

The PhD Candidacy Examination

Information for student, supervisor, examiners and Chair of examination

1. Objectives of the Candidacy Examination

The PhD Candidacy Exam has three components: the candidacy report (research proposal), oral presentation and oral examination (see Section 6). Although the precise content of the examination is up to the examining committee, **questions should not dwell solely on the proposal itself**. Students are normally expected to demonstrate:

- i) a **broad** grasp of existing factual and conceptual knowledge central to the area of biology within which the research is focused (*e.g.*, Ecology, Molecular Biology, etc.);
- ii) an ability to think creatively and critically about questions related to their area of research;
- iii) an awareness and appreciation of the significance, of new advances in their area of research;
- iv) a full understanding of key assumptions and technical complexities of relevant methods (*e.g.*, analytical, experimental, observational, statistical);
- v) a sound knowledge of the biology of the organisms or system on which they work.

Students are advised to discuss the content of the oral examination with each member of the candidacy examination committee prior to the exam. Some members may choose to indicate specific topics that they plan to cover during the exam.

2. When to take the Candidacy

In the DBS, the PhD Candidacy Examination is recommended to be taken *before the end of the second year*, when most, if not all, formal course work is completed, but can be taken no later than the end of the third year of a student's program. FGSR requires that it be completed no later than 6 months prior to the final defense, but delaying the examination that long basically defeats the purpose. At the time of the Candidacy Examination the thesis proposal should be well defined.

The Candidacy Examination must be completed before GTA/GRA support will be provided beyond the third year.

3. Summary of deadlines for Candidacy Examination

FGSR notes that it is the responsibility of the supervisor (not the student) to ensure that adequate time is allotted for scheduling examinations. FGSR requires that the Department recommend an examining committee 3 weeks prior to the examination. Because some time is required to appoint a Chair, supervisors should notify the Associate Chair (Graduate Studies) of an impending examination date at least 1 month prior to the examination.

4. Composition of Candidacy Examination Committee

The examination is conducted by the supervisory committee *plus two other full-time academic staff* and a Chair who is not an examiner. The intent of adding the two other academic staff is that there be at least two individuals at the examination who are at arm's-length from the student and come "new" to the committee for the examination (from FGSR *Graduate Program Manual*).

FGSR requires that at least one member of the examining committee must be from another department.

Attendance at the Examination:

Normally, all members of the examining committee must be physically present at the exam. A maximum of one examiner may attend the exam via telephone or videoconference.

Outside participants - Can others attend the candidacy?

Except for the Dean (or Associate Dean) FGSR, persons other than the examiners may attend only with the permission of the Dean, FGSR, or the chair of the examination committee.

5. Appointment and responsibilities of examiner and chair at Candidacy Examination

Examiner

Examiners are nominated by our Department for approval by FGSR. Although the nomination is made by the Associate Chair, supervisors are required to recommend examiners and confirm that they can attend the examination at the date and time selected by the supervisor.

Examiners who are not full-time academic staff:

Rarely, it might be appropriate to appoint examiners who do not hold full-time faculty appointments

(e.g., Professors emeriti, PDF's, etc.) or who are not employees of the University (e.g., scientists from government agencies or industry). In these cases, permission is requested of the FGSR by submitting a resumé of the proposed examiner to the Associate Chair along with a covering letter from the supervisor briefly explaining the appropriateness of the appointment.

Chair

Candidacy examinations are chaired by a member of the Department appointed by the Associate Chair. Chairs are normally chosen from within the student's research interest group. The Chair of the examination should not have had previous formal advisory contact with the student. Such Chairs have three primary responsibilities:

- i) to maintain the interests and high standards of the Department,
- ii) to ensure a fair examination for the student and,
- iii) to ensure that all required courses to date have been completed, and any other outstanding requirements listed in the student's file have been met.

The Chair thus serves as a 'referee' who ensures fairness, balance and order during the examination. The Chair will moderate the examination and direct the questioning, as well as ensuring that departmental and FGSR regulations are followed. The Chair does not vote on the outcome of the examination. The Chair drafts and signs the "DBS Report of the Candidacy Examination" form and signs the FGSR's "Report of Completion of Candidacy Examination" form and then submits them both to the Associate Chair.

