University of Lethbridge

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TO: Digvir Jayas
President and Vice Chancellor

DATE: August 25, 2025

FROM: Lynn Kennedy
Chair, Academic Quality Assurance Committee

RE: Mathematics Program 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 Mathematics Program at its June 17, 2025, meeting.

The Self Study Committee for this review was comprised of: Andrew Fiori (Program Review Coordinator), Jana Archibald, Nathan Ng.

The review produced 4 documents:

1. Self Study Report. Written by the Self Study Committee. Received September 12, 2024.
2. External Review Report. Written by Dr. Allen Herman (University of Regina) and Dr. Jennifer Hyndman (University of North British Columbia) based on a site visit January 31 to 31, 2025. Received March 3, 2025.
3. Program Response. Written by the Self Study Committee. Received April 4, 2025.
4. Dean's Response. Written by Matt Letts, Dean of the Faculty of Arts and Science. Received May 29, 2025.

Self Study Report

The Self Study Report asked for External Reviewer feedback on several areas:

- Would it be desirable to create additional streams for any of our introductory courses (Linear Algebra, Calculus, Statistics, or Mathematical Concepts), either optional or mandatory, targeted at Mathematics and/or Statistics students?
- What, if any, changes should be made to our current tutorial structure in order to make the best use of resources and best serve our students?
- Should we modify, or remove, the requirements for specific courses in either the Mathematics or the Mathematics Education program? If yes, which requirements should be modified?
- What options should be explored to improve the preparation for proof writing for our students?
- What mechanism or mechanisms would be most appropriate to ensure students obtain sufficient familiarity with the use of computational tools?
- What, if any, specific courses would be best to add to our course offerings as resources allow?
- What, if any, options should be pursued in standardizing the delivery of our introductory courses?
- What actions can we pursue to better manage workload issues, particularly those related to doing additional work which supports teaching, for example graduate supervision, course coordination, etc.?
- Would creating an undergraduate concentration in Data Science within the department be a practical option to expand our applied statistics program or are there other options that would be appropriate to grow the Applied Statistics program?
- Should the Mathematics and Statistics portion of the department be split from the Computer Science portion of the department in order to streamline operations as recommended by past reviews?
- Should we pursue the creation of a specific joint combined degree for Mathematics/Computer Science?

The report noted several strengths of the Mathematics program:

- Good set of core classes.
- All faculty members are very dedicated to their teaching.
- Opportunities for summer research.
- Strong connection to PIMS.

The report noted weaknesses and challenges experienced by the program:

- Lack of collaborative departmental culture.
- Lack of applied or computational courses.
- Growing class sizes.
- Limited outreach, including to Indigenous groups.
- Lack of connection to industry.

- Lack of connection to other science departments.
- Historically isolated department, e.g. not in science building.

The report included the following recommendations:

- The university has begun to offer a graduate certificate in Data Science. Though this program is not actually housed in our department, we have recently become more involved in it. Although creating an undergraduate concentration in Data Science would likely require additional hiring, and so may be impractical, it is worth asking.
- Priority hiring areas would be:
    - an additional instructor with a focus on Mathematics tutorials.
    - a tenure-track faculty in an area not currently represented (not pure math). This is true in both Mathematics and Statistics.
    - Calgary campus should transition to the use of continuing instructors to offer their service courses. Some efficiencies could be found with online course offerings being accessible to both campuses.

