing to Year 6:</b>	<ul style="list-style-type: none"> <li>• NEUR 6909 Thesis due August 31<sup>st</sup></li> <li>• Data collection</li> <li>• Write thesis</li> <li>• Defend thesis</li> </ul>	<ul style="list-style-type: none"> <li>• NEUR 6909</li> <li>• Data collection</li> <li>• Complete and submit <b>Progress Report 3</b> to your TAC by May 31<sup>st</sup></li> <li>• Have <b>fourth TAC meeting</b> by Aug 31<sup>st</sup> at latest. This final TAC meeting will include discussing plans to write up and defend thesis</li> </ul>
<b>Students defending in Year 5:</b>	<b>Students continuing to Year 6:</b>				
<ul style="list-style-type: none"> <li>• NEUR 6909 Thesis due August 31<sup>st</sup></li> <li>• Data collection</li> <li>• Write thesis</li> <li>• Defend thesis</li> </ul>	<ul style="list-style-type: none"> <li>• NEUR 6909</li> <li>• Data collection</li> <li>• Complete and submit <b>Progress Report 3</b> to your TAC by May 31<sup>st</sup></li> <li>• Have <b>fourth TAC meeting</b> by Aug 31<sup>st</sup> at latest. This final TAC meeting will include discussing plans to write up and defend thesis</li> </ul>				
<b>Year Six **if required</b>					
	<p>*** Please note that PhD students do not receive formal funding from the University in Year 6 (i.e., TAsips, etc.). Please refer to your Admissions Offer letter for further details.</p> <p>*** If Year 6 is required, please see deadlines below:</p> <ul style="list-style-type: none"> <li>• NEUR 6909 Thesis due Aug 31<sup>st</sup></li> <li>• Data collection</li> <li>• Write thesis</li> <li>• Defend thesis</li> </ul>				

## Potentially Equivalent Courses at Other Institutions

Supervisor permission is required to replace Carleton courses with equivalent courses at other institutions. Approval will be based upon written justification. This process requires students to obtain the thesis supervisor's signature on the justification and submit it, along with a course syllabus, to the Graduate Administrator along with any forms required by the host institution. The Graduate Administrator will present the application to the Graduate Chair and Departmental Chair for approval.

## Thesis Advisory Committee (MSc & PhD)

### Thesis Advisory Committee (TAC)

It is your responsibility to form your TAC, with members identified through consultation with your supervisor(s). The committee should be identified by May, at the latest, in Year 1 of your MSc or PhD degree and consist of your supervisor(s) plus two additional faculty or adjunct faculty members in the Department of Neuroscience. When appropriate, adjunct and affiliated faculty can also be members of your committee. The purpose of this committee is to act as an additional resource for the student in their thesis progress. Frequency of meetings and extent of support must be discussed and determined by the student and their TAC.

TAC meetings are conducted in-person, or in a hybrid or online format at the discretion of the supervisor, and should include all TAC members, as defined above. TAC meetings include a 10–15 minute presentation that outlines student progress and plans followed by an informal open question and discussion period with all TAC members contributing together (rather than having each TAC member ask their questions one at a time). Each TAC meeting will require about 1–1.5 hours. After each TAC meeting, the supervisor should email the Graduate Administrator to confirm that this milestone was completed. At each TAC meeting, note that there will be a designated time for the TAC to meet with the supervisor without the student present.

After the TAC meeting, the student must inform the Graduate Administrator by email that the TAC meeting was completed. Please copy the supervisor and TAC members as well.

## TAC Meeting Guidelines (MSc)

MSc Students will form and meet with their TAC by the end of Year 1. This informal TAC meeting is to ensure students have begun formulating an experimental plan for their MSc program and for students to receive feedback and support from their TAC members. If the student defends their prospectus in Year 1, this will replace the TAC meeting for this year.

