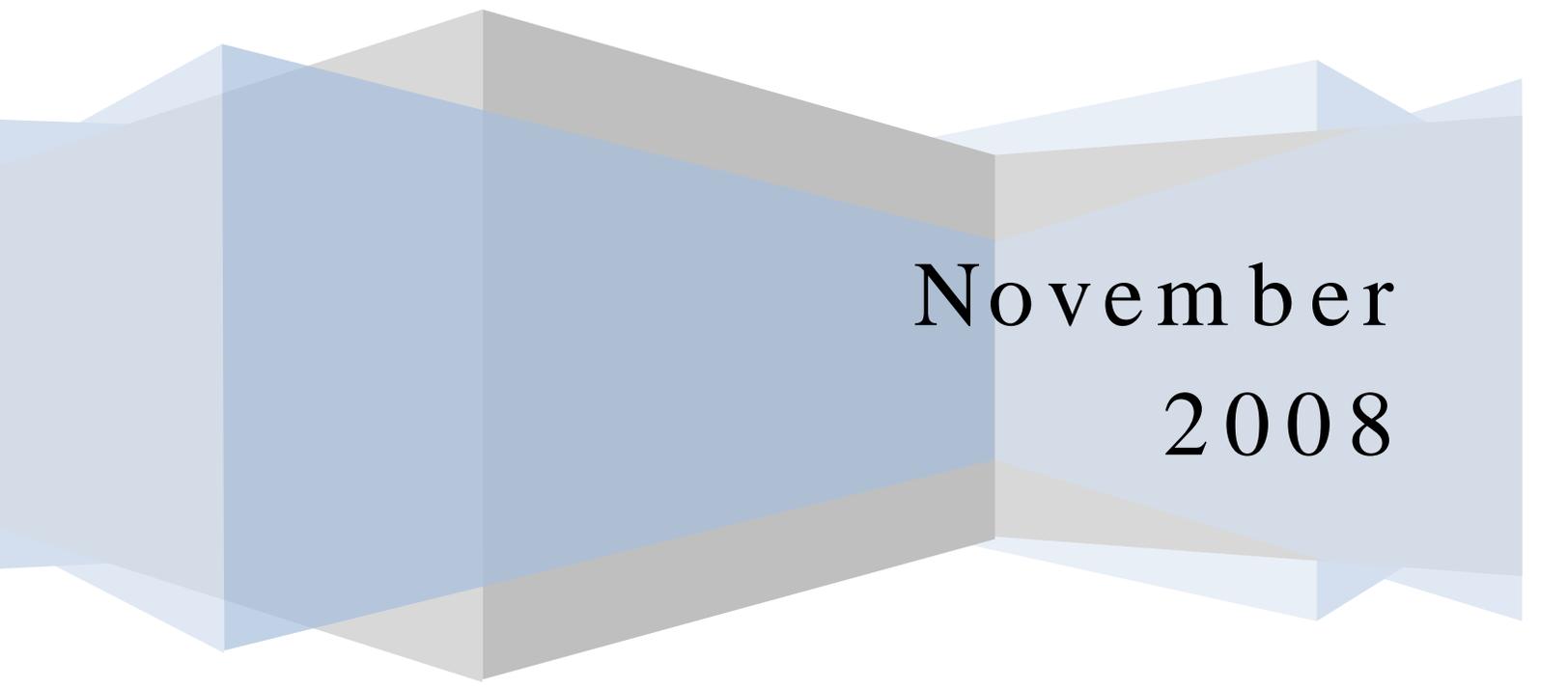


**Brock University**

# **CENTRE FOR NEUROSCIENCE**

**Guidelines for NEUR 4F92 – Library Research Essays**



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**Brock University**  
**Honours Program in Neuroscience**

**GUIDELINES FOR NEUR 4F92 - LIBRARY RESEARCH ESSAYS**

<b>CONTENTS:</b>	<b>Page</b>
1. Nature of NEUR 4F92.....	2
2. Admission to NEUR 4F92 .....	3
3. Responsibilities of the Supervisor.....	3
4. Responsibilities of the Student.....	4
5. Course Requirements .....	4
6. Evaluation.....	6
7. Deadlines.....	7
8. Submission of thesis and assignment of grades.....	8
9. Responsibilities of the 4F92Coordinator.....	9
10. NEUR 4F92 Taken Outside the Normal Academic Year .....	9

## 1. NATURE OF NEUR 4F92

Students, under supervision, will carry out detailed studies of the scientific literature relating to specific topics. These studies will be carried out over a two-term (consecutive) period.

Each student must choose **one** of the following options:

**(I) Two Essays.** Students will complete two essays by the end of the course. A single essay topic will be researched **each term**. It is not necessary for the topics to be related, or that the same faculty member supervise both studies.