External Review Report

The External Review Report contained eighteen (18) recommendations for improving the Mathematics program:

- Develop Learning Objective documents for each course. Reinstate a simplified version of the Course Coverage Reports.
- Develop re-usable content resources for multi-section course offerings. For multi-section courses, keep the weight of the grade assigned to the Lab component of the course consistent among all sections of the course in the same semester.
- Revise the core content of MATH 2000 (Introduction to Proofs) in a way that supports content in all 3000+-level courses for which it is a prerequisite.
- If the Department decides to create an Applied/Computational Mathematics course, we recommend this to be a 3000-level course focusing on Optimization, Linear Programming, and other applications of Linear Algebra.
- The Department should create a 3000-level *History of Modern Mathematics* course, that can be added to the list of optional 3000-level course requirements for the B.Sc./B.Ed. degree.
- Introduce Statistical simulations (current 3000-level Topics course) as a regular named Statistics course.
- Create a joint Mathematics and Computer Science degree.
- Remove one course from the BSc Mathematics degree requirements at the 3000 level.
- Continue to seek opportunities to improve undergraduate opportunities in Statistics; either through creation of more courses, increased opportunities to use Data Science courses in Applied Statistics degrees, or the eventual creation of a B.Sc. in Statistics.
- Continue the highly effective connection with PIMS.

- Develop guidelines for students and instructors on the use of ChatGPT and other online homework help sites.
- Develop Faculty of Arts and Science managed Academic Misconduct procedures.
- Develop communication channels between Recruitment and the Department to create supports for international students.
- Allow some double counting of courses between mathematics and science degrees.
- Regularize some 4th year course offerings and work with the Dean to ensure that 4th year offerings are not cancelled.
- Re-introduce regular social events/extracurricular activities involving students and faculty.
- Have an event each semester that includes alumni.
- The Department of Mathematics & Computer Science should be allowed to separate into two: (1) the Department of Computer Science, and (2) the Department of Mathematics and Statistics if they wish to do so.

The following, taken from the report, note the challenges discussed:

- We were provided a year-to-year retention rates in the Self-study. We were not concerned about the retention rate from Year 1 to Year 2, but Year 2 and Year 3 were surprisingly low. Although we feel there are issues of insufficient information surrounding this data, enough concerns were raised around retention, especially regarding the transition from Year 2 to Year 3, that we decided to focus some recommendations on this issue.
- We were told that there was limited support for students with disabilities at the university. Given the dramatic increase in struggling students post-pandemic, this is a concern that needs to be addressed by the institution.
- The programs are being managed with a near-minimal number of Faculty and Instructors; in the case of Statistics the number is less-than-minimal. This is due mainly to attrition – not all Faculty that have left or retired in recent years have been replaced. High workload was identified as a weakness in the SWOT analysis by the Self Study group, this repeatedly came up in the Site Visit as well.

The following, taken from the report, note the opportunities discussed:

- At the Department level, keeping the distribution of tutorial grade to lecture grade consistent should be manageable, from what we understand tutorial components are currently being weighted between 10% and 20% of the course grade, making these consistent over all sections of the same course should be a reachable step toward more consistency in these classes.
- We understand the no double-counting policy is a long-standing tradition at Lethbridge, but when you combine it with the “at most 12 1000-level courses” requirement of the Bachelor’s degree, we feel that it makes some desirable double-major combinations next to impossible to obtain. So, we recommend the Faculty consider the benefit to student experience if it were slightly relaxed. For examples of “slightly relaxed double-counting policies”, we are aware of some other universities that allow the double-counting of at most 2 courses in a double major or major – minor combination, or the double counting of specific first-year (i.e. 1000-level) requirements in a double major or major-minor combination. Given the “at most 12 1000-level courses” requirement, we see a natural argument in favor of the latter option here. The obvious

outcome is that more of your talented undergraduates will be able to complete double-majors or have a minor with their degree. We see this as a benefit to all disciplines, not just Math and Stats.

- We do feel that students, Post-doctoral fellows, and Faculty would all benefit from having a few more Department social activities. Introducing social activities has to be done sensibly and center around some common interest. Participation needs to be optional. Organizing should be voluntary, and it can even be done by a student or PDF if they are provided with a small budget to cover snacks/refreshments.
- Inclusion of alumni in social events or panel presentations has the potential for supporting retention and increasing recruitment. This builds an even stronger sense of community for current students and may help with recruitment of local students for graduate degrees. Alumni Relations should be able to contact alumni for the Department and will likely have information on the types of jobs alumni actually have.

