



TO: Mike Mahon
President and Vice Chancellor

DATE: October 2, 2015

FROM: Ian MacLachlan
Chair, Academic Quality Assurance Committee

RE: Master of Science, Academic Quality Assurance Review

In accordance with the U of L *Academic Quality Assurance Policy and Process*, the Academic Quality Assurance Committee approved the review of the Master of Science program at its September 17, 2015 meeting.

The Program Review Committee for this review comprised Stephen Wismath (Program Review Coordinator), Jennifer Copeland, Elizabeth Schultz, and Stacey Wetmore. The review produced four documents:¹

1. *Master of Science Program Review, Self-Study Report 2015* (received March 10, 2015) – Self Study Report, developed by the M.Sc. Self Study Committee.
2. *M.Sc. Program Quality Assurance Review, External Review Report* (received May 19, 2015) – External Review Report by Robert Lipson (University of Victoria) and David Sherry (Western University) based on their site visit of April 22-23, 2015.
3. *M.Sc. Program Review: Response to External Review* (received May 27, 2015) – response of the Self Study Committee to the external review.
4. *Master of Science Program Review 2014/2015: Dean's Response* (received September 10, 2015) – response to the review, written by Robert Wood (Dean of the School of Graduate Studies) and Craig Cooper (Dean of the Faculty of Arts and Science).

¹ All documents are available upon request.

Self Study

The self study noted that the M.Sc. program is successful, having almost doubled its enrolment in the past ten years, and that the program is a critical part of the U of L's strategic priority to excel as a comprehensive university. In its introduction, the report summarized the strengths, weaknesses, opportunities, and threats for the program:

Strengths:	<ul style="list-style-type: none">• Resources from two faculties and one school contribute to the program.• The program is mentored, research-based, and thesis-based.• Curricula are personalized and flexible.• There are development opportunities for students, such as the Thrive program, Three-Minute Thesis competition, and Teaching Centre workshops.• The following student-related indicators are all strong: academic performance/student success; satisfaction; completion; and career placement.• Program faculty are of high quality and are committed to the M.Sc.• The program has excellent facilities, including lab equipment, computers, and Library support.
Weaknesses:	<ul style="list-style-type: none">• There is a lack of clarity regarding responsibility and resource allocation related to faculty workload, space, budget, communication, and student advising and monitoring.• The reputation of the M.Sc. is limited because it is a young program.• There is a lack of discipline-specific courses.• Timetabling of graduate courses is a challenge.• Recruitment of international students and of domestic students from outside Lethbridge is weak.• There is no agreement on how to assess student quality for admission.• There is no system to monitor student progress.
Opportunities:	<ul style="list-style-type: none">• A restructuring of program governance could allow more clarity in resource allocation, better communication between groups, and departmental involvement and control.• Related to programming, there is the potential for: more co-op opportunities; new programs; interdisciplinary courses and programs; and improved marketing and recruitment.• More online services for the monitoring of student progress.• Enhanced graduate student advising, at the departmental level.• More Graduate Students Association activities to enhance graduate student experience.• The credit model for faculty supervision of graduate students could be improved.• The Destination Project will facilitate transdisciplinary research, shared equipment and facilities, and centralized resources for student training.
Threats:	<ul style="list-style-type: none">• Increased competition for graduate students.• Increased faculty workload due to budget constraints.• Reduced government funding.• The balance between graduate and undergraduate resources.• Reduced funding for research.

The body of the report noted the following additional strengths of the program:

- According to faculty, the top two strengths of the program are the strong research component and the effective mentorship of M.Sc. students.
- High-quality research being done by the faculty contributes immensely to the training of students.
- Survey data shows that students are satisfied with the guidance and support provided by faculty.
- The co-op option is rapidly expanding in popularity.
- Seminar courses provide instruction in writing, communication, and experimental methods, allowing interaction between students in different fields.
- The NMR Facility Manager oversees magnetic resonance spectrometer maintenance, use, and training for several research groups.

Other program weaknesses and challenges noted in the report body are:

- There is a split in responsibility and resourcing for the program between the Deans of the School of Graduate Studies, the Faculty of Arts and Science, and the Faculty of Health Sciences.
- There is a lack of communication between the School of Graduate Studies and the Department Graduate Education Committees.
- Some faculty lack confidence in the M.Sc. Program Committee, in part because it does not have representation from all M.Sc.-related departments.
- It is unclear if the School of Graduate Studies, the faculties, or the departments have a mandate to recruit and market for the program.
- Faculty members perceive that the curriculum is a significant weakness.
- Surveys reveal that students think the course offerings are adequate, but not ideal.
- Application rates have remained flat over the past five years.
- For faculty members, finding a balance between graduate and undergraduate duties has been difficult.
- Many faculty feel that their graduate teaching and supervision workloads are not appropriately recognized.
- There are no formal methods for evaluating a faculty member's performance as a graduate supervisor.
- There are less technical support staff for research equipment than larger institutions, which is a challenge for student training on complex equipment.
- A rise in the number of M.Sc. students will increase workloads for administrative support personnel.
- There is a lack of communal space for graduate students which can lead to a sense of isolation, especially in smaller departments and for international students.
- The new graduate student funding model is controversial.