**(II) One Essay.** The student has the option to research (in more depth) **one** specific topic over the two terms. In this instance, one essay will be completed and only one faculty member will supervise the student, over the full duration of the course.

**NOTE: A decision to pursue the One-Essay Option must be made by the end of Week 6 of the first term. The student should discuss this option with both the Supervisor and Course Coordinator. Should notification of pursuing this option not be given at this time, it will be assumed that the student is pursuing the Two-Essay Option, and submission of the first essay will be due by the end of the first term (see Deadlines for details).**

Topics chosen for NEUR 4F92 must be sufficiently narrow in scope to warrant students having to undertake a critical evaluation of the topic through study of the original literature. This is to deter students from producing only a precis of a review article or text. It will be the responsibility of the supervisor and the course coordinator to ensure that topics fulfill this objective.

The essay should **not** consist of a large survey of the literature. It should consist of a critical, in-depth analysis of a smaller number of original research articles. Students must be critical in evaluating the selected papers and should point out any limitations in the rationale, methodology, data analysis or conclusions. They must also display some knowledge of statistical procedures used. When the evidence or conclusions described in different papers conflict, an attempt must be made to explain or resolve such differences.

Each faculty member in the Neuroscience Program is expected to participate in the NEUR 4F92 program, and will therefore indicate the areas of neuroscience in which he or she will provide supervision. Possible titles may be available to students on the Neuroscience website or may be directly obtained from the potential supervisor.

Each student participating in the program will be required to make his or her arrangements with a supervisor, and with the course coordinator within seven days of the first day of classes each academic term.

## **2. ADMISSION TO NEUR 4F92**

All students admitted to the Year IV Honours program are eligible for this course. However, NEUR 4F92 may not be taken by a student who is registered for NEUR 4F90/91.

Supervision of a student's research essay will be by mutual agreement of the supervisor, course coordinator, and student.

## **3. RESPONSIBILITIES OF THE SUPERVISOR**

- (a) Supervisors are to ensure that the topic chosen is not too broad in scope, thus causing a student to take a general approach rather than a more penetrating and detailed study. The essay should focus on a relatively small number of key papers in a specific area. For the Two-Essay Option, each essay should focus in depth on approximately 10 key papers. This number should be increased to about 20, if the One-Essay Option is chosen. This is not intended to discourage the students from reading a larger number of papers. In fact, such reading will probably be necessary to provide a sufficient background for understanding and to help the student identify the most important or relevant articles. Supervisors are to assist the students in selecting a core of key papers that, together, will form the theme of the essay. These papers should be primary research articles rather than reviews.
- (b) Supervisors are to assist the student in developing a critical and logical approach to the analysis of scientific literature and methodology. This should be done by discussion of papers from scientific journals, so that the student becomes familiar with the current ideas

and techniques of the subject. A rewriting of textbook chapters or review articles is not sufficient.

- (c) Supervisors, in consultation with the course coordinator, are to assist the students in the organization of the essay, and to ensure that the drafts are of a reasonable quality with respect to style, organization, and length before final typing.

#### **4. RESPONSIBILITIES OF THE STUDENT**

- (a) Students must meet all deadlines set by their supervisors and by the course coordinator. This includes all meetings with the supervisor, reading assignments, written assignments (e.g., outlines), group meetings with the coordinator and all other deadlines (see section 8).
- (b) Although the supervisor assists in selecting a topic and identifying key references, the student is ultimately responsible for reading and understanding the literature, for extracting relevant information from the literature, for synthesizing that information and placing it in the context of the essay and for identifying limitations in the published literature. The student is also expected to have sufficient background knowledge to be able to read the literature with reasonable understanding. If background knowledge is lacking, it is the student's responsibility to bring background knowledge to a level of competency through extra reading.
- (c) The student is ultimately responsible for composing the essay(s). The essay(s) must incorporate the student's original ideas and must reflect the student's comprehension and writing skills.

#### **5. COURSE REQUIREMENTS**

- (a) The student should have regularly scheduled meetings with his or her supervisor. The time should be used to discuss the progress of the project and for an in-depth discussion of the topic.
- (b) All students enrolled in NEUR 4F92 will meet, as a group, with the course coordinator in the middle of each term. At these meetings, each of the students will make an oral presentation regarding the progress of their library research, and will discuss some specific studies pertinent to their essay topic.
- (c) Each essay format should adhere somewhat to the following:
  - (i) Title page
  - (ii) Abstract
  - (iii) Introduction
  - (iv) Review and Analysis of the Literature
  - (v) Conclusions

- (vi) Literature Cited/References
- (vii) Appendices (if any)

The essay should include an experimental proposal where the student has identified questions not resolved by the literature. The student will be expected to provide details of the experimental design, and to defend the design of, and feasibility of the proposal.

The format of the essay should follow an accepted outline for a journal in the field covered by the research project. Students should follow a format appropriate for the supervisor's department.

