

Introduction to the Biochemistry and Molecular Biology Graduate Programs

Background:

The Biochemistry and Molecular Biology (BIMB) Graduate Program offers M.Sc. and Ph.D. degree programs that are research intensive and academically balanced. The BIMB provides current and future students with advanced training and development in leading edge research. It will place a strong emphasis on career development (i.e. writing grants/papers, knowledge translation, public presentations) so that when students graduate, they will have the necessary skill set for future careers in academia or industry. The program strives to foster interdisciplinary and collaborative studies in a collegial atmosphere.

Much of the material in this handbook is taken from program documents for the BIMB Graduate Program as approved by the UBC Okanagan Senate. Other forms, processes and information have been developed by the BIMB Graduate Program Committee in collaboration with the Office of Graduate Studies (Okanagan), the Biology Graduate Program Committee, the Chemistry Graduate Program Committee and the Faculty of Graduate Studies (Vancouver).

Overview of Program Requirements

The M.Sc. and Ph.D. Biochemistry and Molecular Biology degrees are centered on conducting original research. Students learn theoretical, technical, analytical, and communication skills needed to perform timely and groundbreaking research. The work will be original and of suitable quality for publication in peer-reviewed journals. The processes described here are designed to support student learning and enable research excellence.

Links to UBC Policies Regarding Graduate Studies

The following websites give important information regarding Graduate Studies at UBC.

The responsibilities of a graduate student are outlined at the following website:

<https://gradstudies.ok.ubc.ca/policies-procedures/student-responsibilities/>

Upon registering, a student has initiated a contract with the University and is bound by the following declaration:

I agree, if admitted to UBC, to be bound by the statutes, rules and regulations, and ordinances (including bylaws, codes, and policies) of the University of British Columbia, and of the faculty or faculties in which I am registered, and any amendments thereto which may be made while I am a student of the University, and that I may be subject to discipline or other consequences for failure to comply with the same.

<https://gradstudies.ok.ubc.ca/policies-procedures/student-responsibilities/#item1>

Definitions of academic freedom, honesty, and standards to conduct research are found here:

<https://gradstudies.ok.ubc.ca/policies-procedures/student-responsibilities/#item2>

Specific policies related to Intellectual Property and publication of research findings are found here:

<https://gradstudies.ok.ubc.ca/policies-procedures/student-responsibilities/#item7>

Some additional advice on student responsibilities and recommendations for success can be found at these sources:

Some Resources to Increase Graduate Student Success

Don't let academia consume you (Science June 12th, 2020)

<https://www.sciencemag.org/careers/2020/06/don-t-let-academia-consume-you>

Navigating the First Year of Graduate School (Science, Feb 18th, 2005)

<https://www.sciencemag.org/careers/2005/02/navigating-first-year-graduate-school>

Yamamoto K. Time to rethink graduate and postdoc education. iBiomagazine. 2014; issue 11

www.ibiology.org/ibiomagazine/issue-11/keith-yamamoto-time-to-rethink-graduate-and-postdoc-education.html

Gosling, P., & Noordam, B. (2006). *Mastering your PhD: Survival and success in the doctoral years and beyond*. New York: Springer. Call Number: LB2386.G67 2006

Grix, J. (2001). *Demystifying postgraduate research: From MA to PhD*. Edgbaston, Birmingham, UK: University of Birmingham Press. Call Number: LB2371.6.G7 G75 2001

Mullen, C. A. (2006). *A graduate student guide: Making the most of mentoring*. Lanham, MD: Rowman & Littlefield Education. Call Number: LB2371.4 .M85 2006

Potter, S. (Ed.). (2006). *Doing postgraduate research (2nd ed.)*. Thousand Oaks, CA: Open University Press. Call number: LB2371 .D65 2006

Rugg, G., & Petre, M. (2004). *The unwritten rules of PhD research*. Maidenhead, UK: Open University Press. Call Number: LB2386 R84 2004

Tinkler, P., & Jackson, C. (2004). *The doctoral examination process: A handbook for students, examiners and supervisors*. Maidenhead, UK: Open University Press. Call Number: LB2371.6.G7 T56 2004

Wallace, M., & Wray, A. (2006). *Critical reading and writing for postgraduates*. Thousand Oaks, CA: Sage publications. Call Number: LB2395.3 .W35 2006

The Graduate Student's Responsibilities

When you register as a graduate student at UBC, you are making a commitment to devote the time and energy needed to engage in research and write a thesis or dissertation. Your supervisor has a right to expect substantial effort, initiative, respect and receptiveness to suggestions and criticisms.

