

Master of Science in Biology

Handbook

2024-2025

Department of Biology



Table of Contents

1	WELCOME STATEMENT	4
2	LAND ACKNOWLEDGMENT	4
3	DISCLAIMER AND PRIMACY OF REGULATIONS	5
4	WHO'S WHO	5
4.1	DEPARTMENT AND FACULTIES	5
4.2	MSC BIOLOGY GRADUATE COORDINATOR	5
4.3	BIOLOGY ADMINISTRATIVE ASSISTANT	6
4.4	CHAIR OF BIOLOGY	6
5	ACCESSING FORMS	6
6	OVERVIEW OF DEGREE STRUCTURE	6
6.1	REQUIREMENTS	6
6.2	AVAILABLE COURSES	7
6.2.1	<i>Special Topics Courses</i>	7
6.2.2	<i>Courses Beyond the Requirement</i>	8
7	FEES AND FUNDING	8
7.1	TUITION	8
7.2	GRADUATE ASSISTANTSHIPS	8
7.3	SCHOLARSHIPS, BURSARIES, AND AWARDS	8
7.4	FACULTY RESEARCH AWARDS	9
8	PRINCIPLES OF GRADUATE SUPERVISION	9
9	THE SUPERVISORY COMMITTEE	9
9.1	PURPOSE AND COMPOSITION	9
9.2	COMMITTEE MEETINGS	9
9.3	COMMITTEE MEETING RECORDS	10
9.3.1	<i>Directions for the Committee Meeting Record Form</i>	10
10	DEPARTMENTAL SEMINARS	11
11	ACADEMIC INTEGRITY	11
11.1	STUDENT CODE OF CONDUCT	11
11.2	ETHICS AND ANIMAL CARE	11
12	EQUITY DIVERSITY AND INCLUSION (EDI)	12
12.1	LAKEHEAD EDI STATEMENT	12
12.2	LAKEHEAD ETHICAL CONDUCT OF RESEARCH AND PROCESSES STATEMENT	12
12.3	LAKEHEAD RESEARCH EXCELLENCE STATEMENT	12
12.4	MSC BIOLOGY COMMITMENT TO EDI	13
12.5	ADDITIONAL EDI RESOURCES	13
13	WHERE AND HOW TO ASK FOR HELP	13
13.1	ACCOMMODATIONS	13
13.2	SUPERVISORY ISSUES	14
13.3	OFFICE HUMAN RIGHTS AND EQUITY	14
13.4	HEALTH AND WELLNESS	14

13.5	LEAVES OF ABSENCE (INCLUDING PARENTAL LEAVE).....	15
14	THE THESIS EXAMINATION (DEFENCE)	15
14.1	IN GENERAL	15
14.2	EXTERNAL EXAMINERS	15
14.3	SUBMITTING THE THESIS FOR REVIEW/EXAMINATION	15
14.4	THE THESIS DEFENCE.....	15
14.4.1	<i>Scheduling</i>	15
14.4.2	<i>Procedures</i>	16
14.4.3	<i>Outcomes</i>	16
14.5	THESIS STRUCTURE AND FORMATTING	17
15	TIME EXTENSIONS	17
	GENERAL DEGREE TIMELINE	18
16	STEP BY STEP GUIDE	18
16.1	AUTHORSHIP OF THE STEP BY STEP GUIDE	18
16.2	RESPONSIBILITY/DISCLAIMER	18
16.3	START DATE ASSUMPTION	19
16.4	APPLICATION PROCESS	19
16.4.1	<i>Finding a Supervisor</i>	19
16.4.2	<i>Deadlines</i>	19
16.4.3	<i>Steps</i>	19
16.5	INITIAL REGISTRATION	20
16.6	SEMESTER 1 (FALL)	20
16.7	SEMESTER 2 (WINTER)	21
16.8	SEMESTER 3 (SPRING/SUMMER)	21
16.9	SEMESTER 4 (FALL)	22
16.10	SEMESTER 5 (WINTER)	22
16.11	SEMESTER 6 (SPRING/SUMMER)	23
16.12	SUBSEQUENT SEMESTERS	24
17	APPENDIX 1: FORM EXAMPLES	25
17.1	APPENDIX 1.1: FORM C: GRADUATE STUDENT SUPERVISORY COMMITTEE.....	25
17.2	APPENDIX 1.2: FORM D: COURSES TAKEN IN PARTIAL FULFILLMENT OF REQUIREMENTS FOR THE MASTER OF SCIENCE DEGREE	26
17.3	APPENDIX 1.3: COMMITTEE MEETING RECORD GOOGLE FORM	27
17.4	APPENDIX 1.4: THESIS/DISSERTATION READY FOR REVIEW	28
17.5	APPENDIX 1.5: FUNDING RECOMMENDATION FORM.....	29
17.6	APPENDIX 1.6: FORM A: INFORMATION IN SUPPORT OF A MOTION TO ADMIT A GRADUATE STUDENT INTO THE M.Sc BIOLOGY PROGRAM	30
17.7	APPENDIX 1.7: GRADUATE ASSISTANT ASSIGNMENT OF WORK FORM	31
17.8	APPENDIX 1.8: PROPOSED THESIS EXAMINER.....	32
17.9	APPENDIX 1.9: TIME EXTENSION REQUEST FORM	33
17.10	APPENDIX 1.10: MASTER'S EXAMINER REPORT ON THESIS.....	34
17.11	APPENDIX 1.11: MASTER'S COMMENT AND REVISION FORM FOR THESIS	35
17.12	APPENDIX 1.12: THESIS LICENCE FORM	36
17.13	APPENDIX 1.13: GRADUATE STUDIES EXIT SURVEY.....	37
17.14	APPENDIX 1.14: THESIS READY FOR FINAL SUBMISSION FORM.....	40
17.15	APPENDIX 1.15 RECOMMENDATION OF THESIS/DISSERTATION	41
18	APPENDIX 2: THESIS COVER PAGE TEMPLATE	42

1 Welcome Statement

Welcome to the MSc Biology program in the Department of Biology at Lakehead University. Whether you are new to Lakehead University, or have already completed one or more degrees here, starting your MSc degree represents a change in your relationship with the Department, University, and your field of study. As an undergraduate student, you are primarily an absorber of knowledge; as a graduate student you will shift to being a generator of knowledge, carrying out original research to expand our understanding of the biological world. This will, and should, be a challenging endeavour, but we will work hard to ensure that you have the tools, mentorship and community you need to achieve your goals. I hope that you will embrace this challenge and become an active member of the Biology community and help make this a supportive and intellectually stimulating place to learn and do research.

Dr. Adam C. Algar
Associate Professor & Graduate Coordinator
Department of Biology

2 Land Acknowledgment

Lakehead University respectfully acknowledges its campuses are located on the traditional lands of Indigenous Peoples. Lakehead Thunder Bay is located on the traditional lands of the Fort William First Nation, Signatory to the Robinson Superior Treaty of 1850. Lakehead Orillia is located on the traditional territory of the Anishinaabeg. The Anishinaabeg include the Ojibwe, Odawa, and Pottawatomi nations, collectively known as the Three Fires Confederacy. Lakehead University acknowledges the history that many nations hold in the areas around our campuses, and is committed to a relationship with First Nations, Métis, and Inuit Peoples based on the principles of mutual trust, respect, reciprocity, and collaboration in the spirit of reconciliation.

3 Disclaimer and Primacy of Regulations

The purpose of this handbook is to help guide you through the logistics and processes associated with your MSc degree. However, in all cases, the University's Academic Calendar and Regulations remain the authority on these. In the case of any discrepancies between this document and the Calendar/Regulations, the Calendar/Regulations have primacy and should be checked and referred to in all cases in relation to dates, regulations, requirements, etc. It is your responsibility to ensure you are aware of all deadlines and regulations pertaining to your program. The Calendar can be found here:

<https://csdc.lakeheadu.ca/Catalog/ViewCatalog.aspx?pageid=viewcatalog&loadusercredits=False/>

And regulations for Master's programs here:

<https://csdc.lakeheadu.ca/Catalog/ViewCatalog.aspx?pageid=viewcatalog&catalogid=30&chapterid=10300&topicgroupid=33253&loadusercredits=False>

4 Who's Who

4.1 Department and Faculties

As a MSc Biology student, you are part of the Department of Biology, which in turn is part of the Faculty of Science and Environmental Studies (FSES). The Chair of Biology leads the Department of Biology, and the Dean of FSES leads the Faculty. However, as a graduate student, you are also part of the Faculty of Graduate Studies (FGS), which also has its own Dean. FGS is ultimately responsible for all graduate programs at Lakehead and are responsible for setting regulations and administering your degree, as well as providing additional opportunities for engagement and experience. Their website has key information for graduate students relating to regulations and requirements, as well as funding opportunities, events and other information:

<https://www.lakeheadu.ca/programs/faculties/graduate-studies>

4.2 MSc Biology Graduate Coordinator

The Biology Graduate Coordinator coordinates (surprise!) the MSc Biology degree. They sit on the Faculty of Graduate Studies Council and liaise with FGS on admissions, awards, time extensions, theses and defences, and all other matters in relation to the MSc Biology degree.