## TAC Meeting Guidelines (PhD)

Students will meet yearly with their TAC every year except for Year 2, when you will be completing your Comprehensive Exam (NEUR 6200). TAC meetings help ensure students are on track in their PhD program timelines and for students to get feedback and support from their TAC on their current and future plans. As faculty are busy with student defenses and vacations in the summer, it is recommended that students complete their TAC meetings in the Winter semester or early in the Summer semester.

## Progress Reports

### Progress Reports (MSc)

One progress report is to be completed together with your supervisor and submitted to your TAC and the Department of Neuroscience (via the Graduate Administrator) by May 31<sup>st</sup> of Year 1. The report is divided into two sections: Progress to Date and Action Plan. The Progress Report form for master's students is distributed by the Graduate Administrator in early May.

### Progress Reports (PhD)

One progress report is to be completed together with your supervisor and submitted to your TAC and the Department of Neuroscience (via the Graduate Administrator) by May 31<sup>st</sup> of each year in the program. The following reports are due during your program:

#### Progress Report Year 1

- One-page report submitted to your TAC providing an overview of your research plan
- Submission deadline is May 31<sup>st</sup> of your first year (for students with September entrance)

#### Progress Report Years 3 and up

- Up to two-page report submitted to your TAC providing an overview of your progress
- Submission deadline is May 31<sup>st</sup> (for students with September entrance) for Report 2 and Report 3

## Prospectus Guidelines (MSc)

### Prospectus

The prospectus document typically forms the basis of the introduction and methods of your final thesis document. Components of the document include:

- Title page
- Abstract
- Literature review that provides an adequate background to your proposed research project, including supporting context and rationale
- Aims and hypotheses
- Experimental design and methods that is detailed, just as one would see in a journal article, and include a brief section that describes the statistical methods

The document should describe your proposed research study with sufficient detail for your prospectus examination committee to assess the likelihood of success. When writing the document, remember that your internal examiner for your MSc defence will not be a member of the Department of Neuroscience, so extensive detailed knowledge of Neuroscience should not be assumed.

The finalized prospectus document must first be approved by your supervisor(s) and then submitted to your committee three weeks before the date of your prospectus exam.

### Arranging the Prospectus Exam

It is the responsibility of the student to arrange TAC meetings. Please inform the Graduate Administrator when your prospectus has been scheduled so an appropriate room can be located for the exam. Upon successful completion of the prospectus exam, the supervisor should notify the Graduate Administrator.

### Prospectus Examination

The student and at least one member of the TAC must be available in-person for the Prospectus Exam, but the exam may proceed in a hybrid setting with other members of the examination board participating online, as needed.

Your prospectus examination will take the following format (Duration: 2 hours):

1. 15-minute presentation from student	Summarizing research project context and rationale, aims, and experimental plan
2. First round of questions	Each committee member asks questions on a one-to-one basis. During this period, no comments from other members of the committee are permitted. Each member of the TAC can ask questions for up to 15 minutes, with the supervisor(s) asking questions last.
3. Second round of questions	Any member of the committee can ask questions, and comment on the questions/answer.

### Prospectus Grading Policy

The prospectus is graded as follows:

- Accepted as submitted
- Accepted with recommendations attached
- Accepted in principle, but with recommendations of a major substantive nature (attached) requiring additional written and/or another meeting of the committee; or
- Not Accepted. The candidate may, at the discretion of the prospectus committee, be given the opportunity to produce a new prospectus document at a later date.

### Fast-Tracking Policy

Master's students who wish to fast-track to the PhD program must apply no later than their third term of study. Students must convey their intentions to fast-track to the PhD program with their supervisor well in advance of their third term.

Prior to applying, the student must hold a TAC meeting, during which the TAC must indicate unanimous support for the student to fast-track into the PhD program. During this TAC meeting, the student will present and answer questions related to either their current research project or a

proposed research project to demonstrate the qualities necessary for success in the PhD program. If the student has gained support from their TAC to fast-track, contact the Graduate Administrator for information on how to submit an apply to the PhD program. The full application must be complete, except for the referee requirement; only one reference from the supervisor is required.

