### **Defences (by-thesis M.Sc. /Ph.D. candidates)**

This is a brief synopsis of the role of the exam chair in a typical M.Sc. or Ph.D. defence in ABSc, but it should be useful to all participants.

#### **Before the Day of the Defence:**

- The chair should either get a brief "bio" of the candidate to introduce them with on the day, or ask the advisor if they would like to make this introduction at the start of the defense.
- The chair should remind the candidate to select a peer to be their **Graduate Student Representative** (this student sits in on the whole defense except for the final deliberations).
- If one or more examiners are connecting in via video conference, be sure to get their Skype ID and phone number ahead of time and bring a spare laptop, so that skyping can quickly be used as a backup if the system should fail; also touch base with the advisor and the Graduate Secretary to ensure all audio/video settings are prepared.
- The depth of understanding and knowledge we expect of M.Sc. and Ph.D. students is outlined below (based on the OCAV Learning Expectations).
- Send everyone (student & examining committee) these notes, so that everyone can anticipate the process ahead of time.
- Ph.D. only: prior to the exam, the external examiner's report should have arrived. That should be shared with the advisor and the student (Note: it may go straight to them, but double check).

### On the Day of the Defence:

#### Pre-Defence Meeting of the Examination Committee

This is 15 minutes prior to the defense, usually in the office of the person chairing the exam. If any examiner(s) is/are connected via video link, then the pre-exam meeting is held in the room where the exam is being held and uses the video link. No other members of the audience are permitted entry at this time until the discussion is complete; nor does the student being examined attend this meeting.

The <u>Graduate Secretary</u> provides a red folder with all of the paperwork (which the Chair of the defence must retrieve before the meeting). It contains two sets of papers: one for the chair and one for the student. The chair's papers include all the forms that require signatures and the student's grade summary. For Ph.D. candidates, the external examiner's report will also be inside the folder. Then begins the pre-exam meeting:

- 1. Introductions (especially if people do not know the external examiner);
- 2. Course grades are reviewed (the grade summary is circulated);
- 3. Any significant concerns from the committee are inquired; then
- 4. Examiner's orders and time per round is reviewed (see below).

#### The Exam Itself - General overview

M.Sc. Ph.D.

Additional member: 15 minutes in Round 1 / 10 External examiner: 20 minutes in Round 1 / 15

minutes in Round 2 minutes in Round 2

Advisory committee member: 15 minutes / 10 Additional member: 15 minutes / 15 minutes

Advisor: 15 minutes / 10 minutes

minutes

Advisory committee member: 15 minutes / 15

minutes

10 minute break between rounds Advisor: **15 minutes** / **15 minutes** 

10 minute break between rounds

There are two distinct parts within a defence: the first and second round of questions. Anyone who wishes to attend the defence is allowed to do so until the end of the first round of questions, when they are required to leave before the candidate advances to the second round of questions.

M.Sc. defences usually take up to 2.5 hours, while Ph.D. defenses usually take up to 3.5 hours

#### 1. Exam

- The audience is welcomed and introduced to the Ph.D./M.Sc. defence of the candidate, and the Examining Committee is introduced.
  - The external examiner is thanked on behalf of the University of Guelph and the department.
- The procedures are outlined. This includes:
  - o Order and duration of rounds of questions
  - o Audience question(s) at the end of the first round
  - o The graduate student representative is identified by the Candidate.
  - o The audience is reminded to leave in gaps between examiners.
- The Candidate is introduced; the biography of the Candidate is optional.
- The Candidate presents his/her thesis with a presentation (30 minutes maximum).
  - At the end of the presentation, the computer and A/V equipment is optionally shut down if the examining committee agrees.
- First round of questions commences.
  - The examiners should ask the student if they are ready to move on to the next examiner's questioning between each of their allocated times and perhaps provide the Candidate with a chance to catch their breath or have a sip of water.
  - It is also advised to take notes regarding the areas of questioning raised by each examiner. This helps to record the type of questions should an appeal be necessary later.
  - It is advised to keep track of time for each examiner; you have the discretion to adjust the time of questioning for the examining chair to extend a bit of time for

an examiner who is exploring a thread that is worth finishing.

- Some time is allocated for the audience to ask any questions that they may have. One question per person is the recommended limit.
- Break approximately 10 minutes; the Graduate Student Representative is reminded to return after this break.
- Second round of questions commences (closed-doors; the audience is expelled, with the exception of the Graduate Student Representative).
  - o This progresses in the same style as the first round but with less time allocated for each examiner. This also has a more casual atmosphere and interaction between examiners is allowed if the Candidate appears to be relaxed and able to handle it.