All graduate students are responsible for keeping tuition payment and student fees up-to-date until the completion of their program. Students who encounter financial difficulty during their studies should discuss the issue with their graduate supervisor.

As a graduate student, you must accept the rules, procedures, and standards in place in the program and at the university and should check the University Calendar for regulations regarding academic and non-academic matters.

You are expected to:

- Make a commitment and show dedicated efforts to gain the background knowledge and skills needed to pursue your research project successfully.
- In conjunction with your supervisor, develop a plan and timetable for completion of all stages of your thesis project, adhere to a schedule and meet appropriate deadlines.
- Meet with your supervisor regularly on progress and results.
- Maintain registration throughout the program and (for international students) ensure that study permits and (where applicable) employment authorization documents are kept up to date.
- Keep your supervisor, graduate program advisor and Enrolment Services informed about your contact information.
- Give serious consideration to the advice and criticisms received from your supervisor and other members of your supervisory committee.
- Keep your workspace tidy, safe and healthy; show tolerance and respect for the rights of others.
- Be thoughtful and reasonably frugal in using resources provided by your supervisor and the University and assist in obtaining additional resources for your research or for other group members where applicable.
- Conform to University, Faculty, and graduate program requirements, including those related to deadlines, dissertation or thesis style, conflict of interest.
- When your degree program requirements have been met, terminate your work, and clean up your workspace.
- Return borrowed materials to your supervisor, graduate program, library or reading room, etc. when your project has been finished or when return is requested.

The following suggestions can make your life a lot easier:

- Review the literature regularly and keep your literature survey up-to-date
- Maintain exemplary records of your experimental/theoretical work (so that others can replicate your results)
- While your supervisor is required to be reasonably available for consultation, it is your responsibility to keep in touch with your supervisor
- Make yourself available to your supervisor for regular meetings at mutually acceptable times
- Follow the university's policy regarding ownership of intellectual property

The Supervisor's Responsibilities

Your supervisor is the key person in your graduate degree program. Graduate education is greatly affected by the nature of the supervision and the quality of communication between graduate students and their supervisors. When students work closely and effectively with their graduate supervisors, they will improve the quality of their research, their dissertations or theses and their educational experiences.

Supervisors should be available to assist their graduate students at every stage of the degree, from formulation of their research projects through establishing methodologies and discussing results to presentation and possible publication of dissertations. Graduate supervisors must also ensure that their students' work meets the standards of the University and the academic discipline. The following points outline the major responsibilities of a graduate supervisor:

- Assists the student with the selection and planning of a suitable and manageable research topic.
- Discusses the student's academic progress and research regularly. The frequency of meetings will vary according to the stage of work, nature of the project, and the independence of the student.
- Establishes (with input from the student and colleagues where appropriate) a supervisory committee, and convenes a meeting, at least annually, to evaluate the student's progress.
- Responds in a timely and thorough manner to written work submitted by the student, with constructive suggestions for improvement and continuation. The turnaround time for comments on written work should not normally exceed three weeks.
- Makes arrangements to ensure continuity of supervision when the supervisor will be absent for extended periods, e.g. a month or longer.
- When necessary, assists the student in gaining access to facilities or research materials.
- Ensures that the research environment is safe, healthy and free from harassment, discrimination and conflict. When there is a conflict in advice or when there are different expectations on the part of co-supervisors or members of the supervisory committee, the supervisor is expected to endeavor to achieve consensus and resolve the differences.
- Assists the student in being aware of current graduate program requirements, deadlines, sources of funding, etc.
- Encourages the student to make presentations of research results within the University and to outside scholarly or professional bodies as appropriate.
- Encourages the student to finish up when it would not be in the student's best interests to extend the program of studies.
- Acknowledges appropriately the contributions of the student in presentations and in published material, in many cases via joint authorship.
- Ensures that recommendations for external examiners of doctoral dissertations are made to the graduate program advisor and forwarded to the Faculty of Graduate Studies in a timely manner.
- Assists the student to comply with any changes that need to be made to the thesis after the thesis or dissertation examination.