Students who successfully fast-track will have a time limit of five years as a PhD student to complete their thesis work. Please see your Admissions Letter offer to determine if you were given advanced credit on any courses.

## MSc Final Thesis Guidelines

### Format of Thesis Document

The final thesis can take the form of either a traditional thesis or an integrated article thesis.

Details of these formats can be found [here](#).

Full formatting guidelines can be [here](#).

These forms, templates, and policies can be found [here](#).

### Thesis Examination Committee (MSc)

Thesis Examination Committee	
Thesis Advisory Committee (TAC)	Your supervisor plus two additional faculty members from the Department of Neuroscience, as established for the Prospectus.
Internal Examiner	Typically, a faculty member at Carleton University, from a department other than the Department of Neuroscience. Notes: An adjunct professor in the Department of Neuroscience cannot serve as an internal examiner. An examiner from a different institution may be appropriate but requires specific justification and approval.
Chair of the Examination Board	Must be a faculty member of the Department of Neuroscience who is not a member of your TAC

In conjunction with your supervisor, you need to confirm the details of your thesis exam with your TAC as well as your internal examiner. At the beginning of your final term, the Graduate Administrator will reach out to you via email with the necessary details and directions for arranging your thesis defence, including the Defense Planning form, which you will need to complete and return. When you are ready to defend, please contact the Graduate Administrator so they can formally set up your defense with Graduate Studies, help arrange a Chair of the Examination Board, and secure an appropriate examination room on campus. It is important to schedule your defence as early as possible because it can be difficult to coordinate the availability of faculty members.

**Format.** The student and Chair of the Examination Board must be available in-person for the final thesis exam, but the exam may proceed in a hybrid setting with other members of the examination board participating online, as needed.

### Coordinate a Date

Coordinate a date with all members of your committee and complete the defense Planning form. Once complete return the form to the Graduate Administrator.

The Graduate Administrator will book a room for you and send confirmation of location. If your defence is hybrid, the Chair of the Examination Board and student must be in person.

### Examinable Copies

An examinable copy must be uploaded to Carleton Central at least three weeks prior to the scheduled defence. **It is not permissible for students to email copies of their thesis to committee members in lieu of uploading their thesis by the required timeline.**

### Forms

All forms, as well as your final thesis, are now uploaded through the electronic thesis deposit system. Please read the content within the following link carefully for details on forms and formats. <http://gradstudents.carleton.ca/thesis-requirements/electronic/>.

### Prepare to Defend your Thesis

A few days before your defense it is advised that you visit the room where your defense will take place to ensure you are familiar with the equipment and layout.

Please note that students can elect to open their defense to the public *and* elect to permit up to 5 minutes of questioning from the public. The student will indicate their preference for an open defense on the Defense Planning Form.

### MSc Examination

The MSc thesis examination will take the following format (Duration: 2 hours):

1. Up to 20-minute presentation from student	Context and rationale, research question(s), and findings
2. First round of questions	Each committee member asks questions on a one-to-one basis. During this period, no comments from other members of the committee are permitted. Starting with the Internal Examiner, each member of the committee can ask questions for up to 15 minutes, with the supervisor(s) asking questions last.
3. Second round of questions	Any member of the committee can ask questions, and comment on the questions/answer.

### MSc Thesis Grading Policy

The thesis examination is graded as follows:

1. **Accepted.** Used where only a few typographical or stylistic changes are required.
2. **Acceptable after minor revisions as outlined on an attached sheet.** Used where many typographical errors exist, or where other required changes do not affect the basic tenets of the research or its findings and do not call for alteration to the basic structure of the thesis. These changes should be clearly specified in writing and are subject only to the approval of the thesis supervisor before the thesis is finally accepted for deposit.
3. **Acceptable after major revisions as outlined on an attached sheet.** Used where, in the judgment of the examiners, changes of a substantive nature which call for re-writing

of parts of the thesis are required. These changes should be clearly specified in writing and are subject to the approval of the thesis board, or a designated committee, before the thesis is finally accepted for deposit.

