



**Department of Electrical & Computer Engineering
University of Alberta**

**Examination Package:
Procedures for Oral Examination**

September 2011

1. Introduction

The purpose of this booklet is to describe procedure to be followed during M.Sc. and Ph.D. Oral Final Examinations and Ph.D. Candidacy Examinations in the Department of Electrical and Computer Engineering.

2. General Remarks About Oral Examinations

Oral examinations consist of two parts:

- a. 20 to 25 minutes seminar by the student, summarizing his/her thesis work
- b. a question period by the examiners

In all cases, the seminar presentation by the student shall be open to the public. The question period on the other hand, shall be conducted in closed doors and attended only by the student and the members of the examining committee.

3. Duties of the Chair of the Examining Committee

- a. Before the exam starts, ensure that all examiners are present. Introduce yourself to the student and introduce the examining committee members.
- b. After the formalities, declare the beginning of the exam. Stand up, introduce the student to the audience and state the purpose of the meeting, which can be one of the following:

- (i) For an M.Sc. final oral examination:

“It is the purpose of this committee to conduct an oral examination designed to test the student’s knowledge of the thesis subject and related fields”.

- (ii) For a Ph.D. candidacy examination:

The exam will commence immediately following the public seminar.

“Students in doctoral programs are required to pass a candidacy examination in subjects relevant to their general field of research. Students must demonstrate to the satisfaction of the examining committee that they possess:

- (a) an adequate knowledge of the discipline and of the subject matter relevant to the thesis; and
- (b) the ability to pursue and complete original research at an advanced level.

During the exam only minor attention should be given to the work done on the thesis”.

(iii) For a Ph.D. final oral examination:

“It is the purpose of this committee to conduct an oral examination based largely on the thesis”.

- c. Summarize the procedures to be followed, as described in the remainder of this booklet.
- d. Ask the student and the audience to leave the room. Ask the supervisor to distribute and describe the written summary of the student’s record. Review the student’s record and ensure that all FGSR and Departmental degree requirements have been met. The student’s file must be made available to the examining committee members for perusal.
- e. Establish the order in which questions will be asked. Start with the external examiner (if the external is present during a Ph.D. final exam) and continue with the examiner from outside the ECE Department, ECE Department representatives, supervisory committee member(s), and finally the supervisor(s).
- f. Re-admit the student and the rest of the audience and ask the student to give a seminar presentation on the thesis work (completed or proposed, as appropriate). Emphasize what the length of the presentation should be between 20 and 25 minutes. If necessary, give the student a warning and interrupt the seminar if the time limit is exceeded.
- g. After the seminar, thank the speaker for the presentation and invite questions from the audience, other than the examiners. Do not allow questions from the audience to continue for more than 5-10 minutes.
- h. Ask the audience to leave the room and proceed to the closed-door part of the examination. Tell the student and the examiners that the closed door question period has started and start with the first round of questions in the order previously established. Allow approximately 10-15 minutes for each questioner. If the external examiner is a reader and he/she has sent questions for the student, start the question period with the external examiner’s questions. *Under no circumstances read any written comment by the external examiner in the presence of the student.*
- i. After the first round of questions has been completed, ask the student and the examiner if anyone needs a short break and proceed immediately to a second round of questions following the same order.

Once the second round is completed, ask the committee members for any final questions or comments. Ask the student if he/she wishes to make a final statement.

- j. Ask the student to leave the room and initiate the closed-door deliberation period.

Proceed as follows:

3.1 M.Sc. or Ph.D. Oral Examinations

Read the following to the examiners:

“The decision of the examining committee should be based both on the content of the thesis and on the student’s ability to defend it. The committee can make one of four possible recommendations: (i) student passes, (ii) student passes subject to revisions to the thesis, (iii) examination adjourned, (iv) student fails.”

To decide the outcome of the examination, and in the same order used during the question period, ask each examiner to:

- (1) Provide his/her comments with respect to (i) the oral defense, and (ii) the written thesis.
- (2) Ask each member of the committee if:
 - (i) the student should pass the examination.
 - (ii) the student should pass subject to revisions
 - (iii) the examination should be adjourned
 - (iv) the student should fail the examination

The circumstances in which these four possible outcomes should be used, as well as actions to follow in each case are outlined below:

- (1) **Pass:** Both the student’s ability to defend the thesis and the thesis itself are acceptable. In this case inform the Associate Chair of Graduate Studies who will issue a *Report of Completion of Final Oral Examination* to FGSR.
- (2) **Pass subject to revisions:** The student has satisfactorily defended the thesis but the thesis requires changes that are minor in substance, or of an editorial nature (e.g. spelling, punctuation). In this case have the Associate Chair of Graduate Studies sign the *Report of Completion of Final Oral Examination* indicating “pass subject to revisions”. It is expected that the student will make these changes in time to submit the thesis to FGSR on or before the deadline for the next convocation.
- (3) **Adjourned:** The final oral examination should be adjourned in the following

situations:

