Guidelines for Graduate Students and Supervisors in the Neuroscience Graduate Program at the University of Alberta

Revised April 2014

Table of Contents
I. Introduction to the Neuroscience and Mental Health Institute ........................................ 1
II. Program Requirements – MSc and PhD Students .................................................. 1
   Course Requirements .............................................................................................................. 1
   Seminar Attendance .............................................................................................................. 2
   Ethics Component ................................................................................................................. 2
III. Transfer from MSc to PhD Program ............................................................................... 3
IV. Neuroscience Research Day ............................................................................................. 3
V. Supervisory Committees – MSc and PhD ................................................................. 5
VI. Thesis Proposal and Evaluation – MSc and PhD ..................................................... 6
VII. PhD Candidacy Examination ...................................................................................... 9
VIII. Final MSc Examination ............................................................................................... 13
IX. Final PhD Examination .................................................................................................... 17
X. Submission of Final Thesis – MSc and PhD ............................................................ 23
XI. Financial Information ...................................................................................................... 24
   Studentships from the Neuroscience and Mental Health Institute .................................... 24
   Scholarships ......................................................................................................................... 24
   Fees .................................................................................................................................. 24
I. Introduction to the Neuroscience and Mental Health Institute

The Neuroscience and Mental Health Institute at the University of Alberta is a group of more than 90 neuroscientists from 24 departments across 5 Faculties. The NMHI offers a graduate program that is designed for students who desire a broad training in various experimental and theoretical aspects of neuroscience while maintaining a research program that may be more specialized. This can be achieved by drawing on the expertise of specialists (Members of the Centre) from various departments throughout the University who have research interests in neuroscience.

The following are the regulations governing graduate studies in the Neuroscience and Mental Health Institute at the University of Alberta. They encompass and, in some cases, may supersede the equivalent regulations of the Faculty of Graduate Studies and Research (FGSR). Students and Supervisors are referred to the University Calendar for further information.

II. Program Requirements – MSc and PhD Students

Requirements to complete the graduate program include course, ethics, and seminar components (information below), annual meetings with the Graduate Coordinator and supervisory committee, a thesis proposal, candidacy exam (for PhD students), final oral defense of a thesis and submission of a thesis.

Course Requirements

A total of 6 credits and a thesis are required for the MSc degree. The only exception to course requirements for the MSc degree would be for clinical trainees such as medical residents, who, in consultation with and approval of the graduate coordinator, may be exempted. Students are expected to have completed undergraduate courses such as PMCOL 371 and PHYSL 372 or their equivalent. Students deficient in this area may be expected to take these courses soon after admission.

Effective September 2014 (for new students only), MSc students have the option, in consultation with their program supervisor, to complete a lab rotation course, typically during the first year. Students can choose either NEURO 500 (two terms; 6 credits) or NEURO 501 (one term; 3 credits). NEURO 500 involves rotations through three laboratories during the first year. Each rotation involves two months of research experience (six months in total). One rotation may be in the laboratory of the primary supervisor. Although this course is 6 credits, an additional lecture-based, graduate-level course will be required to meet the course requirements if students register in NEURO 500. NEURO 501 involves rotation through one laboratory taken outside of the laboratory of the primary supervisor. Students, in consultation with their supervisory committees, may also select courses in other areas important to their research programs. Effective September 2014 (for new students only), MSc students, therefore, must complete NEURO 500 or 501 and one lecture-based course, or two lecture-based courses, from the Neuroscience-approved course list.

PhD students must complete 9 credits, a candidacy exam, and a thesis. An important feature of the PhD program is the requirement that students participate in a lab rotation course, typically
during the first year. Students must choose either NEURO 500 (two terms; 6 credits) or NEURO 501 (one term; 3 credits). NEURO 500 involves rotations through three laboratories. Each rotation involves two months of research experience (six months in total). One rotation may be in the laboratory of the primary supervisor. NEURO 501 involves rotation through one laboratory taken outside of the laboratory of the primary supervisor. Effective September 2014 (for new students only), PhD students, therefore, must complete either NEURO 500 and one lecture-based course, or NEURO 501 and two lecture-based courses, from the Neuroscience-approved course list.

Neuroscience and Mental Health Institute graduate students may take a graduate level reading course for 3 credits to fulfill their course requirements. However the following limitations apply:

1. The course must be taken with a Faculty member other than the student’s Supervisor(s).

2. The course can be from any department, but it must be approved by the Neuroscience and Mental Health Institute Graduate Student Coordinator.

3. Students cannot meet their graduate student quota of 6 (MSc) or 9 (PhD) credits merely based on a combination of lab rotation and reading courses (i.e., some didactic, lecture based course work is required).

4. Students are required to maintain a minimum cumulative program grade point average of 3.3 (B+) throughout their program.

Seminar Attendance

In addition to the required courses, Students are required to attend regularly scheduled weekly seminars offered in the Neuroscience Seminar Program. All Graduate Students are required to attend 20 seminars per year anywhere on campus and at least 10 of these must be selected from the list of formal Neuroscience seminars hosted by the Centre.

There are also a number of special seminars the NMHI hosts that students will be required to attend in addition to the mandatory minimum of 10 weekly seminars per year. Notices that these seminars are mandatory will be sent by the Centre.

Students must complete an Excel spreadsheet available on the Neuroscience website for reporting their seminar attendance to the NMHI by the first week of June each year. Participation in these seminars is a requisite for continuation in the program.

Ethics Component

The academic integrity and ethics training requirement stipulates that all Graduate Students must complete eight hours of structured academic activity in academic integrity and ethics prior to convocation.