4. **Rejected.** Used where, in the judgment of the examiners, the thesis is unacceptable on substantive grounds.

### Questions?

Ask the Graduate Administrator.

### After the Final Thesis Defence

After a successful defence of the thesis document, the committee may recommend revisions to the document before it is finalized. Once the revisions have been completed, you can then upload your final copy via e-thesis submission. Your supervisor will log into the system to verify the final version is correct and to ensure any required revisions have been completed. It is possible that these changes must be completed within a limited timeframe, so candidates are advised to ensure they are available to continue working on the thesis document for a period of time immediately following the scheduled defence.

Please note that students must request written approval (via email) from their supervisor on their examinable and final copies and forward that to the Graduate Administrator to be granted upload access.

## PhD Comprehensive Exam Guidelines (NEUR 6200)

### Format, Timeline & Comprehensive Exam Committee

1. Student and supervisor form the Comprehensive Examination Committee, which includes the supervisor, the two members of the TAC, and one Neuroscience or Neuroscience adjunct faculty member external to the TAC.
2. Student submits Comprehensive Written Document (see section A below) to their Comprehensive Examination Committee by the end of their 5<sup>th</sup> semester, in the Winter semester of their second year. The student should submit their written comprehensive document four weeks before the oral defense date.
3. The student communicates with each member of the Comprehensive Examination Committee, who will each identify topics of study, which may be broad (e.g., neural correlates of anxiety, community approaches to substance use, molecular mechanisms of stress, etc) and may include review papers, textbook chapters, research papers or other resources relating to the proposed project; the provision of specific articles is not required. Topics of study will form the general framework for the questions asked by each member during Round 2 of the Oral Candidacy Exam (See section B below). Guidance should come from the Comprehensive Examination Committee at least two weeks prior to the oral exam.
4. The Oral Candidacy Exam takes place within the 6<sup>th</sup> semester and no later than by the end of the 7<sup>th</sup> semester, which corresponds to the Fall semester of the student's third



year. Any student who fails to meet the oral exam deadline will meet with the Graduate Chair to discuss their timelines and whether continuation in the program is feasible.

### A. Comprehensive Written Document

(submitted by end of 5<sup>th</sup> semester, winter semester of 2<sup>nd</sup> year)

Written literature review and thesis proposal (started before formally registering for Comprehensive exam course, NEUR 6200), including:

- **Introduction** with the relevant background literature for the proposed thesis project, including rationale and overall objective of the project. Suggested length: 15–25 double-spaced pages.
- **Specific experimental objectives** and associated hypotheses should be explicitly stated, although these may change as the project evolves. Potential pitfalls and contingency plans within each experimental objective should also be considered.
- **Methods** and analyses section will include the detailed experimental procedures and protocols planned for the proposed project.

### B. Oral Candidacy Exam

(completed no later than end of 7<sup>th</sup> semester, Fall semester of 3<sup>rd</sup> year)

The student and at least one member of the Comprehensive Examination Committee must be available in-person, but the exam may proceed in a hybrid setting with other members of the examination committee participating online, as needed.

The Oral Candidacy Exam will take the following format (Duration: 2.5–3 hours):

1. 15–20-minute oral presentation from student	Background, rationale, and specific objective of the proposed project
2. First round of questions (12–15 minutes per examiner, starting with the faculty member external to the TAC and ending with the supervisor)	Questions are based on the proposed research plan. These questions are expected to target specific conceptual, methodological and other aspects of the actual proposed/ongoing experimental research. <b>Purpose.</b> To ensure that the student can develop a suitable research plan for a PhD thesis. To ensure that the student can explain and then defend the theoretical context and technical aspects of data collection and analysis for the project.
3. Second round of questions (12–15 minutes per examiner, starting with the faculty member external to the TAC and ending with the supervisor)	Questions, which may be detailed or broad, are based on the topics of study chosen by the committee members relating to the thesis project. This will focus mainly on principles and concepts from these areas of study. <b>Purpose.</b> To ensure that the student has a broad knowledge of the subject matter relevant to the thesis, including the critical-thinking skills required to successfully complete and defend a PhD thesis.