Equity, Diversity and Inclusivity

The University of British Columbia is committed to providing a collegial, safe, and pleasant working and learning environment for all members of the University community, one that respects differences, champions fair treatment, and celebrates diversity. The University does not condone and will not tolerate acts of discrimination and harassment, including sexual harassment.

All members of the UBC community - students, faculty, staff, and visitors - have a responsibility to respect the rights of others and to cooperate in creating and maintaining an environment that is free of harassment and discrimination. The UBC Equity and Inclusion Office provides up-to-date information and policy resources for faculty, staff and students.

<https://equity.ok.ubc.ca/news/listen-change-do-more/>

Forming a Graduate Student Advisory Committee

Supervisory committees should be chosen within the first or second term you are on campus. Committee members should be chosen with consideration of their research expertise, time availability, and interest in your research topic. The committee should be formed in consultation with the supervisor. Advisory committees for MSc and PhD students should consist of at least 3 faculty members including the supervisor.

Committee members are responsible for offering advice, reading and commenting on proposals and thesis drafts in a timely fashion (typically within 2 weeks), and attending committee meetings; committee members will sit on comprehensive exams (Ph.D. students) and a subset will participate in the thesis defense. In some cases, committee members may also be your research collaborators and the work that you do might involve publication with committee members; in many cases, however, committee members are advisory rather than participatory in the research.

Conflict of Interest

The relationship between the supervisor and the student is an academic one. Where other relationships exist or develop that might give the appearance of conflict of interest, they must be immediately reported to the relevant graduate program coordinator who will consult with the Associate Dean and/or Dean of the College of Graduate Studies to determine best course of action.

In some situations, the supervisor/co-supervisor or committee members may be domestic partners, or close relatives such as siblings, in-laws, cousins etc. In this case, the following considerations should be made:

- If two close relatives supervise or co-supervise a graduate student, or serve on the committee for that graduate student, the committee should be expanded to include another faculty member.
- Faculty members should not be involved in evaluating entrance applications, scholarship applications or fellowship applications for graduate students supervised by their relative.

Committee Meetings

Committee meetings are important. They are an opportunity to present your work and receive feedback and helpful suggestions. Sometimes issues will emerge that have not come up in your one-on-one discussions with your supervisor or committee members and therefore, it is a good idea to be well prepared for each committee meeting (See below).

Committee meetings must be held at least annually to review your progress towards the degree. However, during the first year (M.Sc.) or two years (Ph.D.), meetings may be more frequent as you address the coursework and develop your proposal. The supervisor will chair each meeting, and the committee is tasked with:

- a. reviewing your progress towards completing the degree and offering recommendations and guidance about the next stages of the program
- b. approving any coursework towards the degree
- c. ensuring that the supervisor and student agree to the package of financial support for the academic year.

At least one week in advance of each committee meeting, students are responsible for providing their committee with a short synopsis (usually 2-4 pages) of their progress and projected timelines.

Notes on the committee meeting will be prepared by the supervisor, signed by the graduate student and by the committee members, and added to the graduate student's file.

How to Prepare for Committee Meetings

- Discuss the purpose of the upcoming committee meeting with your supervisor.
- Be sure that you prepare your progress synopsis carefully. It is a good idea to have your supervisor read it for you before sending it to your committee.
- Bring copies of relevant materials. You probably should bring at least one spare copy in case someone has not printed out or brought with them material you sent in advance of the meeting.
- Remember that the committee is there to help you; you should prepare notes for yourself (and sometimes formalize these as part of the agenda) of what you want out of the meeting so that you can be sure your questions and needs are addressed.
- Reserve or bring AV equipment if needed and make sure that it is functional. Be on time, organized and ready to begin as soon as the committee arrives.
- It often helps if you are in regular contact with committee members outside of the formal meetings, so that concerns can be dealt with as they arise rather than accumulating and so that your committee members get an idea of how you approach problems and respond to feedback. These regular contacts often make the formal committee meetings less stressful and more useful.