Program Response

In their Program Response, the Self Study Committee addressed the recommendations from the External Review Report:

1. Develop Learning Objective documents for each course. Reinstate a simplified version of the Course Coverage Reports.	We agree with the value of developing a learning objectives document for each course and reinstating a simplified version of the Course Coverage Report. In line with the detailed recommendations, workload and resource issues suggest developing learning objectives should be a gradual process and that the Course Coverage Reports should be simplified. For context on the second recommendation: Course coverage reports were reports written by instructors at the conclusion of a course to summarize and record outcomes, challenges faced, and reflections on potential future changes to the course. Whereas a course outline may describe what is planned, the course coverage reports reflect what occurred. These are valuable for PAR and STP submission, when contemplating curriculum changes, or to help future instructors. They have fallen out of use for a variety of reasons including workload.
2. Develop re-usable content resources for multi-section course offerings. For multi-section courses, keep the weight of the grade assigned to the Lab component of the course consistent among all sections of the course in the same semester.	The department agrees with the recommendation with respect to re-usable content. We note that this has already begun for some courses. We do have concerns about the short-term workload implications for those tasked with developing these materials while already working under a full teaching load. With regard to the second recommendation, we would like to clarify that the department has been trying to avoid the use of coordinated multi-section courses run by different instructors within the same semester. Likely the concerns the external reviewers' comment on relate to differences between different semesters. In this regard we have also recently standardized a non-specific expectation for some form of graded components in labs and tutorials, completely standardizing the grading formula may be problematic.
3. Revise the core content of MATH 2000 (Introduction to Proofs) in a way that supports content in all 3000+-level courses for which it is a prerequisite.	The department accepts the recommendation to review the content of MATH 2000. We note that the report provides a more detailed explanation of the type of revision that they have in mind. Particularly they are recommending clarify the "Examples of Axiomatic Mathematical

	Theories" in the calendar description by instead incorporating some specific examples from our 3000+ level courses. Several of the ideas in the report could form the starting point for a review but we do not view them as necessarily being the end point for the review.
4. If the Department decides to create an Applied/Computational Mathematics course, we recommend this to be a 3000-level course focusing on Optimization, Linear Programming, and other applications of Linear Algebra.	We accept the recommendation subject to an assessment on the feasibility. To properly assess feasibility, it would be useful to develop a course offering plan to ensure we are regularly able to run any new course (see also response to Recommendations #5, #8 and #14). Appropriately acknowledging the workload associated with new course development and supporting it through staffing plans would be desirable.
5. The Department should create a 3000-level History of Modern Mathematics course, that can be added to the list of optional 3000-level course requirements for the B.Sc./B.Ed. degree.	We accept the recommendation and would like to do this if it is feasible. We note that a History of Mathematics course until recently existed in the School of Liberal Education (we believe LBED 3100 was removed from the Calendar in 2024) though likely it had not been offered for some time. Resurrecting this course would be an alternative to the creation of a completely new course. Though this would not necessarily be a new course a first offering would be a significant new prep and appropriately acknowledging this and supporting it through staffing plans would be desirable. The introduction of any new course would benefit from the development of a course offering plan to ensure we are regularly able to run the course (see also response to Recommendations #4, #8 and #15).
6. Introduce Statistical simulations (current 3000-level Topics course) as a regular named Statistics course.	We accept the recommendation to regularize statistics courses. This specific course has been very successful, and this recommendation is in line with our intent in offering the topics course. That said, we would recommend a plan to consult with the instructor for the current topics course at the end of the current semester before committing to the specific design for a new regularized course as the experience with delivering the course might inform decisions around the design of a regularized version. We also note Recommendation #9 highlights the need for a regularized course at the 4000 level. Having the flexibility to consider a reworked version of this course for the purpose would also be desirable.
7. Create a joint Mathematics and Computer Science degree.	We accept the recommendation. We do note that action on Recommendation #14 may eliminate the need for a specific joint program. The main advantage of a specific joint program in the calendar would be simplifying the requirements for double degrees. The external report also mentions other joint degrees, for instance Physics which would be covered by Recommendation #14.
8. Remove one course from the BSc Mathematics degree requirements at the 3000 level.	Though we accept the rationale we do not agree with the specific recommendation. Within the context of science degree programs at the University of Lethbridge 19 courses is not overly high. The rationale for the recommendation is related to workload and increasing flexibility; however, it is not apparent that reducing the number of courses required in the B.Sc. program would necessarily allow us to offer fewer 3000 level courses on an annual basis or necessarily allow us more flexibility in what we offer. We believe it would be much more useful to develop a multi-year course offering plan under several scenarios for program changes to