Neuroscience and Mental Health Institute Graduate Students must complete this requirement as follows:
1. Complete the G.E.T. (Graduate Ethics Training) WebCT course offered by Faculty of Graduate Studies (FGSR). The course may be accessed from the FGSR homepage at:

http://www.gradstudies.ualberta.ca/degreesuperv/ethics/index.htm

Once completed, the student must provide the NMHI Administrator a copy of their results.

AND

2. Participate in the Scientific Integrity Day organized by the Faculty of Medicine and Dentistry. The Faculty of Medicine and Dentistry offers the Scientific Integrity Day periodically throughout the academic year. Students can get up-to-date information by periodically checking their website at:


It is strongly recommended that students complete this requirement early in their graduate program as space availability is limited and fills up quickly.

Once the ethics training is completed, proof of completion will be submitted to the NMHI Administrator from the Faculty of Medicine and Dentistry.

**Students must complete this ethics component in order to convocate.**

### III. Transfer from MSc to PhD Program

Transfer to the PhD program will be based on both the Student's performance in course work and demonstrated ability to conduct PhD level research. A comprehensive evaluation of the Student's progress will be carried out (normally at the end of the first year) and, after successful completion of a PhD thesis proposal committee meeting, the Supervisory Committee may recommend transfer to the PhD program.

There are two options for MSc students to complete a PhD thesis proposal exam:

1. The MSc student can prepare a PhD thesis proposal with the prior approval of the supervisor and supervisory committee, and not hold an MSc proposal.
2. The MSc student can prepare a PhD thesis proposal following his or her MSc thesis proposal if it is decided following the MSc proposal that the student wishes to transfer to the PhD program.

### IV. Neuroscience Research Day

One day each year is designated as Neuroscience Research Day (NRD) in which Students and Members of the Neuroscience and Mental Health Institute get together to find out about the diverse research interests in the Centre. The format of NRD follows that of a typical scientific meeting and typically includes a keynote presentation from a distinguished scientist from outside
of the University of Alberta as well as presentations by students of the Neuroscience and Mental Health Institute.

Annual NRD requirements of Students will be distributed by the Administrator. Participation in NRD is a requisite for continuation in the Neuroscience graduate program.
V. Supervisory Committees – MSc and PhD

Committees will be formed in accordance with FGSR regulations. Supervisory Committees for all Students (both MSc and PhD) must be appointed by 6 months into the Student's first year in the program and a Supervisory Committee meeting must be held within the first 6 months of the student’s first year.

Supervisory Committee Composition

The Committee will consist of the Supervisor and at least 2 other full-time faculty members (at least 1 of whom is a NMHI member). All Supervisors must be Members of the Neuroscience and Mental Health Institute with active research programs. New investigators, Members who hold an MD degree (with no thesis), or Members who have not graduated a Student will normally be required to appoint a Co-Supervisor for their Students. The Co-Supervisor must first be approved by the Graduate Coordinator.

Supervisors, in consultation with the Student, will suggest names of potential Committee Members to the Graduate Coordinator. Following approval by the Graduate Committee, names will be forwarded to FGSR for approval.

Duties

1. Meet with the Student at least once a year to determine the Student's progress and to advise on academic and research matters. A “Report of Supervisory Committee” form must be submitted to the Neuroscience and Mental Health Institute office after each supervisory committee meeting.

2. Take part in examinations required by the FGSR (e.g., Candidacy Examinations, Final Oral Examinations).

3. The Supervisor has specific responsibilities:

   a) Ensures that the Student meets all the administrative requirements of the Neuroscience and Mental Health Institute and FGSR. Note that, in accordance with FGSR regulations, it is the Supervisor's responsibility and not the Student's to arrange Supervisory Committee meetings and examinations.

   b) Provides the research support necessary for completion of the thesis research.

   c) Makes every possible effort to secure financial support for the Student.

   d) Provides the Graduate Committee with an annual written report on the Student's performance as requested.
VI. Thesis Proposal and Evaluation – MSc and PhD

By the end of the first year of the MSc program or by 18 months into the PhD program, the Student will submit a thesis proposal document, which will be evaluated by an Examination Committee, and the Student will be required to defend his or her proposal orally to that Committee in response to questions. Exceptions to this time frame may be granted by the Graduate Committee of the Neuroscience and Mental Health Institute.

Examination Committee Composition

- The Chair, appointed by the Neuroscience and Mental Health Institute from among the Members of the Graduate Committee
- The Student’s Supervisory Committee

Committee Membership must be ratified in advance by the Graduate Coordinator.

Purpose of the Examination

The purpose of the evaluation is to determine the Student’s ability to formulate a hypothesis based on existing evidence, and to design an experimental test of that hypothesis. The Student must demonstrate a knowledge of the literature relevant to the problem to be addressed, and must show an appreciation of good experimental design and the technical difficulties and pitfalls inherent in the chosen methodology.

Role of the Examination Committee

The Evaluation Committee will review the Student’s performance in formal course work and the Student’s competence as revealed by the thesis proposal itself and the Student’s ability to defend the content of the proposal. Committee members will assess the feasibility of the project within the projected timeline and determine whether the project is of sufficient quality and quantity for the degree proposed. Following this review, a determination will be made on the Student’s future status within the program and recommend any further courses that may be deemed necessary to attain an acceptable level of knowledge. Committee members are encouraged to provide feedback to improve the quality of the research project and identify potential obstacles or pitfalls.

Thesis Proposal Document

At least 1 week prior to the date of the evaluation, the Student will provide each member of the Evaluation Committee and the Chair with a copy of the thesis proposal document. This must include a brief introduction to the research topic, a summary of the Student’s work done to date and an outline of the research plan, including methodology and anticipated time lines for completion. Typically, the thesis proposal document should be between 10-20 double-spaced pages (not including figures or references).
Preparing for the Examination

At least 3 weeks in advance of the exam, the Supervisor will provide the NMHI Administrator with the date, time, and place of the exam. The Administrator will then appoint the Chair and notify the Committee and the Student.