The MSc Biology Graduate Coordinator is: Dr. Adam C. Algar

aalgar@lakeheadu.ca

807-343-8010 ext 8562

CB4018 (office) & CB3006 (lab)

4.3 Biology Administrative Assistant

The Biology Administrative Assistant ensures that the Department runs smoothly. They are a valuable resource for you. They will communicate opportunities, deadlines, and events, as well as keep files on student progress, and liaise with the Faculty of Graduate Studies.

The Biology Administrative Assistant is: Heather Suslyk
biology@lakeheadu.ca
(807) 343-8010 ext 8460
CB4026
Hours: Mon-Fri 8:30am-4:30pm

4.4 Chair of Biology

The Chair of Biology is: Dr. Azim Mallik
amallik@lakeheadu.ca
(807) 343-8010 ext 8927
CB4054

From July 1 – Dec 31 2024, the Acting Chair of Biology is:

Dr. Michael Rennie
mrennie@lakeheadu.ca
(807) 343-8010 ext 7860
CB4050

5 Accessing Forms

PDF (or .docx) version of most forms mentioned in this document can either be accessed from the Department of Biology or Faculty of Graduate Studies (FGS) websites. Examples of the forms are included in Appendix 1 but these versions (which are .jpegs) **should not** be used. Rather the versions available from Biology or FGS must be used. Forms not available on either website will be sent to supervisors or students as needed by the Graduate Coordinator or Biology Administrative Assistant.

Department of Biology MSc Biology forms:

<https://www.lakeheadu.ca/programs/departments/biology/programs/grad/msc/forms>

Faculty of Graduate Studies Forms: <https://www.lakeheadu.ca/programs/graduate/academic-information/grad-forms>

6 Overview of degree structure

6.1 Requirements

The requirements for the MSc Biology degree in the Calendar can be found here:

<https://csdc.lakeheadu.ca/Catalog/ViewCatalog.aspx?pageid=viewcatalog&catalogid=31&chapterid=10787&topicgroupid=34753&loadusercredits=True>

Students must maintain continuous registration during their degree. The MSc Biology degree is composed of 5.0 FCE (full course equivalents, i.e. 'credits') which are expected to be completed over 6 semesters of continuous education. These credits must be composed of:

- The MSc Thesis (3.5 FCE)
 - This includes presenting and defending your proposal and presenting and defending your thesis
 - Students must register for the thesis placeholder course BIOL9901 every semester
- Required Courses
 - BIOL5010 Graduate Seminar (0.5 FCE)
 - All students must take this course in the first year of their degree. It is only offered in the Fall Semester
- 1.0 FCE of additional courses at Level 5
 - This requirement is normally met by taking 2 0.5 FCE graduate (level 5) courses. These must be selected in consultation with your Supervisor and Supervisory Committee. The latter must approve your selected courses.

6.2 Available Courses

There are a limited number of graduate level Biology courses (with code BIOL5---), which you can find in the Calendar. You can take these courses (be sure to check with the professor if they are being offered), but you can also take Level 5 courses offered by other Departments/Faculties if they are appropriate for your degree. You must discuss all course selection with your Supervisor and your Supervisory Committee must approve your selected courses at your initial committee meeting (though you may already have taken some by that time with your Supervisor's approval). You also have the option of taking Special Topics Courses (see below)

6.2.1 Special Topics Courses

The Department of Biology has 2 Special Topics courses available (BIOL5111 and BIOL5131). These courses, also sometimes known as reading or directed reading courses, allow for individual faculty members to offer courses on specialized topics. These can generally take 2 forms. The most common is that a course for 1 or a few students on a specialized topic is arranged with a faculty member. While directed by a faculty member, they are often highly student-led and involve critical thinking around key concepts, or learning of new methods. If a need for a special topics course is identified (after consultation with your Supervisor), the relevant faculty member can be approached to discuss possibilities.

Special Topics courses can also take the form of a graduate (Level 5) version of existing undergraduate courses (normally only Level 4 courses are appropriate). In these cases, the instructor offering the undergraduate version should be approached to see if they are willing to offer a graduate version as a Special Topics. Note that for such courses to be approved, the graduate version must involve additional learning outcomes and assessment to justify the Level 5 listing, not just replicate the assessment in the undergraduate version.

Note that there is no obligation for faculty to offer a Special Topics course and their willingness/ability to do so will depend on their existing teaching, research and service responsibilities. We suggest arranging these as early as possible to ensure availability and so that the instructor can complete the necessary paperwork in time.

6.2.2 Courses Beyond the Requirement

There is no expectation to take courses beyond the requirement for the MSc Biology, nor can you be required to do so. Taking additional courses would require the approval of the Graduate Coordinator and possibly the Chair and/or Dean. Realistically, this approval will not be granted. Note that graduate courses cannot be audited and normally, graduate students do not audit courses (<https://www.lakeheadu.ca/studentcentral/registering-advising/audit-a-course#:~:text=You%20must%20be%20approved%20to%20audit%20a%20course.&text=You%20must%20receive%20permission%20of,registered%20in%20the%20audit%20course.>)

7 Fees and Funding

Details on fees and funding can be found on the Faculty of Graduate Studies web page, along with links to information on how to make payments and deadlines (under General Information about University Fees):

<https://www.lakeheadu.ca/programs/graduate/programs/masters/biology/node/7277>

7.1 Tuition

Tuition & ancillary fees must be paid for 3 semesters (Fall, Winter, Spring/Summer) per year according to the schedule set by the University:

<https://www.lakeheadu.ca/students/finances/tuition-fees/fees/graduate>

7.2 Graduate Assistantships

The Department of Biology receives a limited number of Graduate Assistantships (GAs) for incoming students. Normally, all incoming domestic students are awarded a GA but this is ultimately determined by the Faculty of Graduate Studies. GAs for international students are rare but may be available in exceptional circumstances. GAs are provided for 4 semesters (normally Fall and Winter of the first two years of the degree). GAs are assigned to one (or more) courses per semester for which they will provide teaching support for 135 hours per semester. The value of GAs varies slightly from year to year, but the amount is approximately \$10,500 total for two semesters. The average hours of work per week during the semester should not exceed ~10 hours, recognizing that at certain times of year, high amounts of marking may lead to this being exceeded for a short period. GAs should not be asked to work more than 135 hours per semester, given reasonable expectations for time to complete teaching tasks. For more details see:

<https://www.lakeheadu.ca/programs/graduate/graduate-funding/ga>

7.3 Scholarships, Bursaries, and Awards

Details on potential scholarships, bursaries and awards and how to apply are available here:

<https://www.lakeheadu.ca/programs/graduate/graduate-funding/internal-scholarships-bursaries-and-awards>

The main scholarships generally available to MSc Biology students are NSERC Canada Graduate Scholarships (CGS-M) and Ontario Graduate Scholarships (OGS). Both of these have deadlines in the Fall and you should discuss applying with your Supervisor early. Details available at the above link.

There are also a range of smaller awards/prizes and bursaries that MSc Biology students can apply for through the MyAwards portal: <https://lakeheadu.academicworks.ca/>

7.4 Faculty Research Awards

It is the expectation of the Department of Biology that supervisors provide additional funding to their students (in the absence of a NSERC CGS-M or OGS award) to supplement the GA. This additional funding is called a Faculty Research Award (FRA). Together the GA and FRA form what is colloquially referred to as a graduate student's stipend. FRAs are funded through individual faculty's research grants. While there is no minimum FRA requirement, the recommended FRA per year for the first two years of a MSc Biology is \$10,000. Supervisors may not have sufficient funding to offer this, and students are free to accept a place with an FRA of less than this (or no FRA at all) but should be aware of the general expectation.

8 Principles of Graduate Supervision

All supervisors, and students, have their own approach and mentorship style that varies across individuals and disciplines. However, the fundamental principle governing the student – supervisor relationship is one of mutual respect.

Lakehead University has published a detailed document on Principles of Graduate Supervision adopted from the Ontario Council of Graduate Studies and the Council of Ontario Universities. It includes responsibilities of both the student and Supervisor. You should ensure that you read and understand this document: <https://www.lakeheadu.ca/programs/graduate/responsibilities>

9 The Supervisory Committee

9.1 Purpose and Composition

In addition to your Supervisor, your progress and project will also be overseen by a Supervisory, or Thesis, Committee (Committee hereafter). The purpose of this Committee is to provide additional perspectives beyond that of your Supervisor, ensure you are progressing satisfactorily in your degree and provide additional expertise. The Committee is formed of at least 3 members, one of which is your Supervisor (who chairs the committee). As per University regulations, at least one of the other members must be a faculty (including adjuncts) of the Department of Biology. The third (or additional) members must be qualified individuals and can be appointed from other Departments or Faculties at Lakehead or from outside the University. The composition of the Committee must be discussed and agreed with your Supervisor. The University Regulations on Supervisory/Thesis Committees can be found here: <https://csdc.lakeheadu.ca/Catalog/ViewCatalog.aspx?pageid=viewcatalog&catalogid=21&chapterid=3499&topicgroupid=11179&loadusercredits=True>

9.2 Committee Meetings

You will meet at minimum of 3 times with your Committee throughout the first 6 semesters of your degree. Except for the Proposal Defence, committee meetings will generally involve you sending a document at least a week in advance for the Committee to review outlining your progress since the previous meeting (or since starting your degree) and any other components of the work deemed appropriate. It is common for students to give a presentation on their progress to begin the meeting, as well as a timeline to completion. This is then followed by feedback and

discussion from the Committee. The committee reviews and makes recommendations on student research progress, course completion, adequacy of communication with your Supervisor, interaction with research group and Department, and attendance at departmental seminars. The timing of these meetings must be as follows.