(d)

**(I) Two-Essay Option:**

Normally a student is only permitted to undertake one essay topic per term, and the two essays that comprise credit for the course must be completed in **consecutive** terms.

Each term, an essay on the chosen library research topic is to be written and submitted (two copies) to the course coordinator before the last day of classes of the term. The essay will normally be a synthesis of the literature relevant to the topic, and can be expected to be at least 20 pages in length.

Each term, a final seminar will be scheduled during the examination period. The student is to formally present the findings from the literature study in a well organized fashion, lasting about 30 minutes. The use of a Powerpoint presentation is encouraged. The seminar is open to all neuroscience students and faculty members, and a closed question period will immediately follow the presentation (up to one hour).

**(II) One-Essay Option:**

Two copies of the final version of the essay should be handed in to the course coordinator before the last day of classes. The essay should be at least 40 pages in length. At the end of the first term, the student will be expected to present a progress seminar lasting up to 30 minutes, which may be followed by questions and discussions.

At the end of the two terms, the final seminar will be scheduled during the examination period. The student is to formally present the findings from the literature study in a well organized fashion, lasting about 30 minutes. The use of slides, overhead transparencies or a Powerpoint presentation is encouraged. The seminar is open to all neuroscience students and faculty members, and a question period will immediately follow the presentation (up to one hour).

## 6. EVALUATION

### (I) Two-Essay Option:

#### (a) Essay

Each of the two essays will have a value of 30% of the final grade. It is therefore in the interest of the student that the supervisor be given a preliminary draft of the essay well in advance of the final submission date, and that he/she examine the final draft prior to final submission. Upon submission of an essay in final form, the 4F92 Coordinator will then appoint an Examination Committee consisting of the supervisor and one additional faculty member, who will serve as Chair of the Committee. Once an essay is submitted, no further revisions will be permitted. The Examination Committee will then examine and evaluate the essay, as submitted. The 4F92 Coordinator will be in charge of the final essay presentation and defense, and will be responsible for collating and returning the final grades assigned, to the Director of the Centre for Neuroscience.

**Note:** *Failure to submit the essay on the deadline date will ordinarily carry the penalty of a reduced grade unless there are documented medical or comparable reasons justifying late submission. Under rare and exceptional circumstances, students may obtain an extension from the Director of the Centre for Neuroscience based on compassionate grounds.*

#### (b) Final Seminar

Each of the final seminar presentations will have a value of 10% of the final course mark. The seminar will be judged on criteria such as: organization, comprehensibility, smoothness of presentation, degree of familiarity the candidate shows with the topic and literature, quality of illustrative material and the fielding of questions during the general question period.

#### (c) Oral Examinations

Each oral examination of the candidate will have a value of 10% of the final course mark. This will be held as soon as practical immediately following the seminar presentation and should not normally exceed one hour in duration. Questioning by committee members will normally pertain to the thesis topic, but students should anticipate questions on the theoretical bases and the appropriateness of methodology used and also on the broad ramifications and significance of their topic.

**(II) One-Essay Option:****(a) Essay**

The essay will have a value of 60% of the final grade. It is therefore in the interest of the student that the supervisor be given a preliminary draft of the essay well in advance of the final submission date, and that he/she examine the final draft prior to final submission. Upon submission of an essay in final form, the 4F92 Coordinator will then appoint an Examination Committee consisting of the supervisor and one additional faculty member, who will serve as Chair of the Committee. Once an essay is submitted, no further revisions will be permitted. The Examination Committee will then examine and evaluate the essay, as submitted. The 4F92 Coordinator will be in charge of the final essay presentation and defense, and will be responsible for collating and returning the final grades assigned, to the Director of the Neuroscience program.

**Note:** *Failure to submit the essay on the deadline date will ordinarily carry the penalty of a reduced grade unless there are documented medical or comparable reasons justifying late submission. Under rare and exceptional circumstances, students may obtain an extension from the Director of the Centre for Neuroscience based on compassionate grounds.*

**(b) Seminars**

The progress seminar at the end of the first term will have a value of 10% of the final course mark. This mark will be generated based on the presentation and question/discussion time.

The final seminar presentation will have a value of 20% of the final course mark. The seminar will be judged on criteria such as: organization, comprehensibility, smoothness of presentation, degree of familiarity the candidate shows with the topic and literature, quality of illustrative material and the fielding of questions during the question period.

**© Oral examination**

The oral examination will have a value of 10% of the final course mark. This will be held as soon as practical immediately following the seminar presentation and should not normally exceed one hour in duration. Questioning by committee members will normally pertain to the thesis topic, but students should anticipate questions on the theoretical bases and the appropriateness of methodology used and also on the broad ramifications and significance of their topic.

**7. DEADLINES****(I) Two-Essay Option:**

- (a) Choice of topic and supervisor: Within seven days after the commencement of classes for each term (i.e., fall, winter or spring term).