Format of the Examination

At the evaluation:

1. In the presence of the Student, the Chair will summarize the Student’s performance in course work to date.

2. The Student will give a short (no longer than 20 minutes) presentation summarizing the thesis proposal.

3. The Student will defend the proposal in response to questions from each Committee Member in turn. Questions may include more general areas of relevant neuroscience so that the Committee may be satisfied that the Student has an appreciation of the subject adequate to pursue the proposed research.

4. Discussion among the Committee Members concerning the outcome of the evaluation is carried out in the absence of the Student.

5. Following the conclusion of the exam, a “Report of Supervisory Committee” form must be completed, signed, and returned to the Neuroscience and Mental Health Institute office.

6. If a MSc Student intends to transfer in to the PhD program and successfully completes a PhD Thesis Proposal, a FGSR “Change of Category” form must also be completed and returned to the Neuroscience and Mental Health Institute office immediately following the exam.

Possible Outcomes of the Examination

For Students Registered in the MSc Program:

- **Proceed unconditionally** - Excellent performance with no or minor areas of weakness that do not require remedial action. Allows for continuation in the MSc Program, or, if appropriate, transfer to the PhD Program.

- **Proceed conditionally** - Adequate performance with areas of weakness identified. Committee recommends remedial action. Allows for continuation in the MSc Program, or, if appropriate, transfer to the PhD Program.

- **Repeat Evaluation** - Only given if the Committee feels that there are extenuating circumstances or if the performance is much poorer in one or more areas than anticipated from the Student’s record.
• **Transfer to PhD Program** – In addition to any conditions set, the Student is granted permission to transfer to the PhD program.

• **Withdraw** - The Student is asked to withdraw from the program. The Student may choose to remain in the program for the remainder of the academic year. Students who fail will not be considered for readmission to the program.

*For Students Registered in the PhD Program:*

• **Proceed unconditionally** - Excellent performance with no or minor areas of weakness that do not require remedial action. Allows for continuation in the PhD Program.

• **Proceed conditionally** - Adequate performance with areas of weakness identified. Committee recommends remedial action. Allows for continuation in the PhD Program.

• **Repeat Evaluation** - Only given if the Committee feels that there are extenuating circumstances or if the performance is much poorer in one or more areas than anticipated from the Student’s record.

• **Transfer to the MSc Program** - In addition to any conditions set, the Student is asked to transfer to and complete an MSc program.

• **Withdraw** - The Student is asked to withdraw from the program. The Student may choose to remain in the program for the remainder of the academic year.
VII. PhD Candidacy Examination

Candidacy exams should be scheduled by the end of the 2nd year in the program and held in the 3rd year of the program at the latest. For students who began their program in September 2013 and later and who transferred to the PhD program directly from the MSc program, candidacy exams should be scheduled by the end of the 3rd year in the program and held in the 4th year of the program at the latest.

This is a time when most, if not all, of the course work is completed and the thesis research is started or is well defined. The candidacy examination must be passed no less than 6 months prior to taking the final oral examination.

Examination Committee Composition

• The Chair is a member of the Neuroscience and Mental Health Institute Graduate Committee who is not the Supervisor and is appointed by the NMHI Administrator. Effective September 1/2013, Chairs will also always act as Examiners.

• The Student’s Supervisory Committee

• At least 2 arm’s length members. An arm’s length examiner must not be (or have been) a member of the supervisory committee, or have been connected with the thesis research in a significant way. The examiner should not have been associated with the student, outside of usual contact in courses or other non-thesis activities within the University, nor be related to the student or supervisor(s). Except in special circumstances (fully justified in writing to the Vice-Dean, FGSR), an arm’s length examiner should not be a close collaborator of the supervisor(s) within the last six years.

The Supervisor, often in discussion with the Student, selects and invites the 2 additional examiners to be on the committee.

Purpose of the Examination

The purpose of the examination is for the Student to demonstrate that he or she has a broad knowledge of neuroscience and of the subject matter relevant to the thesis and has the ability to pursue and complete original research at an advanced level. The questioning will not be directly related to the thesis research, but rather questions will cover a broad scope which can include basic neuroscience concepts, broader concepts in the student’s research area as well as theoretical and technical aspects of data collection and analysis.

Role of the Examination Committee

During the examination the role of each examiner is to test the Student's knowledge in specific topic areas previously outlined (see below) and related areas.

Preparing for the Examination
1. The examination committee should be established well in advance of the examination. The student should then meet with each examiner to discuss general content areas that they will base their questions on and establish appropriate sources for background reading material. The specifics regarding the reading sources provided by examiners will vary depending on each examiner; examiners may provide a very specific "reading list" or a more general "reading area".

2. At least 5 weeks in advance of the exam, the Supervisor must provide the Neuroscience and Mental Health Institute with the date, time, and place of the exam as well as the names of the 2 extra examiners. The Administrator will then arrange for the Chair and notify the Supervisory Committee and the Student of the Chair.

3. The Chair is charged with ensuring that the exam is of a consistent standard. Students are expected to have good, general neuroscience knowledge and Chairs are instructed to ask general questions that have not been covered by other examiners. Effective September 1, 2013, the expectation of students will be that they could adequately explain all topics covered (including appendices) in Bear et al, Neuroscience: Exploring the Brain (either 2nd or 3rd edition).