During the Committee Meeting

- Follow the prepared agenda. If other topics arise, give them separate time in the agenda, but be sure all agenda items are addressed.
- Take notes. It is a good idea to circulate these to committee members to ensure that you and the members of the committee are clear on what 'action items' or decisions have been reached.
- Be sure you are clear about who needs to know when you have accomplished particular things (e.g. are you submitting a form to a grad secretary, meeting later with your supervisor, or reporting back at another committee meeting?). Ask for clarification as often as needed; it is a bad thing when the committee thinks they've told you one thing, but you've heard another.
- If a topic arises that is really between you and one other person, ask the group if the two of you can have that conversation later or if it should be held here (e.g. if there is a question around a particular technique that one of your committee members is helping you learn).

- Work from your list of questions / needs to ensure you get the advice and help you need.
- Be aware that people differ in how they give feedback. Sometimes it comes across really harshly, even when it is intended by the speaker to be useful. Try to separate the advice from the way in which it is given.
- It is useful to have a post-meeting debriefing with your supervisor, especially if you have any concerns about how the meeting went or what you are being asked to do.

Annual Progress Reports

An Annual Progress Report must be completed and submitted to the program coordinator and the College of Graduate Studies each year. The annual progress report records the current status of the degree program progress of a student, and it indicates further steps on a path to successful completion of the program. It is important for supervisors and graduate program coordinators to be forthright in their assessments of student progress. Problems may arise when supervisors and graduate program coordinators attest to satisfactory student progress when that progress is, in fact, not satisfactory. When a problem in student progress arises, it is essential for the long-term wellbeing of the student to identify such problems accurately and honestly, so that they may be expeditiously remedied.

Details of the requirements and process are here:

<https://gradstudies.ok.ubc.ca/policies-procedures/program-requirements/#item1>

The form to be completed is found at:

<https://gradstudies.ok.ubc.ca/resources/forms/annual-progress-report-a/>

Course Work

Total Credit Requirements

Master of Science (M.Sc.)

The M.Sc. degree requires completion of a 3-credit seminar course, 6 credits of graduate or advanced courses in Biochemistry or related subjects approved by the student's advisory committee, and the submission and defence of a 21-credit, research-based thesis (BIOC 549). Coursework must be completed with an average of 76% (B+) and a minimum in each course of 72% (B-).

Overall, the course requirements are:

BIOC 549- MSc Thesis	21 credits
BIOC 530 – Biochemistry Seminar	3 credits
*Science Elective Courses Approved by Committee	6 credits
Total	30 credits

*Science Elective courses include:

- Biochemistry, Chemistry, or Biology graduate (at 500-level) or undergraduate courses numbered 400 or higher.
- Suitable courses numbered 300 or higher offered by other programs

M.Sc. students who wish to transfer to the Ph.D. program must complete 9 credits of coursework at the 500-level including BIOC 530 with at least an 80% (A–) average and complete 12 credits of thesis coursework (BIOC 549) within 18 months of entering the program. Clear evidence of research ability, progress and potential must also be shown as determined by the students’ advisory committee.

Doctor of Philosophy (Ph.D.)

The Ph.D. degree requires a seminar, a comprehensive exam, submission and examination of a dissertation, and coursework as assigned in accordance with the graduate program and the recommendation of the student’s Ph.D. advisory committee. If required, coursework must be completed with an average of 80% (A-) and a minimum in each course of 76% (B+).

Other Academic Requirements

Master of Science (M.Sc.)

In addition to required coursework, to complete the M.Sc. program, a candidate must fulfill the following requirements:

- Committee approval of a research proposal in a format appropriate for the area of study
- A masters level thesis reporting results of the student’s research approved by the advisory and examination committees according to the guidelines of the College of Graduate Studies
- A successful oral defense of the thesis.

Doctor of Philosophy (Ph.D.)