The following opportunities were mentioned in the report body:

- Encourage students to participate in SGS career development initiatives (like THRIVE) and Teaching Centre skills programs.
- There is the potential to offer courses in fundamental skills like statistics, experimental design, and career advancement.
- The initiative to increase the number of Research Chairs to 50 could increase the capacity for graduate student training.

The Self Study Report concluded with several questions for the External Reviewers to consider:

- How can the reputation of the program be improved?
- How can the curriculum be improved?
- How can the U of L fairly assess the quality of applicants to the program?
- How can student advising be improved?
- How can student progress be effectively monitored?
- How should faculty be compensated for M.Sc. supervision?
- Is the student funding model appropriate?
- How can M.Sc. program governance be improved?

External Review

The External Review Report raised the following issues with the M.Sc. program:

- The faculty feel that the U of L commitment to grow graduate education has not been backed up by financial resources.
- In some units there are tensions related to admission, progression requirements, and graduate student funding.
- There are broken or out of date web links related to the M.Sc. program, online PDF forms that cannot be saved, and a lack of program-level graduate student handbooks.
- The role of the M.Sc. Program Chair as sole arbiter of student admission and progression is unusual which could lead to decisions that are poorly understood and communicated.
- The GPAs calculated by the Admissions office often differ from GPAs determined at the unit level. This affects graduate student funding, which is competitive and merit-based.
- GPAs of international students are not always a good indicator of their level of preparation or probability of success in the M.Sc. program.
- Graduate student funding from the School of Graduate Studies partly depends on more subjective criteria like research productivity.
- The M.Sc. Program Committee evaluates admission files, assigns funding, and tracks student progression, yet does not have representation from all units.
- The M.Sc. Program Committee does not have a mandate to communicate processes and rationales to the unit level.

- The SGS does not communicate student admission or funding decisions to faculty members in a timely fashion.
- Some students are admitted without any financial support.
- The overlap in responsibilities between the M.Sc. Program Committee and the Departmental Graduate Education Committees (DGECs) is problematic. It is especially problematic in relation to admissions, post-admission processes, funding allocation, and communication.
- Some supervisors are not providing Research Assistantship support.
- The criteria for student support provided by the School of Graduate Studies (like the Deans' Scholarships, or Teaching Assistantships) are not well understood.
- The distribution of Graduate Assistantship support is not well aligned to the needs of the undergraduate programs.
- It can be difficult for students to find graduate courses to satisfy course requirements.

The body of the report contained some recommendations for improvement:

- Ensure that policies and processes related to the graduate program are easily available and well communicated, including the underlying rationale.
- Coordinate resource allocations and other graduate student related activities between the School of Graduate Studies, the Research Services office, and the academic departments.
- Consider requiring that every graduate supervisor with funding provide Research Assistantship support to the students they are supervising.
- For active research programs that have a temporary lack of research funding, consider bridge funding administered by the Research Services office and support to help researchers find alternative funding.
- If a student elects not to teach as part of their program, do not give them Graduate Assistantship funding, even if they are eligible to receive the funding.
- Devolve to the DGECs greater responsibility for admission decisions and responsibility for the Graduate Assistantship budget.
- Ensure the DGECs are responsible for tracking student progress (with milestones for program progress and completion set by the School of Graduate Studies) and for reporting on student progress to the School of Graduate Studies.
- Ensure each DGEC that does not have a graduate handbook develop a document that describes calendar dates for: convening a supervisory committee; meetings of the supervisory committee; submitting a thesis proposal; submitting a thesis draft; and other milestones.
- Make a focused effort to boost student recruitment. One option is to target undergraduate students at other Alberta institutions.
- Ensure the funding package offered on admission is clear. It should include: amount; time period; minimum grades and progression requirements; and changes that will result from external funding or scholarships.
- Ensure graduate training is recognized in faculty workloads.

The External Review Report concluded with three critical recommendations:

1. Reform the governance structure of the program, devolving greater responsibility for admissions, funding, and tracking of student progress to the DGECs.
2. Offer a guaranteed minimum level of support to all M.Sc. students and clearly convey to students and supervisors, at the time of admission, the nature of the funding package.
3. Establish a task force to develop clear methods of communication between programs, departments, faculties, and the School of Graduate Studies, and to update policy and procedures, handbooks, web sites and other sources of information on the program. The task force membership should be: Department Chairs; Dean of the Faculty of Arts and Science; Dean of the Faculty of Health Sciences; Dean of the School of Graduate Studies; the School of Graduate Studies M.Sc. Program Chair; and M.Sc. graduate student representatives.