### Criteria for Passing the Comprehensive Exam (Graded as Satisfactory/Unsatisfactory)

The student must successfully demonstrate:



- An ability to formulate a logical and well-written preliminary research plan at the standards required for peer-reviewed publications.
- An understanding and developing mastery of research concepts and primary literature relating to the proposed research project.
- A grasp of both the theoretical and technical aspects of the research plan, with the critical thinking skills required to execute the plan.
- A feasible research project, with clear objectives, appropriate methodology, and suitable contingency plans.

If the student receives an Unsatisfactory grade in the Comprehensive Exam, the student will work with the committee members to address identified deficiencies through revisions to the Comprehensive Written Document and/or additional oral explanations at a later date. Once the Comprehensive Examination Committee reaches a consensus that all requirements have been met, the Comprehensive Exam grade will be updated to Satisfactory. Failure to pass the Comprehensive Exam will result in withdrawal from the PhD program.

## PhD Final Thesis Guidelines

### Format of Thesis Document

The final thesis can take the form of either a traditional thesis, or an integrated article thesis.

Details of these formats can be found [here](#).

Full formatting guidelines can be [here](#).

These forms, templates and policies can be found [here](#).

### Thesis Examination Committee (PhD)

Your examination is conducted by your thesis examination committee.

Thesis Examination Committee	
Thesis Advisory Committee	Your supervisor plus two additional faculty members from the Department of Neuroscience
Internal Examiner (External to the Department)	Typically, a faculty member at Carleton University, from a department other than the Department of Neuroscience.
External Examiner	A faculty member at an institution other than Carleton University who is an expert in the field.
Chair of the Examination Board	Must be a faculty member outside of the Department of Neuroscience.

In conjunction with your supervisor, you need to confirm your TAC, your Internal Examiner, and your External Examiner. The External Examiner should be approached by your supervisor. More information about the requirements for an External Examiner can be found in the Thesis exam policy [here](#).

At the beginning of your final term, the Graduate Administrator will reach out to you via email with the necessary details and directions for arranging your thesis defence, including the Defense Planning form, which you will need to complete and return. When you are ready to defend, please contact the Graduate Administrator so they may formally set-up your defense with Graduate Studies, arrange a Chair of the Examination Board to chair your defence, and secure an appropriate room on campus. It is important to schedule your defence as early as possible because it can be difficult to coordinate the availability of faculty members.

**Format.** The student and Chair of the Examination Board must be available in-person for the final thesis exam, but the exam may proceed in a hybrid setting with other members of the examination board participating online, as needed.

### Coordinate a Date

Coordinate a date with all members of your committee and complete the defense Planning form. Once complete return the form to the Graduate Administrator.

The Graduate Administrator will book a room for you and send confirmation of location. If your defence is hybrid, the Chair of the Examination Board and student must be in person.

### Examinable Copies

An examinable copy must be uploaded to Carleton Central at least five weeks prior to the scheduled defence. **It is not permissible for students to email copies of their thesis copy to committee members in lieu of uploading their thesis by the required timeline.**

### Forms

All forms, as well as your final thesis, are now uploaded through the electronic thesis deposit system. Please read the details on forms and formats [here](#).

### Prepare to Defend your Thesis

A few days before your defense it is advised that you visit the room where your defense will take place to ensure you are familiar with the equipment and layout.

Please note that students can elect to open their defense to the public *and* elect to permit up to 5 minutes of questioning from the public. The student will indicate their preference for an open defense on the Defense Planning Form.

### Thesis Defence Proceedings (PhD)

The Thesis Defence will take the following format (Duration: 2–2.5 hours):

Opening Remarks	The candidate provides opening remarks (up to 30 minutes)
First Round of Questioning	Questioning from the examination committee in the following order: external examiner (15–20 minutes), internal examiner, committee members, supervisor(s) (10–12 minutes each).
Second Round of Questioning	Informal round. Questions may be asked by any member of the examination committee in any order.
Closing Remarks	The candidate may provide closing remarks if they wish. Closing remarks are optional.