	better identify what types of changes would offer maximal effect (see also response to Recommendation #4, #5, and #15.) As an example of other program changes that could be considered the report contemplated making a recommendation around modifying the requirements for the B.Sc./B.Ed. degree by relaxing the analysis requirement (though did not highlight this as a specific recommendation to us). One could imagine this also providing us greater flexibility in our course offering schedule (though it also may not).
9. Continue to seek opportunities to improve undergraduate opportunities in Statistics; either through creation of more courses, increased opportunities to use Data Science courses in Applied Statistics degrees, or the eventual creation of a B.Sc. in Statistics.	We accept the recommendation. As the report notes significantly expanding the course offerings in Statistics specifically would require additional hiring (beyond the 2 current faculty). For some context on the recommendation for several years prior to the AQA review we briefly had only one faculty in Statistics due to a time delay between a retirement and replacement. This is a problem we hope does not recur. With a growing number of faculty in different departments working in data science and machine learning finding mechanisms to implement undergraduate programming which leverages these faculty working in highly marketable areas is a good idea. This could eventually include considering options for minors or a concentration in Applied Statistics.
10. Continue the highly effective connection with PIMS.	We strongly support the recommendation. Membership in PIMS provides a mechanism to highly leverage funding which in turn supports our research, teaching and outreach activities.
11. Develop guidelines for students and instructors on the use of ChatGPT and other online homework help sites.	We support the recommendation. We do note that the draft of the new student code of conduct includes references to several university resources including a Moodle course which we understand was created with input from department members. We are aware of several other initiatives across campus attempting to develop responses to the use of AI in academic settings.
12. Develop Faculty of Arts and Science managed Academic Misconduct procedures.	We accept the recommendation to improve procedures. We do note that some of the detailed recommendations are not what the new student code of conduct implements. Still, it would remain useful to adjust processes within Arts and Science to smooth the implementation of the flow charts in the new student code of conduct. Additionally, we think a plan to communicate important information about changes in the policy to faculty should be developed.
13. Develop communication channels between Recruitment and the Department to create supports for international students.	We support the recommendation. We greatly appreciate the work the international office already does and hope they are properly resourced to further support students. Faculty would welcome any help to appropriately support students in their transition.
14. Allow some double counting of courses between mathematics and science degrees.	We strongly support this recommendation. We note that the University of Alberta faculty of science allows double counting any number of courses at the 1000 and 2000 level. Similarly, the Dhillon School of Business allows double counting even more liberally. As a liberal education focused institution student flexibility should be something we excel at. The faculty should be more careful about adjustments for minors, though could consider some double counting for these as well.