To complete the Ph.D. program, a candidate must fulfill the following requirements:

- Committee approval of a research proposal in a format appropriate for the area of study.
- Completion of the comprehensive examination as described below.
- Advancement to candidacy within 36 months of initial registration in the program.
- A doctoral dissertation describing the process and results of the student’s original research approved by the supervisory and examination committees according to the guidelines of the College of Graduate Studies.
- A successful dissertation examination in a public oral examination.

Teaching Assistantships

All graduate students are required to act as teaching assistant for undergraduate courses. M.Sc. students are required to TA for at least one semester (one lab per semester) and Ph.D. students for at least 2 semesters (one lab per semester). This requirement helps graduate students learn how to communicate scientific information effectively. Graduate students will have opportunities for mentorship to improve teaching.

The Center for Teaching and Learning has a number of excellent programs to develop skills and techniques to improve teaching. Workshops and resources for graduate students are found at:

<https://ctl.ok.ubc.ca/tas/>

<https://ctl.ok.ubc.ca/tas/ta-resources/>

Research Proposals

All BIMB students must prepare a research proposal as part of their program. Research proposals should be an appropriate length for the research topic and approach. The supervisor has discretion for the format and length of the research proposal. Depending on the area of research, the proposal may be in a 5 page NSERC Discovery Grant format or in a longer free-form style. The proposal should not be more than 25 double spaced pages in length but could be much shorter as determined appropriate by the Student's Advisory Committee. A typical proposal has the following suggested format, but the format may vary as appropriate for individual projects:

1. Project Summary
 - A. Statement of Problem and Significance
 - B. Introduction and Background
 - Relevant literature data
 - Preliminary data
 - Conceptual or empirical model
 - Justification of approach or novel methods
 - C. Research Plan
 - Overview of research design
 - Objectives, hypothesis, methods
 - Analysis and expected results
 - Timeline
2. References Cited
3. Appendices, figures or tables in support of background information

Ideas on preparing a research proposal

- Read widely. It may help to ask your supervisor or committee for suggested readings, but of course you will also need to read well beyond what they recommend.
- Read some other proposals to see how other students have tackled their proposals.
- Discuss your ideas with other grad students, your supervisor, and committee members.
- Start writing early; expect that you will revise and revise and revise this document.
- Someone reading your proposal should be able to tell what question(s) you will address, why the topic is interesting, how you will approach the problem, the types of data you will collect, and how your research will advance the field. Give drafts of your proposal to friendly readers and ask them to answer those questions to see how well you did at conveying your ideas.
- Some good resources for writing proposals are:

- Friedland AJ, Folt CL (2009) Writing successful science proposals 2nd Edition. Yale University Press. ISBN 978-0-300-11939-8
- <https://www.mcgill.ca/gps/students/progress-tracking/proposals>
- <https://advice.writing.utoronto.ca/types-of-writing/academic-proposal/>

Center for Scholarly Communication

The CSC provides one-on-one consultations about all aspects of scholarly communication, including writing support for journal articles, research proposals, theses, dissertations, and conference presentations, as well as copyright, open access, and author rights.

<https://library.ok.ubc.ca/research/csc/>

Approval of the proposal by the advisory committee

There is no formal Proposal Defence process for the BIMB Graduate Program. Once students have written a proposal and the supervisor has provided feedback on the proposed research program, a committee meeting should be held to discuss and approve the research proposal.

MSc Thesis Proposal Committee Meeting

Students should present their committee with copies of the research proposal at least one week prior to a committee meeting and within the first 12 months of study. Students give a presentation explaining their proposed research program, hypothesis, objectives, methods and expected outcomes to the advisory committee. The committee is encouraged to ask questions and evaluate the scope and quality of the proposed work. When the proposed research is sufficient for a MSc program and likely to be successful, the committee votes to approve the proposal. If there are concerns about the quality or quantity of the proposed work, the committee may recommend revisions to the written proposal or the experimental design. Confirmation of the approval of the research proposal is required on the Annual Progress Report.