Following closing remarks, the candidate is excused while the committee deliberates. Once a decision has been made, the candidate is invited back into the room where they are informed of the results.

Please note that students can elect to open their defense to the public *and* to permit up to 5 minutes of questioning from the public. The student will indicate their reference for an open defense on the Defense Planning Form.

### PhD Thesis Grading Policy

The thesis examination is graded as follows:

1. **Accepted:** Used where only a few typographical or stylistic changes are required.
2. **Acceptable after minor revisions as outlined on an attached sheet:** Used where a large number of typographical errors exist, or where other changes are required which do not affect the basic tenets of the research or its findings and do not call for alteration to the basic structure of the thesis. These changes should be clearly specified in writing and are subject only to the approval of the thesis supervisor before the thesis is finally accepted for deposit.
3. **Acceptable after major revisions as outlined on an attached sheet:** Used where, in the judgment of the examiners, changes of a substantive nature which call for re-writing of parts of the thesis are required. These changes should be clearly specified in writing and are subject to the approval of the thesis board, or a designated committee, before the thesis is finally accepted for deposit.
4. **Rejected:** Used where, in the judgment of the examiners, the thesis is unacceptable on substantive grounds.

### Questions?

Ask the Graduate Administrator.

### After the Final Thesis Defence

After a successful defence of the thesis document, the committee may recommend revisions to the document before it is finalized. Once the revisions have been completed, you can then upload your final copy via e-thesis submission. Your supervisor will log into the system to verify the final version is the correct version and to ensure any required revisions have been completed. It is possible that these changes have to be completed within a limited timeframe, so candidates are advised to ensure they are available to continue working on the thesis document for a period of time immediately following the scheduled defence.

Please note that students must request written approval (via email) from their supervisor on their examinable and final copies and forward that to the Graduate Administrator to be granted upload access.

## Sources of Funding

All graduate students are encouraged to apply for external scholarship funding. These scholarships typically come from federal or provincial granting agencies. Typically, graduate students work together with their supervisor(s) in the preparation of applications to these

granting agencies. Carleton Neuroscience students have been very successful in obtaining these external awards. This success has been attributed to the high caliber of students, as well as the exciting health-relevant research being conducted by the faculty members. Examples of funding sources include:

- NSERC Scholarships
- CIHR Scholarships
- Canada Graduate Scholarships (CGS)
- Ontario Graduate Scholarships (OGS)
- Internal Awards
- Travel Awards

Details of various internal and external awards can be found on the Graduate Studies website at <http://gradstudents.carleton.ca/awards-and-funding/>

Travel awards are available to you through the Graduate Student Association. If you are a PD McCormack Scholarship recipient, you can also apply for support from the PD Travel Fund, through the Graduate Administrator. Those who are not recipients of P.D. McCormack can apply to the Graduate Student Research and Travel Bursary through Carleton Central.

### Internal Awards

A list of internal awards can be viewed on the Graduate Studies website at <http://gradstudents.carleton.ca/awards-and-funding/internal-awards/>. The following is the process for internal awards:

- Students interested in applying for an internal award will do so via Carleton Central.
- The Graduate Committee will review the nominations as there is a limit to one application per award from each department. The only exception to this rule is the Graduate Award for Research in Dementia. As a department, for this award only, we are permitted to nominate and submit applications for more than one student.
- The Graduate Committee will decide which nominations will be sent forward to Graduate Studies.
- Graduate Studies will select university-wide winner for each award.

## Teaching Assistantship

Most graduate students in the Department of Neuroscience will be awarded a Teaching Assistant position, as part of their offer of admission. Each position requires you to work for 130 hours per semester to facilitate the operation of an academic course. These positions should be taken very seriously by all students, and it is important that you work with the course instructor to determine when the 130 hours of work are required, so you can arrange your schedule accordingly.