	We also note that the new Institutional Strategic Plan emphasizes interdisciplinarity which would be supported by simplifying pathways to double degrees.
15. Regularize some 4th year course offerings and work with the Dean to ensure that 4th year offerings are not cancelled.	We note that this recommendation comes from concern specifically about the applied statistics program. Regularizing a cross-listed 4000/5000 course offering in Statistics to be offered every two years is in line with our aim of implementing an M.Sc. (Statistics) program and our plan for continuing to offer the B.Sc. (Applied Statistics) program. Indeed, a commitment to offer such a course every two years is essential to ensure students can graduate from the B.Sc. (Applied Statistics) program on time. Various options for courses to fill this role are possible, see for example response to Recommendation #6. For further context we note that a recent failure to offer a 4000-level course in statistics at least every two years was caused by a gap between a retirement and the replacement hire. This is a problem which would ideally not be allowed to recur. The department remains concerned around the risk of 4000-level course cancelation in both Mathematics and Statistics. We would welcome the development of a multi-year course offering plan which clarifies the planned number of upper year course offerings which the dean's office would commit to ensuring run.
16. Re-introduce regular social events/extracurricular activities involving students and faculty.	We accept the recommendation. We are concerned about the impact on workload and work life balance which might be implied by attempting to force someone to take on the duties of running this.
17. Have an event each semester that includes alumni.	We accept the recommendation. We are concerned about the workload impact which might be implied by forcing someone to take on the duties of running this. At the same time, we are hoping to find new leadership for the departmental colloquium and PIMS distinguished lecture series. The type of event proposed would fit well with such a portfolio. Clarification of departmental budgets, or a commitment to fund this type of activity, may be necessary to allow it to run.
18. The Department of Mathematics & Computer Science should be allowed to separate into two: (1) the Department of Computer Science, and (2) the Department of Mathematics and Statistics if they wish to do so.	We accept the recommendation. We do note that the department has restructured all internal committees and the co-chair roles so that the department largely function as though there were two departments. This could be seen to make a split less necessary, at the same time it could be seen to make it simpler to implement if that is ultimately something which is desired.

Dean's Response

The Dean of the Faculty of Arts and Science responded to the recommendations from the External Review Report:

1. Develop Learning Objective documents for each course. Reinstate a simplified version of the Course Coverage Reports.	I agree that there would be value in developing Learning Objective documents for Mathematics and Statistics courses and am pleased to see that the Mathematics AQA Committee agrees with this recommendation. As for the course coverage reports, most faculty members reflect thoughtfully on learning outcomes of individual courses, address these challenges in future offerings, and report these efforts in evaluation years. If the Department chooses to encourage more open reports after each offering, this could help other instructors with teaching performance and would assist with effective curriculum development and program planning. If the Department elects to take on this project, I might suggest that Course "Coverage" is not an ideal term to describe these reports. As the Program Response suggests, these documents, formerly produced in the Department, achieve much more than reporting on coverage, which is only one element of course outcomes.
2. Develop re-usable content resources for multi-section course offerings. For multi-section courses, keep the weight of the grade assigned to the Lab component of the course consistent among all sections of the course in the same semester.	I note that the Mathematics and Statistics AQA team recommends that faculty members support each other by developing reusable content resources for multi-section course offerings, as recommended by the external reviewers. This can provide medium to long-term benefits in terms of student experience, consistency, workload and, arguably, standardized comparability of grades among students, while requiring upfront effort and collaboration. I am pleased by their openness to these efforts. It is important to note, however, that there are pros and cons to standardization and that Recommendation 2 raises some concern around the freedom we support to tailor pedagogical approaches to individual preferences and strengths in relation to how individual faculty members believe concepts should be taught and assessed. There are often differences in views on the importance of recent developments in specific disciplines or in how to apply best practices reported in the scholarship of teaching and learning within these disciplines. We would value coordination among faculty in the way outlined in this recommendation. However, as long as the course content is successfully delivered in alignment with the course description and with positive student learning outcomes, preparing them effectively for later study, faculty members are free to optimize pedagogical approaches and student learning outcomes with the emphases, approaches and graded materials they deem appropriate.
3. Revise the core content of MATH 2000 (Introduction to Proofs) in a way that supports content in all 3000+-level courses for which it is a prerequisite.	The Dean's Office supports the external reviewers' recommendation that the core content of Introduction to Proofs be reviewed by our mathematicians, as outlined in the Program Response. We thank the external reviewers for going a step beyond a standard report and reviewing individual course content in detail.
4. If the Department decides to create an Applied/Computational Mathematics course, we recommend this to be a 3000-level course focusing on Optimization, Linear Programming, and other applications of Linear Algebra.	We are willing to consider such a recommendation but concur with the Program Response that the addition of such a course would be subject to sufficient staffing and available resources (or program streamlining) to offer the course with adequate regularity.
5. The Department should create a 3000-level History of Modern Mathematics course, that can be added to the list of optional 3000-level course requirements for the B.Sc./B.Ed. degree.	The Dean's Office would be willing to work with the Department of Mathematics & Computer Science to determine the feasibility of adding such a course within available resources.