PhD Thesis Proposal Committee Meeting

Students should present their committee with copies of the research proposal at least one week prior to a committee meeting and within the first 18 months of study. Students give a presentation explaining their proposed research program, hypothesis, objectives, methods and expected outcomes to the advisory committee. The committee is encouraged to ask questions and evaluate the scope and quality of the proposed work. When the proposed research is sufficient for a PhD program and likely to be successful, the committee votes to approve the proposal. If there are concerns about the quality or quantity of the proposed work, the committee may recommend revisions to the written proposal or the experimental design. Confirmation of the approval of the research proposal is required on the Annual Progress Report.

The PhD Comprehensive Exam

All Ph.D. students are required to pass a comprehensive exam to advance to candidacy for the degree. The BIMB Comprehensive exam requires advanced knowledge necessary for the proposed research and comprehensive knowledge of Biochemistry and Molecular Biology. The purposes of the comprehensive examinations are:

1. to ensure that a doctoral student has a comprehensive understanding of the literature in their field(s) of study, including theories and methodologies
2. to ensure that the student is fluent with past and current debates and anticipated future trajectories in this/these field(s)
3. to enable the student to develop and locate their own intellectual commitments within the debates of those fields
4. to demonstrate scholarly breadth and depth of understanding that is wider than the specific topic of the student's research
5. to prepare the student to convey their knowledge to both specialized and non-specialized audiences.

Students are normally expected to complete their comprehensive(s) within twenty-four (24) months from the date of initial registration. Students who are not admitted to candidacy within 36 months from the date of their initial registration must withdraw from their program. In exceptional circumstances, the Dean of the College of Graduate Studies may grant an extension to this deadline.

After passing this examination and all required course work, then students are admitted to candidacy and will submit a thesis upon completion of research.

The PhD Comprehensive Examining Committee

The Comprehensive Examining Committee should consist of:

- three of the four members of the student's advisory committee including the advisor
- a neutral chair
- an external examiner.

It is encouraged that the Neutral Chair will normally not vote on the outcome of the examination. If the vote on the outcome of the examination is tied, then the chair has the deciding vote.

The PhD Comprehensive Exam Format

The comprehensive exam must be conducted in a format that complies with the College of Graduate Studies guidelines

<https://gradstudies.ok.ubc.ca/policies-procedures/program-requirements/#item6>

This BIMB Comprehensive exam is designed as an oral exam to test the student's overall knowledge of biochemistry and molecular biology, with particular emphasis on fundamental material oriented towards the student's chosen branch of the field.

- The comprehensive exam should be 2 to 3 hours in length and should not be scheduled if less than a 3-hour period is available.
- The committee will ask the students a broad range of questions that examine their depth and scope of knowledge in their chosen field of study.
- The entire exam should involve questions of a fundamental or comprehensive nature. The examining committee expects to find:
 - Strong analytical, problem-solving and critical thinking abilities
 - Required breadth and in-depth knowledge of the discipline
 - Required academic background for the specific doctoral research to follow
 - Ability to conduct independent and original research
 - Ability to communicate knowledge of the discipline
- The recommendations of the examination committee fall into three categories:
 - Unconditional Pass
 - No further comprehensive examination work is required of the student. The student has passed the comprehensive and may now proceed to the research and writing of a dissertation.
 - Conditional Pass
 - The student may be required to perform additional comprehensive examination tasks (for example, the student may be required to successfully complete a course or write a paper in an area in which the committee finds the student needs additional knowledge);
 - The additional examination requirements are to be provided to the student in writing by the examination committee and include expected standards of achievement and times for completion.
 - Failure
 - The examination committee must inform the student in writing of the failure and provide the student with the conditions, if any, under which a repeat or a continued examination, if any, may take place.
 - If the student is allowed to repeat the examination, the student must be informed immediately after the examination
 - Conditions for repeating the examination are to be clearly stated, including the time frame, potential dates, nature of the re-examination, and consequences of a second failure.
 - The examination committee membership normally remains unchanged for the subsequent examination

Thesis/Dissertation Guidelines

A final written thesis/dissertation must be prepared and defended for the degree to be awarded. Final versions of all UBC Okanagan theses and dissertations must be approved by the College of Graduate Studies and must conform to the technical requirements of the UBC Library and Library and Archives Canada. It is the student's responsibility to ensure that UBC theses and dissertations are consistent, professional, and of the highest quality. The resources below are designed to help students meet these specifications. Students are encouraged to review the resources early in the writing of their thesis and use them to check their thesis before submitting it to the College of Graduate Studies.