**Please refer to Appendix II at the end of this document for details regarding the role of exam Chair.*

6. Candidacy Exam Components

The PhD Candidacy exam has three components: the candidacy report, the oral presentation and the oral examination.

i. Candidacy Report

The student will prepare a Summary and Research Proposal on their research program, using the exact format of an NSERC Research Grant application (see below). This proposal will be handed in to the examination committee at least one week prior to the scheduled exam date.

The research proposal itself is not the sole focal point of the oral examination. It is intended as a document from which other questions relevant to the research area(s), as well as more general questions can be derived such that the objectives of the Candidacy Examination as described in section G.5.1 can be achieved.

Summary

In the space provided on the instruction sheet (7.5" wide x 5.0" high), the student will summarize the research proposal in language that the public can understand.

Research Proposal

The student will describe:

- progress for research activities related to the proposal
- objectives: both short and long term
- literature review pertinent to the proposal
- methods and proposed approach
- anticipated significance of the work
- training aspect of the proposal (if appropriate)

The proposal can be a maximum of 5 pages, single-spaced (maximum 6 lines per inch), with margins no smaller than of $\frac{3}{4}$ of an inch (1.7 cm) all around. If you use a type size measured in pts, it must be no smaller than 12 pts; if you use a type size measured in cpi, it must be no more than 10 cpi.

ii. Oral Presentation

At the start of the exam, the student will deliver a 15 minute oral presentation highlighting the objectives and progress of the Ph.D. research program. The presentation will be uninterrupted and should be limited to a maximum of 20 minutes.

iii. Oral Examination

The examination committee will conduct questioning that may be based to some extent on the content of the proposal and oral presentation. However, it is the responsibility of the examining committee to broaden the line of questioning so

that the general knowledge of the student in areas related to the research field is thoroughly examined. It is the responsibility of the examination chair to ensure that this objective is met. As a guideline, the majority of the examination time should be spent dealing with issues other than the details of the proposal and oral presentation.

7. Recommended procedure for Candidacy Examination

1. The Chair explains the objectives of the examination to the student (See Section 1).
2. The Chair, in the student's presence, reviews the student's record with the committee.
3. The Chair calls for questions on the above material (offers to circulate file to examiners).
4. The Chair recommends an order of questioning (and scheduled breaks) prior to the start of the examination. At the discretion of the Chair, the external examiner on the committee is given the opportunity to begin the questioning.
5. The student is given the opportunity to ask questions or make requests before the examination begins.
6. The student delivers a 15 minute oral presentation that summarizes the research progress.
7. The oral examination is commenced, with questions from the examiners.

At the conclusion of the examination, the student is given the opportunity to make a closing statement or ask closing questions.

8. After the student has left the room, the examiners deliberate.
9. A final decision is normally arrived at *via* discussion until a consensus is reached. Statements to be included on the *DBS Report of the Candidacy Examination* would normally be discussed at this time.
10. The student is advised of the final decision.
11. The Chair of the examination will then draft and sign the *DBS Report of the Candidacy Examination* form and sign the *Report of Completion of Candidacy Examination* form and present both to the Associate Chair.

8. Outcomes of the Candidacy Examination

The final decision of the examining committee is recorded on the '*DBS Report of the Candidacy Examination*' form.

Conclusions of the examining committee include:

- i) *Pass*. The performance was exemplary or acceptable, with no conditions. The student exhibited a strong command of all the areas examined and communicated information clearly.
- ii) *Conditional Pass*. The performance, while generally satisfactory, was weak in certain areas. The examining committee will assign specific conditions (e.g., courses, readings, etc.) that the student must satisfy before the student officially passes the exam. *The examining committee must also specify a proposed timeline for satisfaction of the conditions.* The department holds the "Report of Completion of Candidacy Examination" form until the conditions have been met. Once the conditions are satisfied, the supervisor must inform the Associate Chair (Graduate Studies), in writing, so that the student's "Report of Completion of Candidacy Examination" form can be submitted to FGSR.
- iii) *Fail*. The performance was inadequate and the committee has doubts about the student's potential to improve. One of the following three options must be indicated:
 - a) Repeat Candidacy Exam (re-examination must take place within 6 months)
 - b) Change Category to M.Sc.
 - c) Terminate Ph.D. Program

If all but one member of the committee agree on a favorable decision (i or ii), the decision is that of the majority. If two or more dissenting votes are recorded, the case is referred to the Dean, FGSR who determines the subsequent course of action.