6. Introduce Statistical simulations (current 3000-level Topics course) as a regular named Statistics course.	The Dean's Office agrees that we should regularize this course as soon as we confirm the success of our high-priority request to replace our long-time departing statistics professor on July 1, 2026.
7. Create a joint Mathematics and Computer Science degree.	The Dean's Office looks forward to exploring this recommendation with the Department of Mathematics & Computer Science.
8. Remove one course from the BSc Mathematics degree requirements at the 3000 level.	We have historically had difficulty at times securing sufficient enrolment for regular offerings in senior level courses, and this type of decision could help with enrolment challenges. However, we note that such an initiative would also provide fewer options for students. We constantly seek to optimize this balance and look forward to continuing to work with the Mathematics Department in this way.
9. Continue to seek opportunities to improve undergraduate opportunities in Statistics; either through creation of more courses, increased opportunities to use Data Science courses in Applied Statistics degrees, or the eventual creation of a B.Sc. in Statistics.	The Dean's Office looks forward to working with the Department to find ways, such as this or other recommendations, to sustainably offer students sufficient flexibility in course options and regularly offered, well-enrolled senior courses.
10. Continue the highly effective connection with PIMS.	The Dean's Office agrees with this recommendation. Disclosure: The Dean is a Board Member of PIMS.
11. Develop guidelines for students and instructors on the use of ChatGPT and other online homework help sites.	The Dean's Office agrees with this recommendation and acknowledges the existing initiatives on campus to address this matter, such as those offered by the Teaching Centre with faculty members with such expertise, including in the Department of Mathematics & Computer Science.
12. Develop Faculty of Arts and Science managed Academic Misconduct procedures.	A revised Student Code of Conduct amalgamating four existing policies, was recently developed and passed through General Faculties Council this Winter semester, for implementation as of July 1, 2025, and includes penalty guidelines Faculty members and the student union have been notified of this change at Deans Advisory Committee and Arts & Science Council. Faculty members are strongly encouraged to include their course policies on the use of AI in their course outlines and are encouraged to reference the Student Code of Conduct.
13. Develop communication channels between Recruitment and the Department to create supports for international students.	We agree that any enhancement of communication with the International Centre would be beneficial. Faculty members could also consider joining the International Student Resilience Community of Practice, launched this year by the Teaching Centre, which already includes one member from the Department, but not from Mathematics or Statistics.
14. Allow some double counting of courses between mathematics and science degrees.	The Dean's Office is open to exploring our options with respect to double counting / laddering and the pros and cons of allowing for this sort of flexibility. The faculty currently does not permit double counting toward double degrees, but this is an option at some institutions. If there are no institutional barriers to double counting, a department would still need to submit a program proposal outlining the set of courses required in a combined Major / double degree. Such changes would need to be supported by the Arts and Science Curriculum Committee, Arts & Science Council, the Curriculum Coordinating Committee and General Faculties Council.
15. Regularize some 4th year course offerings and work with the Dean to ensure that 4th year offerings are not cancelled.	The Dean's Office agrees with the impacts of course cancellations outlined by the external reviewers. Unfortunately, in the context of major cuts to the Provincial Operating Grant, our faculty complement has been reduced in size and our faculty budget has been reduced. We carried out a streamlining exercise, but we have largely maintained our suite of programs with only minor reductions in the number of courses required in most of our degrees. As such, as much as we would like to,