Program Response

The Self Study Committee commented on the three main recommendations from the External Review Report:

1. Reform the governance structure of the program, devolving greater responsibility for admissions, funding, and tracking of student progress to the DGECs.	That the DGECs will take on more responsibility for admissions and funding of graduate students is inevitable. But this change will be very challenging. It will have workload implications for faculty members and may create friction within academic departments. The DGECs must make decisions fairly and consistently, and with transparency and discretion.
2. Offer a guaranteed minimum level of support to all MSc students and clearly convey to students and supervisors, at the time of admission, the nature of the funding package.	This would address many concerns with the current funding model. Also required is rigorous enforcement of Research Assistantships from funded supervisors. If an equitable funding formula can be devised, then decisions on Graduate Teaching Assistantships and some scholarships can be made at the department level. Establishing fair funding allocation for each department will be a critical challenge.
3. Establish a task force to develop clear methods of communication between programs, departments, faculties, and the School of Graduate Studies, and to update policy and procedures, handbooks, web sites and other sources of information on the program. The task force membership should be: Department Chairs; Dean of the Faculty of Arts and Science; Dean of the Faculty of Health Sciences; Dean of the School of Graduate Studies; the School of Graduate Studies MSc Program Chair; and MSc graduate student representatives.	This task force must act immediately to establish M.Sc. procedures and guidelines. Membership must be diverse, and there must be significant input from all faculty.

Dean's Response

The Dean's Response addressed the three main recommendations from the External Review Report:

1. Reform the governance structure of the program, devolving greater responsibility for admissions, funding, and tracking of student progress to the DGECs.

There is a need for greater departmental oversight of admissions, funding, and student progress tracking. However, there are barriers to achieving this devolution, such as the lack of consistent departmental capacity. Devolution must be carefully planned, gradually implemented, and implemented at different rates across different disciplines and departments. It will also require a reassessment of the roles and responsibilities of staff in the School of Graduate Studies.

The Dean's office in the Faculty of Arts and Science needs a Program Specialist to help administer graduate studies in the Faculty.

A Program Committee does not have to be involved in the vetting and approval of department recommendations. Program Committee duties should be to: review unusual applications and those that do not conform to admission standards; act as an appeal committee for academic appeals; and advise Graduate Council on program requirements, policies, and procedures.

All graduate student information is being migrated to the BANNER system. This will allow the faster production of reports that are more useful in the administration of graduate education. This migration of student information will be completed in the Fall 2015 semester.

2. Offer a guaranteed minimum level of support to all MSc students and clearly convey to students and supervisors, at the time of admission, the nature of the funding package.

The offers of admission clearly articulate the level of financial support the student is receiving from the U of L. Some of the offers of admission have no offer of guaranteed financial support.

The U of L cannot sustain its use of funds from the operating budget and endowments to provide guaranteed financial support for the current M.Sc. enrolment. This means that the university must consider requiring that supervisors contribute a research stipend or research assistantship for all students. The Deans will begin discussions related to providing guaranteed financial support for all incoming M.Sc. students.

Ideally, student funding allocations should be made to departments, based on the need for graduate assistants and on key performance indicators like completion rate, time to completion, enrolment, and student success in competition for external awards. One important issue is that the departments may not have the human resource capacity to manage and administer student funding.

Given the complexities involved, the transition to departmental student funding allocation should be done with selected departments on a pilot basis.

Current levels of funding for graduate education and student financial support have to be reviewed. The growth of graduate student numbers and of new graduate programs cannot be sustained without additional ongoing funds.

3. Establish a task force to develop clear methods of communication between programs, departments, faculties, and the School of Graduate Studies, and to update policy and procedures, handbooks, web sites and other sources of information on the program. The task force membership should be: Department Chairs; Dean of the Faculty of Arts and Science; Dean of the Faculty of Health Sciences; Dean of the School of Graduate Studies; the School of Graduate Studies MSc Program Chair; and MSc graduate student representatives.

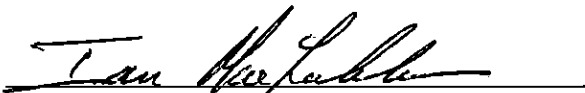
There is a need for administrative units to communicate effectively with all stakeholders.

Current methods of communication include: graduate council; Arts and Science Council; School of Graduate Studies website; School of Graduate Studies events calendar; and School of Graduate Studies newsletter.

The Deans will: organize a retreat, which will involve administrators, faculty, and Graduate Students Association representatives, to discuss communication and other review recommendations; and resurrect the Faculty of Arts and Science Graduate Education Working group, to help advise and implement changes. MSc-participating Arts and Science departments will be asked to invite the Dean of SGS to attend department meetings on an annual basis to solicit feedback and clarify any misunderstandings about funding.

The Academic Quality Assurance Committee is satisfied that the Master of Science program academic quality assurance review has followed the U of L's academic quality assurance process appropriately, and acknowledges the successful completion of the review.

Sincerely,



Ian MacLachlan

Chair, Academic Quality Assurance Committee

Cc: Andrew Hakin, Provost and Vice President (Academic)