1. The initial meeting must take place by the end of your first semester (usually the Fall semester). Generally, an initial draft of your proposal should be provided in advance for the Committee to review, and an update on courses that are in progress. All courses to be taken during the Degree should be discussed and, if possible, approved at this meeting
2. The second meeting is the Proposal Defence and must take place by the end of the second month of your second semester of registration (end of February for the usual Fall start). A final version of your Proposal should be circulated to the Committee by an agreed date. The initial part of the meeting will be a public presentation of your proposal, followed by in camera questioning by the Committee.
3. The third meeting is a progress meeting and will normally take place in the 4th semester of registration (e.g. second Fall semester for a Fall start).
4. Additional meetings occur at the discretion of the student, Supervisor and Committee, as needed, but not less than once every 3 semesters (if there are time extensions).

9.3 Committee Meeting Records

1. At the initial Committee Meeting, Form C: Graduate Student Supervisory Committee ([Appendix 1.1](#)), Form D: Courses Taken in Partial Fulfillment of Requirements for the Master of Science Degree ([Appendix 1.2](#)), and a Committee Meeting Record Form ([Appendix 1.3](#)) must be completed and submitted to the Department of Biology Administrative Assistant
2. For the 2nd and subsequent committee meetings, the Google Form: Supervisory Committee Meeting Record Form ([Appendix 1.3](#)) must be completed by your Supervisor and you and then approved by all Committee Members. **When this form is used for the Proposal Defence, it should indicate in the Supervisor comments whether the Proposal defence was satisfactory, and, if not, indicate by when an additional defence of the Proposal must occur.**

9.3.1 Directions for the Committee Meeting Record Form

The Committee Meeting Record Form is a Google Form with an approvals workflow. It is initially filled out by the supervisor, not the student. Supervisors can access the form at this link, or on the Biology webpage : <https://forms.gle/M527ex4kdS9ZE9p78>.

To complete the form and obtain approvals, follow the steps below.

1. Supervisor fills in all fields and submits form. **It is crucial that email addresses are entered accurately or the approval workflow will not work.**
2. Student receives an email with the form's contents and the option to approve, decline or comment. **Students must select 'Comment' and enter their response to the supervisor's summary and feedback, then select 'Approve'.**
3. Supervisor receives an email with the form's contents that now includes the student's comment/response. Supervisor clicks Approve. Adding a comment is optional.
4. Committee members receive an email with the form's contents and should click Approve (adding a comment is optional).

5. Once the student, supervisor and all other committee members have approved the form, a copy is automatically sent to the Graduate Coordinator and logged with the Biology Office.

10 Departmental Seminars

Each Fall and Winter semester, the Department of Biology hosts a seminar series which consists of research talks by visiting researchers. These are either in person and/or on Zoom. There are also opportunities for graduate students to meet with seminar speakers prior to or after their presentations. Attending and engaging with visiting scientists is an important component of scientific learning and development and graduate students are encouraged, and expected, to take advantage of these opportunities. New graduate students must attend seminars as part of BIOL5010, but there is an expectation that students attend all Departmental Seminars.

11 Academic Integrity

11.1 Student Code of Conduct

Scientific progress and the generation of robust, reliable scientific knowledge, relies on integrity and trust. It is the responsibility of all individuals to maintain the highest ethical standards and levels of integrity. To engage in academic dishonesty is, simply put, theft. It is the theft of the hard work, ideas, and achievements of others. If you publish false research or obtain your degree through dishonesty, you are stealing future jobs, funding, academic positions and other opportunities from others who have earned them. It also has impacts on the reputation, career, and lives of your collaborators. Thus, a breach of Academic Integrity is a serious offence. The principle of Academic Integrity, particularly of doing one's own work, documenting properly (including use of quotation marks, appropriate paraphrasing and referencing/citation), collaborating appropriately, and avoiding misrepresentation, is a core principle of university study. You must read the Student Code of Conduct – Academic Integrity for a full description of academic offences, procedures when Academic Integrity breaches are suspected, and sanctions for breaches of Academic Integrity. Pay particular attention to discussion of graduate students as procedures differ, and penalties are often greater.

[Link to the Student Code of Conduct – Academic Integrity:](https://www.lakeheadu.ca/students/student-life/student-conduct)

<https://www.lakeheadu.ca/students/student-life/student-conduct>

All MSc biology students should complete Lakehead's online resource, AIM (Academic Integrity Matters course):

<https://www.lakeheadu.ca/students/academic-success/student-success-centre/skills-for-success-seminars/thunder-bay/node/45182>

11.2 Ethics and Animal Care

Lakehead University is dedicated to educating and supporting all researchers to uphold the highest standards in the ethical conduct of research and will continue to support and share best practices. There are two Boards/Committees that may be relevant to your research: the Research Ethics Board and the Animal Care Committee. Any research or study conducted within University facilities or undertaken by persons connected to the University, which involves human participants, must be reviewed and approved by the Lakehead University Research Ethics

Board (REB) and research which uses vertebrate animals and/or cephalopods must be reviewed and approved by the Animal Care Committee (ACC). You should discuss the need for REB and/or ACC review with your Supervisor prior to commencing your research.

More details on the REB can be found here: <https://www.lakeheadu.ca/research-and-innovation/ethics/human-subjects>

More details on the ACC can be found here: <https://www.lakeheadu.ca/research-and-innovation/ethics/animals>

12 Equity Diversity and Inclusion (EDI)

12.1 Lakehead EDI Statement

Lakehead University is committed to providing a research environment that continually strives to stimulate creativity and innovation. We as an institution strive to ensure, understand and celebrate equity, diversity and inclusion of all our members, including equity-seeking groups, so as to ensure equal opportunity for participation in research and innovation. Equity-seeking groups include, but are not limited to, women, Indigenous Peoples, persons with disabilities, racialized persons, and persons who identify as lesbian, gay, bisexual, transgender, queer, or two-spirit. Collaborative research offers an opportunity for reconciliation with Indigenous Peoples and a renewed relationship built on the mutual respect for different ways of knowing. Lakehead University is committed to attracting and retaining students, faculty and staff from all backgrounds and to being active champions of equity, diversity and inclusion on our campuses and in our communities. To this end, Lakehead University will continue to support change by continuing to implement Lakehead University's Canada Research Chairs Equity, Diversity and Inclusion (EDI) Action Plan and throughout the university's academy through the Lakehead University EDI Action Plan.

12.2 Lakehead Ethical Conduct of Research and Processes Statement

Lakehead University is dedicated to educating and supporting all researchers to uphold the highest standards in the ethical conduct of research and will continue to support and share best practices. In particular, Lakehead University will ensure that all faculty, students and staff who engage in research with Indigenous Peoples do so in a mutually respectful and collaborative manner. Lakehead University acknowledges the unique status of Aboriginal Peoples and their treaty rights; research involving Indigenous Peoples will ensure that their diverse and distinct worldviews are represented in planning and decision-making, from the conception of a research project and design, through to the analysis and dissemination of research results. Respectful engagement with Indigenous Peoples and communities is an integral part of ethical research involving Indigenous Peoples.

12.3 Lakehead Research Excellence Statement

Excellence is the foundational principle in the pursuit of knowledge and research at Lakehead University. Lakehead University values, supports, promotes, and celebrates all contributions to research (including basic and applied), creative activities and outputs, and innovation. Lakehead University is committed to increasing research excellence through equity, diversity and inclusion; we recognize that the relevance and/or impact of research are different for different

populations and contexts and that a broader understanding and more inclusive definition of research excellence must be supported in evaluating research outcomes. Measures will be implemented to ensure that the full spectrum of talented researchers can equitably access and benefit from research opportunities, including research appointments, career advancement, training and internships, research awards, research facilities, etc. Furthermore, Lakehead University acknowledges the importance of Indigenous perspectives and ways of knowing in achieving research excellence and impact through community-engaged research.

12.4 MSc Biology Commitment to EDI

Like other sciences, Biology has a long history of exclusion, bias, discrimination, racism and colonialism. Significant progress has been made in recent years, yet many, if not all, of these historical barriers remain in some form. Breaking them down requires continual commitment from all scientists. We all have a responsibility to educate ourselves about this inequity, and work toward making Biology a diverse, inclusive and equitable discipline, which can only strengthen our science and our society. As researchers in Biology, we are committed to:

- Developing an environment of mutual respect and safety in the lab, classroom and field for all members, collaborators, and visitors, regardless of culture, ethnicity, gender identity, national origin, race, sex, sexual orientation, socio-economic status, religion, mental and physical ability, experience, or other aspects of identity or background.
- Participating and engaging in continuing education and training on unconscious and conscious bias and how to address and eliminate biased, exclusionary, behaviour.
- Working to expand access, retention and advancement in Biology for all, especially those from communities who have been historically excluded and marginalized in academia.
- Fostering an environment where the merit of ideas, hypotheses, and data are rigorously evaluated, but the merit of individuals is never in question.
- Redefining traditional measures of 'success' in Biology.