<https://gradstudies.ok.ubc.ca/academics/thesis-and-dissertation/preparation/>

A template for thesis formatting is found under “resources” on this site.

A thesis formatting service is available to help with preparation of the thesis.

<https://library.ok.ubc.ca/research/csc/>

More thesis and dissertation information is found here:

<http://gradstudies.ok.ubc.ca/forms/thesis-initiating-exam.html>

Thesis/Dissertation Oral Examination

The thesis may be submitted at any time during the year, but candidates are advised to allow ample time for revision and examination. It is understood that, as the thesis is being written, the candidate will be in regular communication with the advisory committee. When a draft is completed which the advisory committee recommends for examination, the student may formally request an examination. The policies of the College of Graduate Studies must be followed for preparation of the thesis.

MSc Thesis Defence

The supervisor must ensure that the examinable electronic copy of the thesis is sent to the College of Graduate Studies and all examiners at least four weeks prior to the proposed examination date. Under no circumstances are students permitted to make arrangements for an examination.

The composition of the Examination Committee must be approved by the Dean of the College of Graduate Studies, and makes a recommendation of the final outcome of the examination to the dean of the College of Graduate Studies. The examination committee must be seen as impartial and conflicts of interest must be avoided and disclosed.

The BIMB Master’s Thesis Oral Examination committee should consist of:

- The supervisor of the candidate
- All supervisory committee members
- The University Examiner, who is external to the student’s home department or program in which the student is registered.

During the Defence:

- The student presents the results and significance of the research program in a seminar style presentation lasting less than thirty minutes.
- The oral examination should not exceed two hours in addition to the thirty minutes allowed for the opening summary.
- During the formal question period, only examination committee members, as identified on the Notice of Master’s Thesis Oral Examination form, are allowed to question the candidate. Examiners, either in person or via teleconference, must be present during the entire questioning period. All examiners must be given the opportunity to question the student.

Details of the process can be found at:

<https://gradstudies.ok.ubc.ca/policies-procedures/program-requirements/#item8>

PhD Dissertation Oral Examination

The purpose of the Doctoral Dissertation Oral Examination is for the student to independently defend the dissertation. It is also intended to serve as confirmation of the student's knowledge of the research topic within the context of their field(s) of study. In order to safeguard and promote the quality of the graduate degree, all PhD students must pass a final dissertation oral examination before the degree can be granted.

The Doctoral Dissertation Oral examination process is initiated once the student has been deemed, by both their supervisor and their supervisory committee, as ready to proceed to examination. The supervisor must have reviewed the student's research and the entire draft of the dissertation and obtained written agreement from the members of the supervisory committee that the dissertation is ready to move to oral examination.

The examination committee consists of:

- The Supervisor
- All members of the Supervisory Committee
- The University Examiner, who is external to the graduate program
- The External Examiner, who is external to the university

During the Oral Examination:

- The student presents the results and significance of the research program in a seminar style presentation lasting less than thirty minutes.
- The oral examination should not exceed two hours in addition to the thirty minutes allowed for the opening summary.
- During the formal question period, only examination committee members, as identified on the Notice of Doctoral Dissertation Oral Examination form, are allowed to question the candidate.
- In a doctoral exam, the formal question period should begin with the external examiner, university examiner, other examination committee members, followed by the supervisor and co-supervisor, if applicable. Normally, the question period may consist of two to three rounds but should proceed (within the allowable time frame) until examiners have no further questions. During question period, the supervisor should be taking notes about concerns and areas for revision. The neutral chair does not question the student.

Details of the process can be found at:

<https://gradstudies.ok.ubc.ca/policies-procedures/program-requirements/#item8>

Problem Solving

If you encounter problems during your graduate program, you should notify your supervisor immediately. If the problem involves the supervisor, you are advised to speak to a member of your supervisory committee. If the problem cannot be solved, then you should speak to the BMB Program Coordinator.