4. The Administrator will provide the Supervisor with a completed FGSR “Notice and Approval of Doctoral Examining Committee & Examination Date” form which the Supervisor must print, sign, and return to the Administrator.

5. The Administrator will ensure that form is complete and submit the form to FGSR at least 3 weeks in advance of the exam.

**Format of the Examination**

The Student does not present the Committee with a written report. The examination will begin with a review of the Student's progress including course work, awards, publications and presentations. The Student will then provide a 15-20 minute oral presentation outlining their thesis. Emphasis should be given to describing the overall goals and hypotheses being tested. Key data can be presented to emphasize progress of the thesis work and the presentation should conclude with an outline of future plans for completion of the thesis. It should be noted that during the candidacy examination only minor attention should be given to the thesis work.

**Possible Outcomes of the Examination**

If all but 1 member of the Committee agrees on a decision, the decision shall be that of the majority. If 2 or more dissenting votes are recorded, the department will refer the matter to the Vice-Dean (FGSR), who will determine an appropriate course of action. Notwithstanding the overall performance, if the Chair and a majority of committee members agree that basic knowledge in the general area of Neuroscience is not sufficient, the outcome will automatically registered as a Conditional Pass (see below). The final outcome in this case will be determined following an additional oral exam to take place no longer than four weeks following the date of the original candidacy exam. The Evaluation Committee for this additional examination will be determined ad hoc and will consist of the Chair and two other members of the Neuroscience Graduate Committee.
One of the following outcomes of the candidacy is appropriate:

- **Pass**: If the Student passes the Candidacy Examination, the FGSR “Report of Completion of Candidacy Examination” form must be signed and submitted to the NMHI Administrator immediately following the exam. The Administrator will arrange for the final signature and will submit the form to FGSR.

- **Conditional Pass**: If the Candidacy Examining Committee agrees to a conditional pass for the Student, the Chair of the Examining Committee shall provide in writing to the Vice-Dean (FGSR), the Student, and the Neuroscience and Mental Health Institute:
  - the reasons for this recommendation
  - details of the conditions
  - timeframe for the Student to meet the conditions
  - the approval mechanism for meeting the conditions (i.e., approval of the Committee Chair or Supervisor, or approval of the entire Committee, or select Members of the Committee, or the approval of the ad hoc Evaluation Committee)
  - the supervision and assistance the Student can be expected to receive from Committee Members and/or ad hoc Evaluation Committee Members

Once the Examining Committee has agreed that the conditions have been met and have informed the NMHI Administrator, the NMHI Administrator will complete the “Report of Completion of Candidacy Examination” form and submit it to FGSR. If unmet, the subsequent outcome will be selected.

- **Fail**: If the candidacy Examining Committee or the ad hoc Evaluation Committee agrees that the Student has failed, the Committee Chair shall provide the reasons for this recommendation and the department’s recommendation for the Student’s program in writing to the Vice-Dean (FGSR), to the Student, and to the NMHI Administrator. For failed candidacy examinations, the Vice-Dean (FGSR), normally arranges to meet with the Student and with department representatives before acting upon any department recommendation. A decision of the FGSR which affects a Student's academic standing (e.g., required to withdraw or transfer to a master's program) is appealable.

The following options are to be considered by the Examining Committee when the outcome of a Student’s candidacy exam is “fail:”

- **Repeat the Candidacy**
  If the Student’s candidacy exam performance was inadequate but the Student’s performance and work completed to date indicate that the Student has the potential to perform at the doctoral level, the Examining Committee should consider the possibility of recommending that the Student be given an opportunity to repeat the candidacy exam.
If the recommendation of a repeat candidacy is formulated by the Examining Committee and approved by FGSR, the Student is to be notified in writing of his/her exam deficiencies by the Chair of the Examining Committee. The second candidacy exam is to be scheduled no later than 3 to 6 months from the date of the first candidacy. In the event that the Student fails the second candidacy, the Examining Committee shall recommend 1 of the next 2 options.

- **Change of Category to a Master’s Program**
  If the Student’s candidacy exam performance was inadequate and the Student’s performance and work completed to date indicates that the Student has the potential to complete a master’s program, the Examining Committee should consider the possibility of recommending a change of category to a master’s program or postgraduate diploma program.

- **Termination of the Doctoral Program**
  If the Student’s performance was inadequate and the work completed during the program is considered inadequate, the Examining Committee should recommend termination of the Student’s program.
VIII. **Final MSc Examination**

Typically, the final oral exam for MSc Students is scheduled at the **end of the second year or approximately 1 year after the thesis proposal meeting**. MSc Students have 4 years from their first term of registration to complete all degree requirements.

**Examination Committee Composition**

- The Chair is a member of the Neuroscience and Mental Health Institute Graduate Committee who is not the Supervisor and is appointed by the NMHI Administrator. If approved by the Neuroscience and Mental Health Institute, the Chair may also act as an examiner.
- The Student’s Supervisory Committee.
- One arm’s length examiner. An arm’s length examiner must not be (or have been) a member of the supervisory committee, or have been connected with the thesis research in a significant way. The examiner should not have been associated with the student, outside of usual contact in courses or other non-thesis activities within the University, nor be related to the student or supervisor(s). Except in special circumstances (fully justified in writing to the Vice-Dean, FGSR), an arm’s length examiner should not be a close collaborator of the supervisor(s) within the last six years.

**Purpose of the Examination**

The purpose of the final MSc examination is to assess the Student’s: 1) knowledge of the literature relevant to their research area, 2) understanding of the procedures used to collect and analyse their data, 3) understanding of the significance of their research in the context of their research area, and 4) knowledge of the limitations and pitfalls of their chosen methodology.