12.5 Additional EDI Resources

Lakehead's Research Office has compiled a webpage of resources on EDI in research. While some of these resources are geared toward established researchers, there is much that will be beneficial to MSc students:

<https://www.lakeheadu.ca/research-and-innovation/research-services/resources/edi-in-research/edi-in-research-resources>

13 Where and How to Ask for Help

13.1 Accommodations

Many students do not realize that academic accommodations apply to, and are relevant for, graduate students as well as undergraduate students. Lakehead University is committed to achieving full accessibility for persons with disabilities/medical conditions. Part of this commitment includes arranging academic accommodations for students with disabilities/medical conditions to ensure they have an equitable opportunity to participate in all of their academic activities. If you are a student with a disability/medical condition and think you may need accommodations, you are strongly encouraged to contact Student Accessibility Services (SAS)

and register as early as possible. For more information, please email sas@lakeheadu.ca or visit <https://www.lakeheadu.ca/faculty-and-staff/departments/services/sas>

13.2 Supervisory Issues

Issues/concerns regarding supervision and a potential breakdown in the student – supervisor relationship can be mitigated by ensuring both student and Supervisor have read and discussed the Principles of Graduate Supervision linked above, and by discussing and agreeing on mutually beneficial goals and expectations, and by keeping records of meetings. However, if you have supervisory concerns, then the first step should be to attempt to resolve these through open and respectful discussion with your Supervisor. If this is not possible, then you can raise concerns about scientific matters and progress with your Committee members. If this is not appropriate, or does not resolve the issue, please bring concerns to the Graduate Coordinator initially, who then may elevate these to the Chair of the Department or appropriate Dean. Note that if your Supervisor is the Graduate Coordinator, then you can bring concerns directly to the Chair of the Department.

13.3 Office Human Rights and Equity

Lakehead's Office of Human Rights and Equity (OHRE) is "an arms-length department of Lakehead University whose mandate is to promote and protect the human rights of students, employees, and volunteers at Lakehead University, by building and fostering an equitable, diverse, and inclusive university community." The OHRE supports student, employees and volunteers at Lakehead University in a range of ways which includes accommodations, training, and information. They also handle concerns and complaints relating to human rights violations including (but not limited to) harassment, discrimination, and sexual and gender-based violence.

All of the relevant information on reporting and procedures is available on their website: <https://www.lakeheadu.ca/faculty-and-staff/departments/services/human-rights-and-equity>

This includes information on how to report incidents of discrimination or sexual and gender-based violence and what will happen once you report:

<https://www.lakeheadu.ca/faculty-and-staff/departments/services/human-rights-and-equity/human-rights>

<https://www.lakeheadu.ca/faculty-and-staff/departments/services/human-rights-and-equity/sexual-violence>

<https://www.lakeheadu.ca/faculty-and-staff/departments/services/human-rights-and-equity/reporting>

13.4 Health and Wellness

It is important during your degree to look after your health and wellbeing, and to communicate with your Supervisor, as appropriate, if you are struggling. Lakehead University also has a wealth of resources to support student health and wellbeing:

<https://www.lakeheadu.ca/students/wellness-recreation/student-health-and-wellness>

If you, or someone you know, is in crisis, resources are available here:

<https://www.lakeheadu.ca/students/wellness-recreation/student-health-and-wellness/mental-health-supports/crisis>

13.5 Leaves of Absence (Including Parental Leave)

A leave of absence from the Master's program can be granted by FGS for exceptional circumstances (health issues, compassionate grounds, or exceptional opportunities to gain practical experience). A parental leave of absence will be granted to students who are either biological or adoptive parents, while they are caring for a newborn or newly-adopted child of any age.

For full details on requesting a leave of absence, as well as on conditions and limits of leaves of absence, and a link to the Leave of Absence Request Form, see the FGS website:

<https://www.lakeheadu.ca/programs/graduate/resources/leave>

14 The Thesis Examination (Defence)

14.1 In General

In addition to completing the course requirements of the MSc Degree, you must successfully complete a thesis and defend that thesis during an oral examination. The thesis will be examined by (an) Internal Examiner(s), normally composed of your Committee and an External Examiner.

14.2 External Examiners

External Examiners are agreed upon through discussion between the student and Supervisor and then must be approved by the core faculty members of the MSc Biology program. In general, External Examiners must have a PhD, applicable expertise, relevant experience supervising graduate students and preferably, experience examining graduate students. External Examiners are usually from other universities, but can be selected from Lakehead University, provided they are not core MSc Biology faculty. Note that adjuncts to the Department of Biology will not be approved. It is important that External Examiners are nominated well before the thesis is submitted, preferably in the penultimate (5th) semester. For the suggested timeline see Sections 16.10 and 16.11.

14.3 Submitting the Thesis for Review/Examination

When the Supervisor and student have agreed that the thesis is ready to be examined, the Supervisor submits a PDF of the thesis and a Thesis/Dissertation Ready for Review form ([Appendix 1.4](#)) to the Graduate Coordinator who will then send the thesis to the External Examiner. There is no contact permitted between the External Examiner and the student after this time, and contact between the External Examiner and the Supervisor must be limited to arranging a defence date. For details see Sections 16.10 and 16.11.

14.4 The Thesis Defence

14.4.1 Scheduling

The scheduling of the defence is the responsibility of the Supervisor. After the Graduate Coordinator has formally invited the External Examiner, the Supervisor must liaise with the student, the committee, the External Examiner and the Graduate Coordinator (as Chair of the Defence) to arrange a suitable time. **Note that supervisors regularly omit including the**

Graduate Coordinator in this process, which may result in the Defence not being held as scheduled as a Chair may not be available. The defence must take place with sufficient time afterward for the student to make anticipated changes and submit the final, approved, version prior to the Department of Biology deadline. There are no available funds to cover travel expenses of External (or Internal) Examiners, so attendance via Zoom is necessary for Examiners outside of Thunder Bay. If an Examiner cannot attend the scheduled date, then by pre-arrangement with the Graduate Coordinator, they can submit a list of questions in advance. Once the Supervisor has identified a suitable date and time, they should inform the Biology Administrative Assistant who will advertise the defence and can assist with room booking.

14.4.2 Procedures

By default, pending room availability, defences are held in a hybrid format (in-person and Zoom). Zoom-only defences are possible where a suitable room is not available. It is the Supervisor's responsibility to set up the Zoom meeting and make the Defence Chair (usually the Graduate Coordinator) and Biology Administrative Assistant co-hosts.

The Defence consists of a public ~30 minute presentation by the student describing their research. This is then followed by in-camera (Examiners and Chair only) questioning of the candidate. The exact format of this questioning is set by the Chair and agreed by the Examiners but generally takes the form of 2 rounds of questioning by each Examiner for a set period of time. In general, the questioning takes 1.5-2 hours although this is highly variable.

14.4.3 Outcomes

After the oral examination (defence), the Examiners reach a consensus decision of the outcome from the following options:

- Accepted
 - This means the thesis is accepted as is with no changes. The student need only submit the licence form and other paperwork to the Department of Biology
- Accepted with Revisions
 - This means that revisions are required prior to the thesis being accepted. Examiners will provide a list of the required changes. The final version of the thesis incorporating the changes must be approved by the Supervisor.
- Appreciable Revisions Required
 - This means that revisions are required prior to the thesis being accepted, usually to a greater extent than under 'Accepted with Revisions'. Examiners will provide a list of the required changes. The final version of the thesis incorporating the changes must be approved by the External Examiner.
- Rejected
 - This means that the thesis is deemed of insufficient quality to be counted as credit toward a MSc Biology degree.