9. DBS Report of the Candidacy Examination

In addition to determining the outcome of the examination, the Examination Committee should advise the Chair of the examination on appropriate comments to be made on the student's performance in specific areas listed on the '*DBS Report of the Candidacy Examination*' form. The student and examining committee will receive a copy of the completed form.

If the student is not successful in the examination, the Associate Chair (Graduate Studies) files a written report with the Dean, FGSR.

Appendix I: Report form for the Candidacy Examination (spacing not as on form)

REPORT OF THE CANDIDACY EXAMINATION

STUDENT: _____

SUPERVISOR: _____

EXAMINATION RESULT:

- Pass* (performance was exemplary, acceptable, no conditions)
- Conditional Pass* (performance weak, specific conditions (e.g. courses, readings, etc.) to be met prior to the defense, performance in these areas to be re-examined at the defense. Department withholds holds FGSR "Report of Completion of Candidacy Exam" form until the conditions have been met.
- Fail* (one of the following three options must be indicated)
- Repeat Candidacy Exam (within 6 months)
- Change Category to M.Sc.
- Terminate Ph.D. Program

REMARKS ON STUDENT'S PERFORMANCE (e.g. areas to be re-examined at defense, conditions)

Comments need not be placed in all numbered categories below.

Copies of the completed form will be distributed to examiners prior to the Final Oral Examination.

- i) Grasp of existing factual and conceptual knowledge central to research discipline:
- ii) Ability to think creatively and critically:
- iii) Awareness, and appreciation of significance, of new advances in research discipline:
- iv) Depth of understanding of key assumptions and technical complexities of research methods:
- v) Depth of knowledge of the biology of research organisms (if relevant):
- vi) Other remarks:
- vii) Has the student completed (or en route to complete) 8 hours of ethics training? yes no
- viii) Is the exam to be counted as a Supervisory Committee Meeting? yes no

Chair of Examining Committee: _____ DATE: _____

***Appendix II:** A Brief Supplementary Explanation of the Role and Guidelines for Candidacy Examination Chairs

- The examination chair is a non-voting member of the examination committee.
- The role of the examination chair is to ensure that the exam is conducted in accordance with FGSR and departmental rules and standards, as well as to ensure that the objectives of the candidacy exam as outlined in section G.5.1 of the Department of Biological Sciences Graduate Student Manual are met.
- The examination chair acts as a "referee" to ensure that "fairness, balance and order" have been maintained and that the interest of the student is adequately protected.
- The examination chair moderates and directs the questioning.
- At the end of the examination, the examination chair acts as a neutral member to guide the committee through the process of reaching a decision.
- The examination chair then drafts and signs the examination report and submits it to the Associate Chair.
- Comments on the quality of the research proposal document, the candidacy exam seminar presentation and oral examination can be included in the candidacy exam report under "Other remarks" where appropriate.
- The examination chair may ask questions if he/she feels that critical and pertinent questions have not been asked or addressed. Alternatively, the examination chair can request the examination committee to refocus or redirect questions to address areas as appropriate.
- If the examination chair feels that the examiners are either too hard or too easy on the candidate, he/she can call a recess to discuss this with the other examining committee members in the absence of the candidate. Likewise, any examiner can ask for a recess and raise concerns of this nature with the examination chair and other examining committee members.

If, at the end of an exam, the chair or an examiner is unhappy with the resulting rigor of the exam or its process, they should inform the Associate Chair (Graduate Studies) of the details in a memo. The Associate Chair will then investigate the issue in question, and in consultation with the Departmental Chair and FGSR take specific actions where appropriate.