**Role of the Examination Committee**

The Committee will review the thesis document and conduct an oral examination to test the Student's knowledge of the thesis subject and of related fields. The final decision of the examination committee will be based both on the quality of the thesis document and on the Student’s performance in defence of that document.

**MSc Thesis Document**

All regulations regarding the preparation of the thesis are governed by FGSR. Please visit http://www.gradstudies.ualberta.ca/degreesuperv/thesis/prepare.htm for current requirements.

**Preparing for the Examination**

1. Students must submit a completed thesis to the supervisory committee with sufficient time so that each member can submit a form indicating their decision on its suitability for defence at least 5 weeks prior to the examination. The exam date cannot be set before members of the Supervisory Committee recommend, on the “Preliminary
Acceptance of Thesis form available on the NMHI website, that the thesis is acceptable for examination.

Because the exam must be set with FGSR 3 weeks prior to the date of the exam and a Chair for the exam must be arranged, the Preliminary Acceptance of Thesis form(s) must be submitted by the Student to the NMHI office at least 5 weeks before the date of the exam. The Members can each sign a different form; all signatures do not have to be on the same form.

2. Once the NMHI Administrator receives all of the signatures as supplied by the Student, the Administrator will inform the Supervisor. It is then the responsibility of the Supervisor to arrange the date, time, and place of the exam at least 5 weeks prior to the exam.

3. Once the Administrator has been informed of the date, time, and place of the exam, the Administrator will arrange for the Chair from among the Members of the Neuroscience and Mental Health Institute Graduate Committee. The Administrator will then inform the Supervisor and Student of the Chair. It is then the Student’s responsibility to provide a hard and/or electronic copy of the thesis to the Chair.

4. Once the meeting has been set and the Chair arranged, the Administrator will email the Supervisor the FGSR form “Notice and Approval of a Master's Final Oral Examining Committee & Examination Date.” The Supervisor must print this form, sign it, and return it with the original signature to the NMHI office.

5. The Student must provide the NMHI Administrator with the exact name of the thesis as soon as it is known and at least a few days prior to the exam.

6. The Administrator will provide FGSR with the “Notice and Approval of a Master's Final Oral Examining Committee & Examination Date” at least 3 weeks prior to the exam.

**Format of the Examination**

- A formal public seminar is not required for an MSc degree but can be scheduled if the Student or Supervisor wish to hold one prior to the exam. It would be attended by the Supervisory Committee and other interested individuals. If a seminar is scheduled, please ensure that the venue is appropriate and provide the NMHI office with a seminar title and abstract at least 2 weeks in advance so the seminar notice may be circulated. If the student does not present a public seminar the final examination will be preceded by a 30 minute presentation attended by the Supervisory Committee.

**Possible Outcomes of the Examination**

If all but 1 member of the Committee agrees on a decision, the decision shall be that of the majority. If 2 or more dissenting votes are recorded, the department will refer the matter to the Vice-Dean (FGSR), who will determine an appropriate course of action.
• **Pass:** If the Student passes the examination, the Committee shall sign the “Thesis Approval/Program Completion” form and submit it immediately to the NMHI office. The Administrator will arrange for the final signature and submit the form to FGSR.

• **Pass subject to revisions:** The Student has satisfactorily defended the thesis but the revisions to the thesis are sufficiently minor that it will not require a reconvening of the Examining Committee. Members wishing to do so may sign immediately. The Committee Chair or Supervisor withholds signature until the thesis is amended satisfactorily and all other Committee Members have signed. Sign the Program Completion form and submit it to the NMHI office indicating "pass subject to revisions". It is expected that the Student will make the changes in time to submit the thesis to the FGSR on or before the deadline for the next convocation. These changes should be checked and approved by the Supervisor, who does not sign until the required changes are satisfactorily completed. Other Committee Members may also wish to withhold their signature until they can verify that their required revisions have been made to their satisfaction. **Once the revisions have been satisfactorily completed, the Supervisor will visit the NMHI office, sign the form, and the Administrator will submit the form to FGSR.**

• **Adjourned:** The final oral examination should be adjourned in the following situations:

  • The revisions to the thesis are sufficiently substantial (if further research or experimentation or major reworking of sections are required, or if the Committee is not satisfied with the general presentation of the thesis) that it will require a reconvening of the Examining Committee. The Committee should not propose that the Student has passed, rather the Committee shall adjourn the examination.

  • The Committee is dissatisfied with the Student's oral presentation and defence of the thesis, even if the thesis itself is acceptable with or without minor revisions.

  • Compelling, extraordinary circumstances such as a sudden medical emergency during the examination.

  • If the examination is adjourned, the Committee should:

    ▪ Specify in writing to the Student, with as much precision as possible, the nature of the deficiencies and, in the case of revisions to the thesis, the extent of the revisions required. Where the oral defence is unsatisfactory, it may be necessary to arrange some discussion periods with the Student prior to reconvening the examination.

    ▪ Decide upon a date to reconvene. If the date of the reconvened oral examination depends upon the completion of a research task or a series of discussions, it should be made clear which Committee Members will decide on the appropriate date to reconvene. The final date set for reconvening shall be no later than six months
from the date of the examination. A final decision of the Examining Committee must be made within six months of the initial examination.

- Make it clear to the Student what will be required by way of approval before the examination is reconvened (i.e., approval of the Committee Chair or Supervisor, approval of the entire Committee, or of select Members of the Committee).

- Specify the supervision and assistance the Student may expect from the Committee Members in meeting the necessary revisions.

- Advise the Vice-Dean (FGSR), and the Neuroscience and Mental Health Institute office in writing of the adjournment and the conditions.

- When the date is set for the adjourned final oral examination, the Supervisor will notify the NMHI office and the NMHI will notify the FGSR. Normally the Dean, Vice-Dean, Associate Dean or Pro Dean attends the examination.