If revisions are necessary, the student is provided with a list of outcomes and they work, in consultation with the Supervisor to incorporate these before the Supervisor approves the final version. The student and Supervisor then follow the procedures in 16.11. These must be completed by the deadline set by the Department of Biology or the student will need to 1) apply for a time extension and 2) pay additional fees. Full details on this process are available here:

<https://www.lakeheadu.ca/programs/graduate/academic-information/degree-completion/thesis>

14.5 Thesis Structure and Formatting

In general, the thesis should follow discipline-specific conventions and ensure readability for the Examiners. Precise details (e.g. specific referencing style) should be agreed upon with the Supervisor. However, these guidelines must be followed:

1. The thesis must be double-spaced with an easily readable font (no smaller than 11pt)
2. Margins should be 2.54 cm (1 inch) on the top, right and bottom, and 3.81 cm (1.5 inches) on the left to accommodate binding on letter-sized paper (8.5 x 11 inches)
3. Theses must be saved in a single PDF/A file type.
4. The thesis must include a title page using the recommended template ([Appendix 2](#))
5. The thesis should include the following sections (in this order):
 - a. Title Page
 - b. Abstract
 - c. Land acknowledgement
 - d. Acknowledgements
 - e. Table of Contents
 - f. List of Tables (includes page numbers)
 - g. List of Figures (includes page Numbers)
 - h. Main Text
 - i. References
 - j. Appendices
6. Page numbering should be as follows: The title page is not numbered. Numbering in lowercase Roman numerals begins with ii (two) on the abstract page and is continuous until the List of Figures (inclusive). Arabic numbering (1, 2, 3, etc) should begin with 1 (one) on the first page of the main text and be continuous until the end of the Appendices.
7. Chapters and sub-sections should be numbered hierarchically e.g. 1.1, 1.1.1, 1.1.2, 1.2 etc. Tables and figure numbers should include be numbered separately and include the chapter number, e.g. Table 2.1, Figure 2.1.

15 Time Extensions

If the defence is not completed and the final thesis not submitted within 6 semesters, you must apply for a time extension. These are granted by FGS Council on an individual basis, on the advice of the Department of Biology (Graduate Coordinator). MSc students are eligible for up to 3 time extensions. Full details, conditions and links to the Time Extension Request form are available on the FGS website:

<https://www.lakeheadu.ca/programs/graduate/resources/time-extension>

Students who do not complete their degree within the maximum of 3-time extensions must apply for re-admission to the program through the online application system and pay the relevant fees. Note that acceptance after re-admission is not guaranteed. Students and Supervisors in this position must discuss the situation with the Graduate Coordinator well before the end of the final time extension. Note that students who are re-admitted must complete their degree within 3 semesters (continuous) with no extensions or leaves of absence (except for parental leave) possible.

General Degree Timeline

Table 0.1 Timing of key MSc Biology milestones. Note this assumes a standard (Fall semester) start. For non-standard starts, adjust dates accordingly.

Semester	Courses	Committee	GA	Thesis Defence	Miscellaneous
Semester 1	BIOL9901 & BIOL5010	Hold 1 st committee meeting	GA teaching		
Semester 2	BIOL9901 & potentially 0.5 FCE elective	Public proposal defence (2 nd committee meeting) by end of February	GA teaching		
Semester 3	BIOL9901 & potentially 0.5 FCE elective				
Semester 4	BIOL9901 & potentially 0.5 FCE elective	Hold 3 rd committee meeting	GA teaching		
Semester 5	BIOL9901 & potentially 0.5 FCE elective		GA teaching	Nominate External Examiner	If not on track to complete by end of Semester 6, submit time extension by May 1
Semester 6	BIOL 9901			Submit & Defend Thesis	Submit intent to graduate

16 Step by Step Guide

16.1 Authorship of the Step by Step Guide

This step-by-step guide has been assembled by numerous authors over the years, with substantive and recent contributions from Dr. Michael Rennie and Dr. Adam Algar.

16.2 Responsibility/Disclaimer

This section deals primarily with the procedures and responsibilities of you, the student, but in some instances (e.g. organization of the defense), there are tasks/procedures/forms that must be undertaken/completed by your Supervisor. However, **the completion of all requirements and the degree is the ultimate responsibility of you, the student.**

16.3 Start Date Assumption

The below is written assuming a September (Fall Semester) start date. Thus:

- Semester 1: Year 1, Fall semester,
- Semester 2: Year 1, Winter semester
- Semester 3: Year 1, Spring/Summer semester
- Semester 4: Year 2, Fall semester
- Semester 5: Year 2, Winter semester
- Semester 6: Year 2, Spring/Summer semester

If you have a non-standard start semester (i.e. not the Fall semester), then adjust accordingly.

16.4 Application Process

16.4.1 Finding a Supervisor

It is highly recommended that you contact a potential Supervisor prior to applying and discuss whether they are willing to take you on as a student, and can fund your research, prior to applying. The funding available for the student, and to support the research should be discussed at this time. While we do not require you to have contacted a Supervisor before applying, in practice **we very rarely accept students who have not already pre-arranged a Supervisor.**

16.4.2 Deadlines

Deadlines for applications for particular semester entries are set by the University/FGS. Late applications can be considered but may not be eligible for the same funding (e.g. Graduate Assistantships), depending on availability. The potential Supervisor should discuss potential applicants with the Graduate Coordinator.

16.4.3 Steps

1. The applicant goes to the [Faculty of Graduate Studies](#) website and reviews the links under “Apply Now to Graduate Studies”.
2. The applicant submits their electronic application form, including arranging for an **official transcript**, and **three letters of reference** as part of the application, and naming their (normally pre-arranged) Supervisor.
3. The Department of Biology confirms that the Supervisor agrees to support the student and asks them to supplement the application with a Funding Recommendation Form ([Appendix 1.5](#)), along with and Form A: Information in Support of a Motion to Admit a Graduate Student into the M.Sc Biology Program ([Appendix 1.6](#)). The Graduate Coordinator communicates to the Supervisor whether a Graduate Assistantship is available for this student and any other sources of funding from the FSES or FGS
4. The Department of Biology circulates the application and Supervisor's supplement to core faculty members of the MSc Biology program who must vote on admission within seven (7) working days.
5. After the voting, the Graduate Coordinator either accepts or rejects the application. If accepted, the Department of Biology forwards the Funding Recommendation Form to the Faculty of Graduate Studies, who will send an Offer of Admission to the applicant.
6. The Supervisor should communicate the funding arrangements to the applicant directly if they have not done so already.
7. The applicant accepts (or not) the Offer of Admission **by the specified deadline**. If the student is unable to start in the semester specified in the Offer, they must discuss this with

their Supervisor who will liaise with the Graduate Coordinator for an alternate Offer of Admission.

16.5 Initial Registration

1. As per the dates set by the University (usually in June preceding a Fall start), the student registers as directed by the University. At this time, students should register for the Fall and Winter Semesters (if the student has a non-standard start semester, registering for 2 semesters will not be possible and they will have to register for subsequent semesters during the relevant registration dates. **It is the student's responsibility to ensure they register by the deadline.**
2. At minimum, students must register for the following:
 - a. Fall semester:
 - i. **BIOL9901 Masters Thesis.** This is a placeholder course that students must register for every semester until completion of their degree.
 - ii. **BIOL5010 Graduate Seminar.** Required course that **must** be taken in the first year of the MSc degree. Only offered in the Fall semester.
 - b. Winter semester:
 - i. **BIOL9901 Masters Thesis.** This is a placeholder course that students must register for every semester until completion of their degree.
3. Students may also register for additional courses at this time but must discuss this with their Supervisor, and have them agreed beforehand. There is an opportunity later to add additional courses.
4. The student is supplied a copy of the Funding Recommendation Form from FGS who also supply it to Finance/Accounts
5. The Finance/Accounts Office arranges fee and salary payments. It is the student's responsibility to ensure all fees are paid by the deadline.
6. Students are put in touch with Human Resources to be enrolled as an employee (for their Graduate Assistantship, if applicable) and to sign tax forms. It is the responsibility of the student to ensure all of the relevant forms are submitted by the deadline to ensure the GA is set up.
7. There is a GA orientation session (online, via Zoom) just prior to the start of the Fall Semester that new GAs must attend. The date will be communicated to students by FGS; it is usually recorded.

16.6 Semester 1 (Fall)

1. Students should meet with their Supervisor upon arrival to be allotted laboratory and desk space. If suitable desk space is not available in the Supervisor's laboratory, there is additional graduate student desk space available in CB4030. Students wishing to use this space should discuss their needs with their Supervisor and Graduate Coordinator.
2. During the registration drop/add period, students can add additional courses as discussed with, and approved by, your Supervisor.
3. Within 2 weeks of commencing their studies, students **must** complete the applicable new employee orientation, accessibility and safety training. Students should discuss this with their Supervisor, who will liaise with the laboratory and Biosafety Specialist (Tiffany Moore, tiffany.moore@lakeheadu.ca). This training is available online via www.mycourselink.lakeheadu.ca. Details on accessing this training are available here:

<https://www.lakeheadu.ca/faculty-and-staff/departments/services/hr/health-safety/or/new-employee-orientation-training>. There are specific modules that must be completed depending on the type of research/work that will be undertaken and additional modules may be necessary in relation to your GA. It is the Supervisor and student's responsibility to ensure that all required and relevant safety training is completed.

4. Students with a GA will meet with their allocated course instructor and complete a Graduate Assistant Assignment of Work Form ([Appendix 1.7](#))
5. Student and Supervisor meet regularly as student commences thesis and course work. This should include discussions of required approvals (Permits, Research Ethics Board, Animal Care Committee)
6. The Supervisory Committee is established
7. As part of BIOL5010, student present their proposal presentation to the Department
8. The first Supervisory Committee meeting takes place (see section 9) before the end of Semester 1 to formally establish the Committee, approve additional courses, and provide feedback on progress. Relevant forms must be submitted to the Biology Administrative Assistant.