	we simply cannot afford to offer classroom course teaching credit for courses with fewer than five students except in extreme circumstances when this would prevent students from being able to complete their degrees. We greatly appreciate the efforts of the Department and would be pleased to consider a multi-year course offering plan that would ensure sufficient offerings for our students while avoiding insufficient enrolment in senior-level courses. With respect to the Applied Statistics concern, we agree that there is a critical need for a replacement hire in July 2026 to offer this degree with adequate course offerings at the senior level.
16. Re-introduce regular social events/extracurricular activities involving students and faculty.	The Dean's Office agrees but also commends the department for the excellent community of scholars they have established, with vibrant interactions among faculty members and undergraduates, graduate students and postdocs.
17. Have an event each semester that includes alumni.	The Dean's Office agrees that this would be beneficial, but there may not be additional budgetary assistance available beyond the existing Department budget, which might affect the frequency of such events.
18. The Department of Mathematics & Computer Science should be allowed to separate into two: (1) the Department of Computer Science, and (2) the Department of Mathematics and Statistics if they wish to do so.	The faculty recently worked through a sustainability plan in which one of the various mechanisms for finding meaningful savings was to reduce the number of compensated units. The achievement of such savings formed the basis for an argument for positions, which were received. In this context, while we understand the potential benefits to be considered, the efficiency of the current arrangement in one department with internal committees specific to Math & Stats vs. Computer Science is desirable. Furthermore, the combined unit might make even more sense if we pursue Recommendation 7, or if very recent national trends of shifts away from high Computer Science enrolments begin to see impacts here.

Consulting the External Reviewer Recommendations, the Program Response, and Dean Letts, the Academic Quality Assurance Committee made the following eight (8) recommendations for action which the Program must report on in 1 and 3 years:

1. The Department of Mathematics & Computer Science will complete a thorough curriculum review of all Mathematics programs to ensure that the requirements for a major or minor in Mathematics reflect current resources and faculty strengths. Items to consider include:
    a. Regularizing regularly offered courses.
    b. Ensuring pre-requisite courses provide the expected foundations for subsequent courses.
    c. Streamlining the major requirements to allow for flexibility and alignment with the currently available teaching resources.
    d. As resources permit from work completed under section c (above), offering courses that may provide additional breadth (Data Science, Applied Statistics, History of Mathematics, etc.).
    e. Discuss with the Dean's Office and Faculty/University colleagues possibly allowing the "double counting" of some courses in double majors. Should discussion warrant it, make a university level proposal to reconsider double counting.

2. The Mathematics program will develop learning objective documents for each course taught.
3. Faculty teaching different sections of the same Math course should meet annually to discuss common learning objectives. They may, if desired, also share teaching resources.
4. The Department of Mathematics & Computer Science and the Faculty of Arts and Science Dean's Office will discuss the potential of creating a joint Mathematics and Computer Science degree.
5. The Department of Mathematics & Computer Science will develop guidelines on the use of artificial intelligence (in compliance with GFC policies on academic misconduct). Each instructor should clearly articulate their policy on course outlines.
6. The Department of Mathematics & Computer Science will work with the International Centre and the Teaching Centre to coordinate supports for international students.
7. The Department of Mathematics & Computer Science will continue their efforts to hold regular extracurricular activities that bring together faculty and students.
8. To ensure the viability of Statistics as a program area the Department of Mathematics & Computer Science and the Dean of Arts and Science will prioritize the hire of an academic staff member with relevant expertise.

The Academic Quality Assurance Committee is satisfied that the Mathematics 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,

Dr. Lynn Kennedy
Chair, Academic Quality Assurance Committee

Associate Professor, Department of History and Religion

cc Michelle Helstein, PhD.

Provost & Vice-President (Academic)