Details of TA positions, including details on the CUPE 4600 union (to which teaching assistants belong) can be found at <http://gradstudents.carleton.ca/teaching-assistants>

## Research Assistantship

Some graduate students may receive funding in the form of a research assistance position (RAship). You may therefore be asked to conduct research-related tasks that are not directly related to your thesis but will enhance your laboratory experience. If you receive an RAship, expectations will be determined through consultation with your supervisor(s).

## Contract Instructor Positions

As a PhD graduate student, you may have the opportunity to apply for a position as a contract instructor (CI), teaching course(s) for the university. While these experiences can be very rewarding, the workload associated with teaching a course should not be underestimated. Students interested in applying for CI positions are *strongly* advised to discuss the idea in advance with their thesis supervisor(s).

**Students employed as a contract instructor cannot work simultaneously as a Teaching Assistant. Students who accept a CI position should submit a request for a Leave of Duties from their priority TAs. Failure to do so will result in the forfeiture of the TAs and the funds associated.**

## Employment while Studying as a Full-time Student

There are maximum time limits for the completion of degree programs and the University strictly enforces these limits. Refer to the Graduate Calendar for the policy on Extensions of Time Limit. Keep in mind it can be a challenge to balance employment outside of your graduate studies, as your studies are a full-time commitment. If you are suffering financial distress, you are encouraged to meet with your supervisor to discuss options.

## Society for Neuroscience – Ottawa Chapter

Carleton graduate students are highly involved in the Ottawa chapter for the Society for Neuroscience <http://sfn-ottawa.ca>. Everyone is encouraged to become a member of this very active and rewarding society.

## Library Support

Carleton University library subscribes to large numbers of neuroscience and life science publications. We recommend that you attend an introductory tour of the library facilities. Details can be found at <http://www.library.carleton.ca/services/tours-and-workshops/>

### Off-Campus Access to Library Resources

Articles published in journals to which Carleton library subscribes can be easily accessed from computers on campus by following journal access links from PubMed. However, accessing

articles from off campus is more complex, requiring you to login through the library website. An easier option is to establish a Virtual Private Network (VPN) link from your home computer, which essentially makes your home computer function like any computer on campus. Instructions on obtaining free VPN access are found at <https://carleton.ca/its/help-centre/remote-access/>

### Citation Management

Reference manager software is an essential tool for any student writing a thesis, as it allows you to easily organize and format your citations/bibliography. Carleton University library offers resources on citation management here: <https://library.carleton.ca/help/citation-management>

## Student Support Resources

For help and advice on matters that are not directly related to your degree, the following websites should be of assistance. Neuroscience administrators can often assist you should you not find that information that you require.

### Carleton – Current Students

<http://students.carleton.ca> is aimed at all current students, and has links to on-campus resources such as:

- Awards and Financial Aid
- Co-op and Career Services
- Health & Counselling Services
- International Student Services Office
- Paul Menton Centre for Students with Disabilities
- Student Academic Success Centre
- Student Experience Office
- Undergraduate Recruitment Office
- Admissions Services (Undergraduate)
- University Registrar's Office
- Student Affairs

### Carleton – Current Grad Students

<http://gradstudents.carleton.ca> is aimed specifically at current graduate students, and has links to many resources including:

- Awards and Funding
- Thesis Requirements
- Professional Development
- Forms and Policies

## Help and Advice

For help and advice on most matters relating to your degree, you can contact your supervisor, our Graduate Administrator, Graduate Chair, Department Chair, or any member of your thesis advisory committee.

Role	Description
Supervisor	Faculty member supervising your thesis/research
Graduate Administrator	Staff member, advises on academic and administrative procedures
Departmental Administrator	Staff member, assists on general departmental and administrative procedures or policies, and handles TAs
Graduate Chair	Faculty member assigned every academic year to oversee graduate student progress in department
Departmental Chair	Faculty member assigned to oversee and represent department