16.7 Semester 2 (Winter)

1. Students should ensure they are registered for BIOL9901 and add any additional courses approved by the Supervisory Committee during the course registration dates.
2. Students with a GA and who have not completed a Graduate Assistant Assignment of Work form for Semester 2 should liaise with their course instructor do so.
3. Students should liaise with their Supervisor and Committee during the first 2 weeks of the semester to arrange a date and time for their proposal defence. The proposal defence must be no later than the end of February (or equivalent for a non-standard start).
4. Students communicate the time and date of the proposal defence, committee membership and title of their project to the Biology Administrative Assistant and Graduate Coordinator no later than the end of the third week of January. Where possible, the proposal defence is offered in a hybrid format, though it may be in-person only or Zoom only if necessary. The Biology Administrative Assistant will assist with room booking and publicize the public portion of the proposal defence.
5. Student finalizes proposal and sends it to Supervisory Committee by a date agreed with the Committee.
6. Student delivers their proposal talk (20-30 minutes) and defends their proposal.
7. Student and Supervisor meet regularly to discuss research and progress.

16.8 Semester 3 (Spring/Summer)

1. Students should ensure they are registered for BIOL9901 and add any additional courses approved by the Supervisory Committee during the course registration dates.
2. If necessary, students liaise with GA course instructor to complete an Graduate Assistant Assignment of Work form. Note: for most students (standard start) this will be the Spring/Summer semester and GA related teaching is normally restricted to Fall and Winter.
3. Students continue with their research following the timeline agreed with their Supervisor and committee.
4. Student and Supervisor meet regularly to discuss research and progress.

16.9 Semester 4 (Fall)

1. Students should ensure they are registered for BIOL9901 and add any additional courses approved by the Supervisory Committee during the course registration dates.
2. Students with a GA will meet with their allocated course instructor and complete a Graduate Assistant Assignment of Work form.
3. Students continue with their research following the timeline agreed with their Supervisor and committee.
4. Student and Supervisor meet regularly to discuss research and progress.
5. Students must have a committee meeting by the end of semester 4 to update committee on progress. They should send out a document outlining progress and work so far to the committee by an agreed date. After the meeting, the student and Supervisor must complete the Committee Meeting Record Google Form ([Appendix 1.3](#)) and have it approved by all Committee members

16.10 Semester 5 (Winter)

1. Students should ensure they are registered for BIOL9901 and add any additional courses approved by the Supervisory Committee during the course registration dates.
2. Students with a GA and who have not completed a Graduate Assistant Assignment of Work form for Semester 5 should do so.
3. Students continue with their research following the timeline agreed with their Supervisor and Committee.
4. Student and Supervisor meet regularly to discuss research and progress.
5. Student and Supervisor should discuss the timeline to completion of the thesis to determine whether progress is on track and develop a plan to complete the thesis by the end of Semester 6.
6. Student should informally inform their Committee regarding the timeline to completion to determine if there are any potential periods of unavailability.
7. Assuming completion in Semester 6, student and Supervisor should discuss and agree on an External Examiner.
8. The potential External Examiner is contacted informally **by the Supervisor** to determine their willingness and availability. If they are willing, the Supervisor sends a letter in support of the nomination, a copy of the External Examiner's CV and a Proposed Examiner Form ([Appendix 1.8](#)) to the Graduate Coordinator and Biology Administrative Assistant. The letter of support should outline the thesis topic, why the proposed External's expertise is appropriate, a list of 3-5 recent relevant publications, and a statement of any existing or previous affiliation with the Department of Biology, Lakehead University or the MSc Biology program (note that affiliation with Lakehead does not preclude acceptance). These documents are then made available to core faculty members of the MSc Biology program who must vote on acceptance within seven (7) working days.
9. When an External Examiner is agreed, they are formally invited by the Graduate Coordinator to serve as Examiner. **From this time, the scheduling of the defence will be handled by the Supervisor** who must find a time agreed by the student, External Examiner, committee (Internal Examiners) and Graduate Coordinator (as Chair of the Defence). If all Examiners are in Thunder Bay, the defence can be in person but zoom or hybrid is more usual. The format must be confirmed with the Graduate Coordinator prior

to advertising the defence. The Biology Administrative Assistant will assist with booking a room once the date is agreed.

10. If the student is not on track to complete their degree within 6 terms, they and their Supervisor must submit a Time Extension Request Form ([Appendix 1.9](#)) to the Graduate Coordinator with sufficient time for the Department of Biology to submit it to FGS by May 1 to receive an extension for the Fall Semester. See here for full details and timing justification: <https://www.lakeheadu.ca/programs/graduate/resources/time-extension>

16.11 Semester 6 (Spring/Summer)

1. Students should ensure they are registered for BIOL9901 and add any additional courses approved by the Supervisory Committee during the course registration dates.
2. GAs are normally completed by now
3. If an External Examiner has not already been nominated and a defence date set, then this must be completed as soon as possible.
4. In close consultation with the Supervisor, the student **completes the thesis a recommended minimum of 6 weeks prior to the end of the semester.** The Supervisor then submits an examination-ready PDF of the thesis and a copy of the Thesis/Dissertation Ready for Review form ([Appendix 1.4](#)) to the Graduate Coordinator who sends it to the External Examiner. At this stage, there should be no communication between the student and External Examiner, nor between the Supervisor or Examiner with the exception of finalizing a defence date if this has not already occurred.
5. Contemporaneously with the thesis being sent to the Graduate Coordinator for review, the Student or Supervisor sends the **identical copy** to their committee, who will take on the role of Internal Examiners. The Supervisor, as representative for the Internal Examiners should also ensure they have blank copies of the Masters Examiner Report on Thesis ([Appendix 1.10](#)) and Master's Comment and Revision Form for Thesis ([Appendix 1.11](#)).
6. The student submits an Intent to Graduate via MyInfo as per the guidelines outlined here: <https://www.lakeheadu.ca/studentcentral/graduating/intent-to-graduate>
7. The Supervisor sends the Graduate Coordinator a copy of the Internal Examiners' Master's Examiner Reports and Comment and Revision Forms no later than 3 working days prior to the Defence. **These must not be shared with the student prior to the defence.**
8. The External Examiner sends the Graduate Coordinator a copy of the External Examiner's Report and Comment and Revision Form no later than 3 working days prior to the defence. The Graduate Coordinator will share these with the Supervisor, **but they must not be shared with the student prior to the defence.**
9. The defence is held, chaired by the Graduate Coordinator or appointed proxy. If an Examiner (internal or external) is unable to attend, it is permissible for them to submit a list of questions to the Graduate Coordinator (or appointed proxy) prior to the defence. These will then be read by the Supervisor. The defence consists of a public ~30 minute presentation by the student on their research, followed by in-camera (no audience) questioning of the student by the Examiners.
10. The Examiners reach a decision. In most cases this results in revisions which must then be completed by the student and approved by the Supervisor or External Examiner as appropriate and directed by the Graduate Coordinator. Final signed versions of Internal

and External Examiner reports and comment and revision forms are provided to the Graduate Coordinator.

11. The student submits the final, approved pdf of the thesis to the Graduate Coordinator and the Biology Administrative Assistant. They must also submit a signed Thesis Licence Form ([Appendix 1.12](#)) to Biology Administrative Assistant as well as complete a Grad Studies Exit Survey ([Appendix 1.13](#)). Both of these will be provided to the student by the Biology Administrative Assistant or Graduate Coordinator. The Supervisor must submit a Thesis Ready for Final Submission Form ([Appendix 1.14](#)) and a Recommendation of Thesis/Dissertation Form ([Appendix 1.15](#)) to the Graduate Coordinator and Biology Administrative Assistant. If the student and/or Supervisor would like bound printed copies of the thesis for their own use, they must supply **single-sided** hard copies and arrange payment for binding with the Biology Administrative Assistant. **The thesis and all forms must be submitted to the Biology Administrative Assistant by the deadline set by the Department and communicated to students during the semester and/or at the defence. Note that this precedes the deadline set by FGS.**
12. The Department of Biology submits the thesis and relevant forms to FGS.
13. If a time extension is necessary, the form should have been submitted by May 1, but if not, this should be submitted as early as possible in the semester to the Graduate Coordinator. See here for details:
<https://www.lakeheadu.ca/programs/graduate/resources/time-extension>

16.12 Subsequent Semesters

1. If not completed within 6 semesters, the student should follow the timeline above in their final semester, while ensuring they are registered in BIOL9901 and pay required tuition fees.
2. Students and supervisors must familiarize themselves with the limits on time extensions and the regulations around re-application should extension limits be reached.

17 Appendix 1: Form Examples

17.1 Appendix 1.1: Form C: Graduate Student Supervisory Committee

BIOLOGY: GRADUATE FORM C (to be placed in the student's file in the Biology office)

GRADUATE STUDENT SUPERVISORY COMMITTEE

"The supervisory committee consists of a minimum of three faculty (including the supervisor), who are members of the Faculty of Graduate Studies. The supervisory committee will be chaired by the student's supervisor, who must be a member of the Biology MSc core faculty. One member of the committee has to be a full-time Biology faculty member who is also a member of the Biology MSc core faculty. The third supervisory committee member (and any additional members) should preferably be from the current list of MSc Biology core faculty, but can be a member selected from the currently approved Faculty of Graduate Studies members' list. The Chair of the Biology department will be ex officio member of all Biology MSc Supervisory Committees."