- (b) Submission of the first essay draft to the supervisor: Three weeks before the end of each term (i.e., fall, winter or spring term).
- (c) For the September - April period, the deadline for final submission of the thesis (**two copies**) to the 4F92 Coordinator is **on the last day of classes in April**.
- (d) Seminar and defence: During the final examination period for each term.
- (e) Submission of three copies of the **two essays**, which will be bound as a single volume thesis, to the course coordinator: **no later than seven days** after the final date of scheduled exams.

## (II) **One-Essay Option:**

A decision to pursue the One-Essay Option must be made by the end of Week 6 of the first term. The student should discuss this option with both the supervisor and the course coordinator. Should notification of pursuing this option not be given by this time, it will be assumed that the student is pursuing the Two-Essay Option.

- (a) Choice of topic and supervisor:  
Within seven days after the commencement of classes for each term (i.e., fall, winter or spring term)
- (b) The progress seminar will be held during the examination period of the first term.
- (c) Submission of the first essay draft to the supervisor: Three weeks before the end of the second term (i.e., fall, winter or spring term).
- (d) For the September - April period, the deadline for final submission of the thesis (**two copies**) to the 4F92 Coordinator is **on the last day of classes in April**.
- (e) Seminar and defence: During the final examination period of the second term.
- (f) Submission of three copies of the essay to the course coordinator: **no later than seven days** after the final date of scheduled exams.

## 8. **SUBMISSION OF THESIS AND ASSIGNMENT OF GRADES**

For the September - April period, the deadline for final submission of the thesis (**two copies**) to the 4F92 Coordinator is **on the last day of classes in April**. Once submitted, no further revisions will be permitted. This copy is to be graded, as submitted, by the Examination Committee. Failure to submit the thesis on the deadline date will carry the **penalty** of a reduced grade unless there are documented medical or comparable reasons justifying late submission or unless, the Director for the Centre, in consultation with the 4F92 Coordinator, will exercise their discretionary powers. There are no predetermined penalties. Penalties are determined on an individual, case by case basis.

Marks assigned to the essays and seminars by each examiner are to be given, in writing, to the coordinator following termination of the seminar. The course coordinator will calculate the average mark and recommend the overall grade for the course to the Director.

Prior to submission of the final grades for NEUR 4F92, the results will be reviewed by the Director for the Centre.

**Faculty approval and disposition of the thesis after the thesis defence.** When the thesis is approved by the examining committee, **the candidate must submit all corrected copies (normally three)** of the **two essays** which will be bound as a single volume thesis, to the administrative assistant in the Centre for Neuroscience **no later than seven days** after the final date of scheduled exams. These copies must be corrected of any errors noted by the examiners and must contain all charts, maps, figures, tables, and appendices as finally approved. One bound copy is retained by the Centre, others by the supervisor and the student. One copy is bound at the expense of the Centre. The binding of the other two are bound at the expense of the supervisor. The supervisor, in consultation with the student, will determine the kind of binding that will be used for the copies of the supervisor and the student. Any additional copies that the student wishes to have bound, if submitted for binding by the Centre, will be paid for by the student at a cost of \$11 per copy (payable when the theses copies are submitted to the administrative assistant). **Any student that does not submit the final copies for binding on time will receive an "Incomplete" grade for NEUR 4F92.** Students will also be required to return all keys that were signed out. **Grades will not be submitted to the Office of the Registrar until the final copies of the thesis have been submitted and until all keys have been returned.**

***Note:** As is the case with final grades in all courses, a student may feel compelled to appeal a final mark. In such an instance, the Director for the Centre for Neuroscience will appoint an ad hoc committee to deal with the matter.*

## 9. RESPONSIBILITIES OF THE 4F92 COORDINATOR

- (a) The coordinator will serve as an advisor to the students and supervisors on matters pertaining to the organization and format of the essay.
- (b) The coordinator will attend and chair all the group meetings.
- (c) The coordinator will prepare a final grade in the course for each student, and forward this grade to the Director for Neuroscience.

## 10. NEUR 4F92 TAKEN OUTSIDE THE NORMAL ACADEMIC YEAR

NEUR 4F92 may also be taken either during the Winter (January to August) or Spring (May to December) terms. All regulations apply with the exceptions of deadlines noted below. In the case of the **Winter term**, students would begin on **January 1st** and submit the final submission

of the thesis by **August 7th** or, if a weekend, on the following Monday. **Spring term** students would begin on **May 1st** and submit the final submission of the thesis by the **last day of classes in the Fall term**. The final seminar and oral defence will take place in a two-hour period within two weeks of the submission date of all theses.

Under special circumstances, the course may also be taken during a single term. In this case, the student must have the approval of the Director for Neuroscience and the supervisors involved, before enrolling in the course.