- **Fail:** If the final examination Committee agrees that the Student has failed, the Committee Chair shall provide the reasons for this recommendation and the department's recommendation for the Student's program in writing to the Vice-Dean (FGSR), to the Student, and to the NMHI office. The Vice-Dean (FGSR) will arrange to meet with the Student and with department representatives before acting upon any department recommendation. A decision of the FGSR which affects a Student's academic standing (e.g., required to withdraw) is appealable.

**Time Limit for Submission of Theses to FGSR**

Following completion of the final oral examination at which the thesis is passed or passed subject to revisions, the Student shall make the appropriate revisions where necessary and **submit the approved thesis to FGSR within 6 months** of the date of the final oral examination. The Neuroscience and Mental Health Institute may impose earlier deadlines for submitting revisions.

If the thesis is not submitted to FGSR within the 6 month time limit, the Student will be considered to have withdrawn from the program. After this time, the Student must apply and be re-admitted to FGSR and register again before the thesis can be accepted.

If the final oral examination is adjourned, the 6 month time limit will take effect from the date of completion of the examination where the thesis was passed with or without revisions.

In order to convocate, Students must submit their thesis to the FGSR for approval before the deadline dates set out in the Academic Schedule of the Calendar. Students must also ensure that they are registered in the appropriate Thesis course in their last registration prior to convocation.
IX. **Final PhD Examination**

The final exam for PhD Students is normally **held at the end of the fourth year** in the graduate program. PhD Students have a maximum of 6 years from their first term of registration to complete all degree requirements. Master's Students who are transferred to a doctoral degree must complete all degree requirements within 6 years from their first term of registration as a Master's Student.

**Examination Committee Composition**

The PhD Examining Committee is composed of a minimum of 5 examiners:

- The Student’s Supervisory Committee
- An External Examiners from outside of the University of Alberta
- At least one arm’s length examiner. An arm’s length examiner must not be (or have been) a member of the supervisory committee, or have been connected with the thesis research in a significant way. The examiner should not have been associated with the student, outside of usual contact in courses or other non-thesis activities within the University, nor be related to the student or supervisor(s). Except in special circumstances (fully justified in writing to the Vice-Dean, FGSR), an arm’s length examiner should not be a close collaborator of the supervisor(s) within the last six years. **It is the responsibility of the Supervisor to inform the NMHI office of the UofA external examiner and the non-UofA external examiner.**

The exam Chair will be appointed by the NMHI office from among the Members of the Neuroscience and Mental Health Institute Graduate Committee.

**Purpose of the Examination**

The purpose of the final PhD examination is to assess the Student’s: 1) knowledge of the literature relevant to their research area, 2) understanding of the procedures used to collect and analyse their data, 3) understanding of the significance of their research in the context of their research area, 4) knowledge of the limitations and pitfalls of their chosen methodology. The PhD thesis must include the results of original investigations and analyses and be of such quality as to merit publication; furthermore, it must constitute a substantial contribution to the knowledge of the Student's field of study.

**Role of the Examination Committee**

The Committee will review the thesis document and conduct an oral examination to test the Student's knowledge of the thesis subject and of related fields. The final decision of the examination committee will be based both on the quality of the thesis document and on the students performance in defence of that document.
All regulations regarding the preparation of the thesis are governed by FGSR. Please visit http://www.gradstudies.ualberta.ca/degreesuperv/thesis/prepare.htm for current requirements.

Preparing for the Examination

1. External Examiner outside of the University of Alberta

   a) Once an External Examiner has been chosen by the Supervisor, the Supervisor must complete the “External Examiner Invitation” form required by FGSR (found in the forms cabinet on the FGSR website). The original signed form must be submitted to the NMHI office so the appropriate additional signatures can be obtained. A CV for the External Examiner, which must contain supervisory experience of the proposed External Examiner, must also be submitted by the Supervisor to the NMHI office to accompany the invitation form to FGSR.

   b) The NMHI office will forward the Invitation form to FGSR. This form and the CV must be submitted to the NMHI office AT LEAST 6 weeks ahead of the exam date.

   c) Once approved by FGSR, the External Examiner will receive an official invitation letter from FGSR. At that point neither the Supervisor nor Student can have any contact with the External. The Administrator will inform the Student and Supervisor when the invitation has been approved and sent by FGSR to the External.

   d) The NMHI office requires the Supervisor to provide the External Examiner’s email address and office phone number to the Administrator.

   e) In the letter of invitation sent to the External Examiner by FGSR, the External Examiner is requested to prepare and send to the Graduate Coordinator, at least 1 week in advance of the examination, a brief written commentary (approximately 2 to 3 pages) on the structure, methodology, quality, significance and findings of the thesis. The commentary should not be given to the Student prior to the examination.

   f) Very limited funding is available from the Neuroscience and Mental Health Institute for the travel required by the external examiner. A written request must be made to the NMHI Director. There is also funding from FGSR to cover the costs associated with bringing in external examiners; Supervisors must apply for this funding first and submit the decision of the request to the NMHI Director with their NMHI request.

2. Preliminary Acceptance of Thesis
a) Before the final exam can be scheduled members of the Supervisory Committee must recommend, on the “Preliminary Acceptance of Thesis” form (available on the Neuroscience website), that the thesis is acceptable for examination. The form must be submitted to the Neuroscience and Mental Health Institute office by the Student.