(Revised November 11, 2016)

NAME OF CANDIDATE: _____

TITLE OF RESEARCH THESIS:

DATE OF ACCEPTANCE INTO
M.SC. PROGRAM: _____

SUPERVISORY COMMITTEE

	NAME	AFFILIATION	SIGNATURE
Supervisor:	_____	_____	_____
Committee Member:	_____	_____	_____
Committee Member:	_____	_____	_____
Committee Member:	_____	_____	_____
Department Chair (Ex officio):	_____	_____	_____

DATE COMMITTEE SELECTED: _____

17.2 Appendix 1.2: Form D: Courses Taken in Partial Fulfillment of Requirements for the Master Of Science Degree

BIOLOGY: GRADUATE FORM D
Updated September 11, 2016

**COURSES TAKEN IN PARTIAL FULFILLMENT OF REQUIREMENTS
FOR THE MASTER OF SCIENCE DEGREE**

NAME OF STUDENT: _____

LIST OF COURSES APPROVED BY THE SUPERVISORY COMMITTEE:

Course Number	Course Title
_____	_____
_____	_____
_____	_____
_____	_____

SIGNATURES OF SUPERVISORS AND MEMBERS OF SUPERVISORY COMMITTEE:

_____ (signature)	_____ (print name)
_____ (signature)	_____ (print name)
_____ (signature)	_____ (print name)
_____ (signature)	_____ (print name)
_____ (signature)	_____ (print name)

DATE APPROVED: _____

COURSES COMPLETED:

Course Number	Course Title	Mark
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

17.3 Appendix 1.3: Committee Meeting Record Google Form

Committee Meeting Record Form 2024-2025

Use this form to keep a record of Supervisory Committee meetings. Supervisors should fill out all fields, including names and dates. **It is crucial that the student's email and committee member emails are entered correctly.**

Workflow:

1. Supervisor fills in all fields and submits form
2. Student receives an email with the form's contents and the option to approve, decline or comment. **Students must select 'Comment' and enter their response to the supervisor's summary and feedback, then select 'Approve'**
3. Supervisor receives an email with the form's contents including the student's comment. Supervisor clicks Approve. Adding a comment is optional.
4. Committee members receive an email with the form's contents and should click Approve (adding a comment is optional).
5. Once the student, supervisor and all other committee members have approved the form, a copy is sent to the Graduate Coordinator and a copy logged with the Biology Office.

aalgar@lakeheadu.ca [Switch account](#)

*** Indicates required question**

Email *

Your email _____

Your Name (Supervisor) *

Your answer _____

Student's Name *

Your answer _____

Current Semester for student *

First

Second

Third

Fourth

Fifth

Sixth

First Time Extension

Second Time Extension

Third Time Extension (FINAL)

Other: _____

Date of Committee Meeting *

MM DD YYYY

__ / __ / __

List of Attendees Other than Supervisor and Student, i.e. Committee Members *

Your answer _____

Meeting Attendee Committee Member #1 or Co-Supervisor Email *

Your answer _____

Meeting Attendee Committee Member #2 Email

Your answer _____

Meeting Attendee Committee Member #3 Email

Your answer _____

Meeting Summary and Feedback on Progress for Student - Supervisor to Fill In *

Your answer _____

Please enter the student's email address below for their input and approval *

Your answer _____

17.4 Appendix 1.4: Thesis/Dissertation Ready for Review

Lakehead

UNIVERSITY

FACULTY OF GRADUATE STUDIES

Thesis/ Dissertation Ready for Review

Student Name: _____

Student Number: _____

Degree Sought: _____

Thesis/Dissertation Title: _____

This is to confirm that I have read the Thesis/Dissertation by _____ and it is
now ready for review.

Supervisor Signature: _____

Date: _____

Graduate Coordinator Signature: _____

Date: _____

17.5 Appendix 1.5: Funding Recommendation Form

Lakehead University, Office of Graduate Studies

FUNDING RECOMMENDATION

Academic Year: FALL 2024

This form is initiated by the Graduate Coordinator/Chair. Once completed should be submitted to the Faculty of Graduate Studies. **One form per student ANY additions to the form must be made on the same form.**

Name: _____	Program: _____
Masters <input checked="" type="radio"/>	Student Number: _____
Doctoral <input type="radio"/>	Email Address: _____
Program Year: 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/>	DOMESTIC <input type="radio"/> INTERNATIONAL <input type="radio"/>
Campus <input type="radio"/> TBAY <input type="radio"/> OR <input type="radio"/>	

GRADUATE ASSISTANTSHIP:

Fall/Winter Fall Winter Amount \$ _____

For HR Use Only

****Please note that GA payments have mandatory statutory/benefit costs/union dues deducted****

International PhD Budget Code (if applicable): _____

SCHOLARSHIPS, BURSARIES & AWARDS: (shaded areas to be completed by Graduate Studies Office)

Name of Award:	Amount \$	Date Awarded	Award Code
Breakdown of Payments / per Term	Sept – Dec 2024	Jan – Apr 2025	May – Aug 2025
Name of Award:	Amount \$	Date Awarded	Award Code
Breakdown of Payments / per Term	Sept – Dec 2024	Jan – Apr 2025	May – Aug 2025
Name of Award:	Amount \$	Date Awarded	Award Code
Breakdown of Payments / per Term	Sept – Dec 2024	Jan – Apr 2025	May – Aug 2025

FACULTY RESEARCH AWARD (to be completed by the Grant Holder):
NOTE – End date not to exceed August 31st of relevant academic school year

Name of Grant Holder	Amount \$	For Funds Added at a Later Date: Amount: _____ Initials: _____ Date: _____	
Budget Code	Source of Funding	Start Date of Payment	Last Date of Payment
Signature of Grant Holder & Date	Second Signature (if required) & Date		
Breakdown of Payments / per Term	Sept – Dec 2024	Jan – Apr 2025	May – Aug 2025

I have signed a contract with an external funder other than the Tri-Council (please check appropriate box):
 YES NO

If yes, check here to signify that you have communicated to the student the terms of the contract that relate specifically to the student, and that the student has agreed to those terms:
 YES

Graduate Coordinator Date

Office of Financial Services Date
(*Only required if there are deductions)

Human Resources Officer Date

Graduate Funding Officer Date

For Office Use Only

17.6 Appendix 1.6: Form A: Information in Support of a Motion to Admit a Graduate Student into the M.Sc Biology Program

BIOLOGY: GRADUATE FORM A



**INFORMATION IN SUPPORT OF A MOTION TO ADMIT
A GRADUATE STUDENT INTO THE M.Sc. BIOLOGY PROGRAM**

Date: _____

Prospective Supervisor: _____

Department: _____

Recommended Student: _____

Undergraduate University: _____

Applied to: OGS

NSERC

Average mark over last 20 courses: _____

1. Brief description of proposed research: _____

2. Brief indication of the source and assurance of funding to support student research expenses and stipend: _____

3. Statement of how the student's academic and practical background is thought to suit the proposed M.Sc. research: _____

Signature of Prospective Supervisor: _____

17.7 Appendix 1.7: Graduate Assistant Assignment of Work Form

Lakehead

UNIVERSITY

Faculty of Graduate Studies

GRADUATE ASSISTANT ASSIGNMENT OF WORK

SPACE ASSIGNED _____

Fall/Winter Fall Winter

Instructions for Graduate Coordinators: Please ensure one form for each Graduate Assistant in your program is completed. Keep one copy for your files and send the original to the Faculty of Graduate Studies **no later than 30 SEPTEMBER**. Please ensure the Graduate Assistant's space has been recorded above.

Student's Name: _____ ID#: _____ Academic Unit: _____

Fall (Course Title & Number): _____ Instructor: _____

Fall (Course Title & Number): _____ Instructor: _____

Winter (Course Title & Number): _____ Instructor: _____

Winter (Course Title & Number): _____ Instructor: _____

Duties that have been mutually agreed upon between the Graduate Assistant and the assigned course instructor:

	Fall Hours	Winter Hours
<input type="checkbox"/> Class preparation	_____	_____
<input type="checkbox"/> In-class teaching	_____	_____
<input type="checkbox"/> Demonstrating	_____	_____
<input type="checkbox"/> Leading seminar	_____	_____
<input type="checkbox"/> Supervising laboratories	_____	_____
<input type="checkbox"/> Grading/marking	_____	_____
<input type="checkbox"/> Consulting with students	_____	_____
<input type="checkbox"/> Holding assigned office hours	_____	_____
<input type="checkbox"/> Invigilating tests/exams	_____	_____
<input type="checkbox"/> Conducting field trips	_____	_____
<input type="checkbox"/> Other (please specify – must be related to GA/RA duties)	_____	_____
Total Hours	_____	_____

NOTE: The CUPE Agreement states that Graduate Assistants are to limit the number of hours of work to an average of 10 hours per week in any given semester of employment. Instructors/supervisors are expected to maintain logs of actual time usage.