#### 2. Post-exam

- The Candidate is asked if they have any questions for the examining committee. They are not required to ask any, however, there may occasionally be times when they wish to know the answer to a specific question asked by an examiner earlier.
- The Candidate and Graduate Student Representative are excused and instructed to wait in the main office (or somewhere nearby).
- A non-binding vote is cast using paper ballots (satisfactory/unsatisfactory), but how each person voted is not yet revealed.
- The results are reviewed (one unsatisfactory is OK, however, two is a failure).
  - O Discussion is held regarding exam performance, issues within the thesis, and the examiners' votes. If the vote was unanimously satisfactory ("SAT"), then it is directly proceeded to a discussion of the disposition of the thesis (unless 2 people wish to change their vote).
  - o If the vote contained one unsatisfactory ("UNSAT") vote, there can be two different situations:
  - o If the external examiner voted UNSAT, then a discussion amongst the entire committee is warranted, whether a second UNSAT vote is fair.
  - If a local examiner votes UNSAT, it is appropriate to leave the vote as it stands to reflect the lower quality of the defence and/or thesis. In other words, the student still passes but it was not a stellar performance.
  - o From the Graduate Calendar: "The examination is passed and the thesis approved if there is no more than one negative vote. An abstention is regarded as a negative vote. The report to the Assistant VP of Graduate Studies will record the decision as unsatisfactory or satisfactory. If unsatisfactory, the candidate may be given a second attempt. A second unsatisfactory result constitutes a recommendation to the Board of Graduate Studies that the student be required to withdraw (see Unsatisfactory Progress and Appeals of Decisions)."

- The disposition of the thesis is decided. Forms are signed, the candidate is recalled, and the defence is concluded.
- 1. The thesis is reviewed and revised one last time by the examiners before signing off.
- 2. The thesis is revised at the student and his/or advisor's discretion. The examining chair receives assurance from the advisor once changes are complete, which enables the examining chair to sign off.
- 3. No revisions or the examining chair can decide to sign off immediately and leave it for the advisor to decide when the thesis is ready to submit.

#### **Expectations of a Defending Thesis Student**

The OCAV (Ontario Council of Academic Vice-Presidents) Graduate "learning expectations" provide the following useful guide:

#### Ph.D. Degree

This degree extends the skills associated with a Master's degree and is awarded to students who have demonstrated the following:

A thorough understanding of a is at the forefront of their academic and/or discipline, and a critical discipline or area of professional practice including, where appropriate, relevant knowledge outside the field and/or discipline.

a) The ability to conceptualize, design, and implement research for methodological competence that: the generation of new knowledge, applications, or understanding at the forefront of the discipline, and to adjust the research design or methodology in the light of unforeseen problems;

b) The ability to make informed judgments on complex issues in specialist fields, sometimes requiring new methods; and

#### Master's Degree

This degree is awarded to students who have demonstrated the following:

A systematic understanding of knowledge, including, where appropriate, substantial body of knowledge that relevant knowledge outside the field awareness of current problems and/or new insights, much of which are at, or informed by, the forefront of their academic discipline, field of study, or area of professional practice.

A conceptual understanding and

- a) Enables a working comprehension of how established techniques of research and inquiry are used to create and interpret knowledge in the discipline;
- b) Enables a critical evaluation of current research and advanced research and scholarship in the discipline or area of professional competence, and
- c) Enables a treatment of complex issues

### 1. Depth and breadth of knowledge

## 2. Research and scholarship

c) The ability to produce original research, or other advanced scholarship, of a quality to satisfy peer review, and to merit publication.

and judgments based on established principles and techniques; and,

On the basis of that competence, has shown at least one of the following:

- a) Development and support of a sustained argument in written form; or
- b) Originality in the application of knowledge.

#### The capacity to:

# 3. Level of application of knowledge

- a) Undertake pure and/or applied researched at an advanced level;
  and
- b) Contribute to the development of academic or professional skills, techniques, tools, practices, ideas, theories, approaches, and/or materials.
- a) The qualities and transferable skills necessary for employment requiring the exercise of personal responsibility and largely autonomous initiative in a complex situation;
- b) The intellectual independence to be academically and professionally engaged and current;
- c) The ethical behaviour consistent with academic integrity and the use of appropriate guidelines and procedures for the responsible conduct of research; and
- d) The ability to evaluate the broader implications of applying knowledge to particular contexts.

The ability to communicate complex and/or ambiguous ideas, issues and conclusions clearly and

Competence in the research process by applying an existing body of knowledge in the critical analysis of a new question or of a specific problem or issue in a new setting.

- a) The qualities and transferable skills necessary for employment requiring;
- i) Exercise of initiative and of personal responsibility and accountability; and
- ii) Decision-making in complex situations.
- b) The intellectual independence required for continuing professional development; and
- c) The ethical behaviour consistent with academic integrity and the use of appropriate guidelines and procedures for the responsible conduct of research.

The ability to communicate ideas, issues and conclusions clearly.

# 4. Professional capacity / autonomy

# 5. Level of communications skills

#### effectively.

# 6. Awareness of limits of knowledge

An appreciation of the limitations of one's own work and discipline, of the complexity of knowledge, and of the potential contributions of other interpretations, methods, and disciplines.

Cognizance of the complexity of knowledge and of the potential contributions of other interpretations, methods, and disciplines.

Another useful external list of tips on thesis defences written by Dr. Joe Wolfe from the University of New South Wales can be found <u>here</u>.

•

### **Graduate Program Information**

- Overview
- Why, How, and When to Apply?
- New Student Information
- Courses and Training
- Funding Your Degree
- Professional Development
- Advisory Committees
- Defences and Qualifying Exams
- U of G Graduate Calendar
- Social Activities
- Health and Well-Being

Edi