Because the exam must be set with FGSR at least 3 weeks prior to the date of the exam, a Chair for the exam must be arranged, and the External Examiner must receive a copy of the thesis at least 1 month ahead of the exam, the “Preliminary Acceptance of Thesis” form(s) must be submitted by the Student to the NMHI office at least 6 weeks before the date of the exam. The Committee Members do not have to all sign the same form.

b) Once the Supervisory Committee has preliminarily approved the thesis, the Student must provide a hard or electronic copy to the External Examiner. The External must receive the Thesis at least 4 weeks in advance of the exam; please allow for sufficient mailing time if the Examiner prefers to receive a hard copy.

c) Once the signature forms have been received, the Administrator will inform the Supervisor that he/she can now set the date, time, and place of the exam. The Supervisor must inform the Administrator once this information is confirmed.

d) The Student must provide the NMHI Administrator with the exact title of the thesis and a very brief abstract (maximum 200 words) for the public seminar.

3. Examination Chair

a) A Chair will be arranged through the NMHI office from among the Members of the Neuroscience Graduate Committee after the Administrator has received the signatures from the Supervisory Committee AND after the Supervisor has informed the Administrator of the date, time, and place of the exam.

b) Once the Chair is arranged, the Supervisor and Student will be informed. The Student then must provide a hard and/or electronic copy of the thesis to the Chair.

4. University of Alberta (Internal) External Examiner

a) After the Student’s Supervisory Committee preliminarily accepts the thesis for examination, the Student must provide the Internal External examiner with an electronic or hard copy of the thesis, whichever is preferred.

5. FGSR-Required Form

a) Once the meeting has been set and the Chair arranged, the Administrator will email the Supervisor the FGSR form “Notice and Approval of a Doctoral Final Oral Examining Committee & Examination Date.” The Supervisor must print
this form, sign it, and return it with the original signature to the NMHI office.

b) The Administrator must provide FGSR with the “Notice and Approval of a Doctoral Final Oral Examining Committee & Examination Date” at least 3 weeks prior to the exam.

6. Examination Seminar

a) The examination will be preceded by a 30 minute to one hour public seminar and question period that will be attended by the Examining Committee and other interested individuals. The Student must provide a seminar title and short abstract to the NMHI office at least 2 weeks in advance of the exam so that the seminar notice can be circulated. The seminar is usually held in the same room as the exam if the room is appropriate. It is the responsibility of the Supervisor to arrange for the venue of the seminar.

**Format of the Examination**

1. After a brief break following the public seminar the examining committee and the Student reconvene for the formal final examination. After initial introductions are made, the Student leaves room while the committee discusses the Student's performance in the program and establishes the order of questioning.

2. It is generally agreed that the most time should be allotted to the internal/external member and the external examiner and the least to the Supervisor. In this way new and challenging questions are asked in place of reiteration of questioning already utilized to develop the Student and enhance the research. Examiners should avoid discussions among themselves that exclude the Student. They should not lecture but should ask detailed questions about the thesis and occasional broad, disciplinary questions. Typographical and stylistic errors should not take up examination time.

3. At the close of the examination the Student is asked if they have any final question or comments before they asked to withdraw.

4. For the adjudication, no final verdict should be rendered without each examiner having given an opinion. Two opinions will be sought: (1) on the acceptability of the thesis; and (2) on the acceptability of the defence. When a positive conclusion is obvious, some time should be spent on discussing the future of the thesis and the research area.

5. The Student is invited back into the room and the Chair announces the decision and provides feedback on the committee's discussions regarding the strengths and weaknesses of the thesis and the thesis defence.

**Possible Outcomes of the Examination**
• **Pass:** If the Student passes the examination, the Examining Committee shall sign the “Thesis Approval/Program Completion” form and submit it to the NMHI office. The Administrator will arrange for the final signature and submit the form to FGSR.

• **Pass subject to revisions:** The Student has satisfactorily defended the thesis but the revisions to the thesis are sufficiently minor that it will not require a reconvening of the Examining Committee. Members wishing to do so may sign immediately. The committee chair or supervisor withholds signature until the thesis is amended satisfactorily and all other committee members have signed. The Examining Committee shall sign the “Thesis Approval/Program Completion” form and submit it to the NMHI office indicating, “pass subject to revisions”. The NMHI will hold the form. It is expected that the Student will make the changes in time to submit the thesis to the FGSR on or before the deadline for the next convocation. These changes should be checked and approved by the Supervisor, who does not sign until the required changes are satisfactorily completed. Other Committee Members may also wish to withhold their signature until they can verify that their required revisions have been made to their satisfaction. Once the conditions have been met, the Supervisor will visit the NMHI office, sign the form, and the Administrator will submit the form to FGSR.

• **Adjourned:** The final oral examination should be adjourned in the following situations:

  • The revisions to the thesis are sufficiently substantial (if further research or experimentation or major reworking of sections are required, or if the Committee is not satisfied with the general presentation of the thesis) that it will require a reconvening of the Examining Committee. The Committee should not propose that the Student has passed, rather the Committee shall adjourn the examination.

  • The Committee is dissatisfied with the Student’s oral presentation and defense of the thesis, even if the thesis itself is acceptable with or without minor revisions.

  • Compelling, extraordinary circumstances such as a sudden medical emergency during the examination.

  • If the examination is adjourned, the Committee should:
    - Specify in writing to the Student, with as much precision as possible, the nature of the deficiencies and, in the case of revisions to the thesis, the extent of the revisions required. Where the oral defense is unsatisfactory, it may be necessary to arrange some discussion periods with the Student prior to reconvening the examination.
    - Decide upon a date to reconvene. If the date of the reconvened oral examination depends upon the completion of a research task or a series of discussions, it should be made clear which Committee Members will decide on the appropriate date to reconvene. The final date set for reconvening shall be no later than six months.
from the date of the examination. A final decision of the Examining Committee must be made within six months of the initial examination.