 Graduate Assistant's Signature Date Graduate Coordinator's Signature Date

 Supervisor's Signature Date Dean of Faculty of Graduate Studies Signature Date

17.8 Appendix 1.8: Proposed Thesis Examiner

Lakehead
UNIVERSITY

FACULTY OF GRADUATE STUDIES

Proposed Thesis Examiner

Examiner: _____ Rank: _____

Institution Name and Address: _____

Phone: _____ Fax: _____ email: _____

Last Degree: _____ University: _____ Discipline: _____

On a separate page, please submit the following information

Area of Specialization: Relevant to this specific Thesis/Dissertation

Experience Relevant to Evaluating Graduate Work: Briefly describe the nominee's appropriateness for this work

Recent Scholarly Activity: Cite 3 to 5 recent publications in the discipline's decided method

Previous Affiliation with the Academic Unit/Program:

Proposed external examiner has been contacted informally and has agreed to serve.

A current CV has been requested by the academic unit and is attached.

Please complete the following

Name of Student: _____ Graduate Program: _____

Supervisor: _____ Academic Unit: _____

Phone: _____ email: _____

Proposed Title of Thesis: _____

Signatures

Supervisor: _____ Date: _____

Graduate Coordinator: _____ Date: _____

17.9 Appendix 1.9: Time Extension Request Form



Lakehead Faculty of
UNIVERSITY **Graduate Studies**

Time Extension Request Form

To be considered for a Time Extension a student must be **Registered**

Student Name: _____ Student Number: _____

Academic Unit/Program: _____ Supervisor: _____

Student email: _____

Extension Information

First Term Extension

- Submit to Academic Unit/Program for signatures then send the original to Graduate Studies Office

Third and Final Term Extension (Masters)

- Submit to the Graduate Studies Office

Second Term Extension

- Submit to the Graduate Studies Office

Fourth and Final Term Extension (Doctoral)

- Submit to the Graduate Studies Office

Term(s) Requested:

- Fall Term – Year: _____ (Must normally apply by May 1st)
- Winter Term – Year: _____
- Spring/ Summer – Year _____

Comments:

Requests will be returned to the academic unit if the information provided is insufficient. The Supervisor and/or Graduate Coordinator **must provide adequate details** in support of the request.

Student Signature: _____

Date: _____

Supervisor Signature: _____

Date: _____

Graduate Coordinator Signature: _____

Date: _____

Examiner's Report on Thesis

Examiner 1 Examiner 2 (External)

Name of Candidate: _____

Degree Sought: _____

Academic Unit: _____

Title of Thesis: _____

Indicate your assessment of the thesis by checking one of the boxes below.

Accepted

Accepted Subject to Revisions
• Please indicate suggested revisions on the attached form.

Appreciable Revisions Required
• If you choose this category, please indicate the revisions required before you would find the thesis acceptable; please use the attached form to do so. If ranked in this category, the revised thesis will be returned to you for final acceptance.

Thesis Rejected
• A choice of "Rejected" means that the thesis is of insufficient worth to be counted as credit toward a Master's degree.

Examiner (Print Name)

Examiner (Signature)

Date

17.11 Appendix 1.11: Master's Comment and Revision Form for Thesis

Lakehead
UNIVERSITY

FACULTY OF GRADUATE STUDIES

Comment and Revision Form for Thesis

Examiner Name: [Click here to enter text.](#)

Student Name: [Click here to enter text.](#)

In the space below, please indicate the required and/or suggested revisions. Please attach and submit this document with the **Examiner's Report on Thesis**.

17.12 Appendix 1.12: Thesis Licence Form



Thesis/Dissertation Title:

Student Name: _____

In order to facilitate research by others at Lakehead University (the "University") and elsewhere, and in partial fulfillment of the University's degree requirements, I hereby grant a worldwide non-exclusive royalty-free licence to the University, for the term of copyright protection of the Thesis/Dissertation, for the following purposes ("Purposes"): to make copies of, convert, archive and distribute the Thesis/Dissertation, including descriptive information, metadata and the abstract, in any format and in any medium. No Purpose shall have a commercial component except when, at the sole discretion of the University, it is deemed necessary to ensure that that Purpose can be realized. The University may sub-license these rights to third parties such as ProQuest LLC. For greater certainty, and without limiting the generality of the foregoing, the University and/or its sub-licensees may publish the Thesis/Dissertation electronically on the Internet, distribute the Thesis/Dissertation through library loan, interlibrary loan and public loan and may digitize, photocopy, microfiche or otherwise reproduce the Thesis/Dissertation, but no sub-licensee may commercialize any Purpose without express authorization by the University.

I confirm that the Thesis/Dissertation is my original work, does not infringe the rights of others and that I have the right and authority to make the grant conferred by this non-exclusive licence. If third party copyrighted material not in the public domain is included in the Thesis/Dissertation, I assert that either:

- a) such use complies with the "fair dealing": provisions of the *Copyright Act* (Canada), or,
- b) I have obtained written permission from the copyright holder(s) to include that material in the Thesis/Dissertation.

I promise to inform any person to whom I may hereafter assign or license the copyright in the Thesis/Dissertation of the rights granted by me to the University in this licence.

For greater certainty, this licence shall in no way preclude me from granting non-exclusive licences to other third parties, or assigning any or all of my copyright in the Thesis/Dissertation to a third party (provided such assignment is subject to this licence), or waiving my moral rights in the Thesis/Dissertation.

Signature of Student

Date

Signature of Witness

Date

17.13 Appendix 1.13: Graduate Studies Exit Survey



GRADUATE STUDIES - EXIT SURVEY

We hope your experience at Lakehead University has been positive and rewarding. This survey is directed to those students who have completed all requirements for a graduate degree or who are withdrawing from a graduate program without completing a graduate degree. Your answers on this survey can help ensure the quality of the graduate experience at Lakehead University.

Do not put your name on this survey. Please submit the completed survey to the Faculty of Graduate Studies, Lakehead University, 955 Oliver Road, Thunder Bay, Ontario, P7B 5E1.

Student Information

Graduate Program: _____ Collaborative Program: _____

Year of Enrollment: _____ Year of Graduation: _____ Year of Withdrawal: _____

Age: Under 25 25-34 35-44 45-54 55 of older

Gender: Female Male

Citizenship Status at Program Entry: Canadian Landed Immigrant Visa

Graduate Program Environment

Using the scale below, please indicate the degree to which you agree or disagree with each of the statements about your graduate program. Circle the number which best represents your opinion.

	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
I was satisfied with the quality of instruction in most of my courses.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My program provided an intellectually stimulating environment.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt socially isolated from other graduate students in my program.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
International and domestic students were treated equally.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There was an active communication network among the graduate students in my program.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There were not enough opportunities to meet the faculty in my program.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The general atmosphere in my program was supportive.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

If you are **WITHDRAWING** from a graduate program, indicate the reasons. Please check all that apply.

- | | |
|--|---|
| <input type="checkbox"/> Loss of motivation | <input type="checkbox"/> Academic problems |
| <input type="checkbox"/> Financial problems | <input type="checkbox"/> Health problems |
| <input type="checkbox"/> Other personal problems | <input type="checkbox"/> Other opportunities for employment |
| <input type="checkbox"/> Other opportunities for education | <input type="checkbox"/> Other reasons: |

Supervision

Using the scale below, please indicate the degree to which you agree or disagree with each of the statements about your supervisor. Circle the number which best represents your opinion.

My supervisor . . .	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
. . . encouraged me to publish my work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
. . . encouraged me to present my work at scholarly conferences.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
. . . has assisted me in finding suitable employment.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
. . . was available for informal consultations on academic matters.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
. . . discussed my research with me on a regular basis.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
. . . gave me constructive criticism on my work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
. . . directed my research in a fair and consistent manner.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

... gave me useful advice on surviving in graduate school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... was knowledgeable about general program requirements.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Additional Comments:



17.14 Appendix 1.14: Thesis Ready for Final Submission Form



Thesis Ready for Final Submission

Student Name: _____ Student Number: _____

Degree Sought: _____

Academic Unit: _____

Title of Thesis:

The above named student's thesis has been reviewed and is now ready for submission.

Supervisor Name

Date

Supervisor Signature

Date

Graduate Coordinator Name

Date

Graduate Coordinator Signature

Date

Lakehead

UNIVERSITY

FACULTY OF GRADUATE STUDIES

Recommendation of Thesis/Dissertation

Student Name: _____ Student Number: _____

Degree Sought: _____

Academic Unit: _____

Title of Thesis or Dissertation: _____

The above named student has successfully completed all of the thesis/dissertation requirements for the degree sought. We recommend approval of this degree to the Faculty of Graduate Studies Council.

Supervisor

Date

Graduate Coordinator/ Chair

Date

18 Appendix 2: Thesis Cover Page Template

Title of Thesis

A thesis presented to

The Faculty of Graduate Studies

of

Lakehead University

by

Student Name

In partial fulfillment of requirements

for the degree of

Master of Science in Biology

Submission Date

© Student Name