- The revisions are more substantial than editorial or minor reworking (i.e. if further research or experimentation or major reworking of sections is required, or if the committee is not satisfied with the general presentation of the thesis). 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/or defense of the thesis, even if the thesis 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:

- Inform immediately the Associate Chair of Graduate Studies, and 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.
 - Decide upon a date to reconvene. The final date set for the reconvening shall be no later than six months from the date of the examination.
 - Make it clear to the student what will be required by way of approval before the examination is reconvened (e.g. approval of the committee chair or supervisor, approval of the entire committee, or of selected members of the committee).
 - Specify the supervision and assistance the student may expect from the committee members in meeting the necessary revisions.
 - Inform the Associate Chair of Graduate Studies who will in turn advise FGSR in writing of the adjournment and the conditions.
- (4) **Fail:** Both the student's ability to defend the thesis and the thesis itself are unacceptable. The committee chair shall provide the reasons for this recommendation in writing to the Associate Chair of Graduate Studies, who on behalf of the Department will make a recommendation on the student's program to the Associate Dean of FGSR and to the student.

3.2. Split Decisions

M.Sc. Exams – Normally, if all but one of the members of the committee agree on a

decision, the decision shall be that of the majority. The dissenting committee member does not have to sign the thesis. If two or more dissenting votes are recorded, the Department will refer the matter to the Associate Dean, FGSR, who will determine an appropriate course of action.

PhD. Exams - Normally, if all but one of the members of the committee agrees on a decision, the decision shall be that of the majority, *except when the one dissenting member is the external examiner*. The dissenting committee member does not have to sign the thesis. If this happens, or if two or more dissenting votes are recorded, the Department will refer the matter to the Associate Dean, FGSR, who will determine an appropriate course of action.

3.3. Ph.D. Candidacy Examinations

Read the following to the examiners:

“The purpose of the candidacy examination is to decide whether or not the student

- has an adequate knowledge of the discipline and of the subject matter relevant to the thesis.
- the ability to pursue and complete original research at an advanced level.”

Three decisions are possible: (1) student passes, (2) student passes conditionally, and (3) student fails the candidacy examination. The circumstances in which these three possible outcomes should be used, as well as actions to follow, are outlined below.

- (1) **Pass:** The committee agrees that the student’s performance during the exam was acceptable. In this case, inform the Associate Chair of Graduate Studies who will issue a Recommendation for a Change of Category Form from provisional Ph.D. Candidate to Ph.D. Candidate.
- (2) **Conditional Pass:** The student’s performance was weak. In this case the chair of the committee shall write a memo to the Associate Chair of Graduate Studies explaining:
 - the reason for this recommendation.
 - detailed conditions for approval.
 - timeframe for the student to meet the conditions. Normally, provisions should be made so that the student can clear the approval conditions within six months of the candidacy examination.
 - the approval mechanism for meeting the conditions, i.e. approval of the committee chair or supervisor, or approval of the entire committee, or select committee members of the committee.

- the supervision and assistance that the student can be expected to receive from committee members.

The Associate Chair of Graduate Studies shall communicate in writing both the Associate Dean, FGSR, and the student the information received from the committee. The Department will hold the "Recommendation for a Change of Category" from until the conditions have been met.

- (3) **Fail:** The student's performance was inadequate. In this case the chair of the committee shall write a memo to the Associate Chair of Graduate Studies outlining the reasons for this recommendation and the recommendation of the committee on the student's program. The Associate Chair of Graduate Studies will inform FGSR of the outcome of the examination and will also make a recommendation in writing (with a copy to the student) for the student's program. The following options are to be considered by the committee:
- (i) **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. In this case, a second candidacy examination will be scheduled *no later than six months from the date of the first candidacy examination*.
 - (ii) **Change of Category to a Master's Program:** 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 complete a Master's program.
 - (iii) **Termination of the Doctoral Program:** If the student's candidacy exam performance was inadequate but the student's performance and work completed to date is considered inadequate, the examining committee should recommend termination of the student's program.

4. Closing Remarks

When the committee has reached a verdict, re-admit the student and explain the decision of the committee.

4.1 Signatures

- In the case of M.Sc. or Ph.D. oral examinations, if a student has passed with minor revisions, ask the committee members if they wish to sign the bond paper acceptance sheets at this time or, if appropriate, if they wish to see the thesis after the modifications have been completed.

- The supervisor's signature is normally withheld pending completion of all corrections.
- The committee chair shall not sign, unless he/she is also one of the examiners.
- If the external examiner is present during the exam, he/she shall sign the thesis along with the other examiners.
- When the external examiner does not attend the exam, the external's name will be printed on the signature page, and the chair of the examining committee will initial the external's signature line.
- If more than one person attends the exam via teleconference, the Department will find a signing authority for the second person.