- Make it clear to the Student what will be required by way of approval before the examination is reconvened (i.e., approval of the Committee Chair or Supervisor, approval of the entire Committee, or of select Members of the Committee).

- Specify the supervision and assistance the Student may expect from the Committee Members in meeting the necessary revisions.

- Advise the Vice-Dean (FGSR) in writing of the adjournment and the conditions (in the points above).

- When the date is set for the adjourned final oral examination, the department will notify the FGSR. Normally the Dean, Vice-Dean, Associate Dean or Pro Dean attends the examination.

- **Fail:** If the final examination Committee agrees that the Student has failed, the Committee Chair shall provide the reasons for this recommendation and the department’s decision for the Student’s program in writing to the Vice-Dean (FGSR), to the Student, and to the NMHI office. For failed examinations, the Vice-Dean (FGSR), will arrange to meet with the Student and with department representatives before acting upon any department recommendation. A decision of the FGSR which affects the Student's academic standing (e.g., required to withdraw or transfer to a master's program) is appealable.

**Time Limit for Submission of Doctoral Theses to FGSR**

Following completion of the final oral examination at which the thesis is passed or passed subject to revisions, the Student shall make the appropriate revisions where necessary and submit the approved thesis to the FGSR within 6 months of the date of the final oral examination. The Neuroscience and Mental Health Institute may impose earlier deadlines for submitting revisions.

If the thesis is not submitted to the FGSR within the 6 month time limit, the Student will be considered to have withdrawn from the program. After this time, the Student must apply and be re-admitted to the FGSR and register again before the thesis can be accepted.

If the final oral examination is adjourned, the 6 month time limit will take effect from the date of completion of the examination where the thesis was passed with or without revisions. In order to convocate, all doctoral Students must submit their thesis to the FGSR for approval before the deadline dates set out in the Academic Schedule of the Calendar. Students must also ensure that they are registered in the appropriate Thesis course in their last registration prior to convocation.
X. Submission of Final Thesis – MSc and PhD

Students can submit their thesis to FGSR electronically if they so choose. However, the Neuroscience and Mental Health Institute requires ALL graduating Students to submit 1 bound copy of their thesis to the NMHI whether or not they are submitting to FGSR electronically. Please note that the color of the book binding is “Dark Green” for Neuroscience. This copy will be added to the permanent library in the Neuroscience and Mental Health Institute.

Following are the options for Students when submitting their thesis to FGSR after the corrections to a defended thesis have been made:

- 1 PDF version if submitted electronically, OR
- 2 copies if submitted hard-copy submitted. 1 unbound copy is sent by FGSR to Library and Archives Canada for inclusion in the national repository and 1 copy is bound and supplied to UofA Libraries for cataloguing and placement in its Special Collections.
- Neuroscience Students will be required to submit a hard copy of the thesis to the Neuroscience and Mental Health Institute office.
- Students may choose to have additional copies printed for Supervisors or personal use but this is not required.

There are additional supporting documents that must be sent to FGSR as well. Students are responsible for checking the FGSR website for complete and up-to-date information:


Step by step instructions for electronic thesis submission are available at:


Important Note on E-theses, Public Access, and Prior Publication

Students are to check with the likely publishers of their work in advance of the submission of their thesis as to whether they consider submission of a thesis to ERA as prior publication (many publishers do not consider the inclusion of a thesis in a university repository to be a prior publication but some do). A request to restrict public access to a thesis may be approved by FGSR for a maximum of 1 year; however this request must be fully documented. Students who have been advised by a publisher that it considers the e-thesis to be a prior publication can include the copy of the publishing contract, or a copy of the author guidelines, to support a request to restrict access to a thesis at the time of submission of the thesis.

Further information may be obtained from FGSR.
XI. **Financial Information**

**Studentships from the Neuroscience and Mental Health Institute**

A limited number of graduate research assistantships are available through the Centre. In addition, graduate teaching assistantships and research assistantships may be available through one of the faculties or departments participating in the graduate program in Neuroscience or from research grants held by individual investigators. Other funding is provided by scholarships awarded to students by federal and provincial agencies such as the Canadian Institutes of Health Research (CIHR), Natural Sciences and Engineering Research Council (NSERC), Alberta Innovates Health Solutions (AIHS) and the Provincial Government of Alberta. Many private foundations also have scholarship programs to support graduate students. **Students are expected to apply for external funding.**

**Eligibility**

Any Supervisor with a student enrolled full-time in the Neuroscience Graduate Program and not receiving support from a major competitive award (CIHR, AIHS, NSERC, etc.) may apply for full or partial funding from the NMHI for their student if and when funding is available.

**Procedure for application and evaluation**

Application information will be distributed to Supervisors as funding is available (usually in June). Funds will be distributed on the basis of need, special circumstances related to progress in the graduate program and a fair distribution to different laboratories.

Each application should include a statement from the Student listing their current source(s) and amount(s) of funding and a letter of support from the Student’s Supervisor explaining the need for financial assistance and listing the current funding support of the laboratory. A research proposal is not required.

The applications for support will be evaluated by the Graduate Committee ahead of each Fall semester. Members of the Graduate Committee submitting applications will not participate in the evaluation procedure. These Members will be replaced on an ad-hoc basis.

**Scholarships**

A number of University of Alberta and private scholarships are available to Neuroscience graduate students. **Students are responsible for researching scholarship eligibility and deadlines.** Information on FGSR’s scholarships can be found at:

http://www.gradstudies.ualberta.ca/awardsfunding/

**Fees**

Graduate Student fees and tuition are regulated by the University. It is the student’s responsibility to track all fees and pay all amounts owing by the specified deadlines.