



Cyclical Program Review Final Assessment Report and Implementation Plan for the Academic Programs Offered by the Department of Physics, Engineering Physics and Astronomy

Programs Reviewed:

Physics: Bachelor of Arts, Bachelor of Science, Bachelor of Science (Hons), Bachelor of Science (Hons) (Specialization).

Astrophysics: Bachelor of Science (Hons) (Specialization).

Mathematical Physics: Bachelor of Science (Hons) (Specialization).

Engineering Physics: Bachelor of Applied Science, Bachelor of Applied Science (Internship).

Physics, Engineering Physics, and Physics and Astronomy: Master of Applied Science, Master of Science, Doctor of Philosophy.

In accordance with Queen's University Quality Assurance Processes (QUQAP), this final assessment report provides a synthesis of the external evaluation, internal responses, and assessment of the above programs. This report identifies the significant strengths of the programs, and opportunities for program improvement.

An implementation plan is attached that identifies:

who will be responsible for acting on and monitoring progress on the recommendations, any resource or governance implications resulting from the recommendations, and timelines for implementation of the recommendations.

[Final Assessment Report: Executive Summary](#)

Summary of Review

- 1) The Department of Physics, Engineering Physics and

- iii. Dr. Peter Taylor, Professor, Department of Mathematics and Statistics, Queen's University
- 3) The visit included meetings with
 - i. Undergraduate and graduate students

no-questions-asked 3-day extension, was also highlighted for praise by students and faculty as a significant contributor in dealing with program-related stresses and mental health issues.

Sustainability of Programming Quality

The review team found that the faculty complement is fully optimized to ensure and sustain the quality of programming currently being delivered. If the current trajectory of increasing student numbers continues, the review team strongly recommends that the Department's current complement of faculty and staff be appropriately increased to ensure program delivery quality.

Summary of Review Team Recommendations

The review team made 8 recommendations in the following areas:

Revising program level learning outcomes to integrate recent changes to Queen's Degree Level Expectations on equity, diversity, inclusion and Indigenization.



Implementation Plan

| Recommendations | Proposed Follow-up | Responsibility for Leading Follow-up | Resource or Governance Implications | Timeline for Addressing Recommendation |
|--|--------------------|--------------------------------------|-------------------------------------|--|
| <p>1. That, within the next 18 months, the Faculty of Arts and Science work with the academic unit to address the deficiencies of the learning spaces (undergraduate laboratories and graduate offices) in Stirling Hall by, e.g., regular custodial maintenance, necessary repairs throughout, upgrading of lighting throughout, replacement of graduate student office furniture, etc., to ensure that these spaces are conducive to learning.</p> | | | | |

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|---|--|---|-------------------------------------|--|
| Degree Level Expectations are being met in the programs in time for the next cyclical program review. | Consult relevant stakeholders on proposed changes to program-level learning outcomes (PLLOs). Make changes to the PLLOs. | Teaching and Learning and Human Rights and Equity Office. | | |

3. That, within the next 2 years, the University work through the relevant channels to streamline the academic integrity investigating and reporting procedure to minimize instructor workload, next 43the2 (o)-2 (u)6 7.6 (a)4 .1 ((o1.96 175.32(roP492)-4 (p75.32efEMm (an)s)12 (ad)-4 a(ru)-406 0.702 0w -12

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|--|--|--------------------------------------|-------------------------------------|--|
| <p>processing time is approximately 2 weeks. This includes hiring temporary staff in a timely manner to replace financial administrative staff who are on long-term leaves, e.g., maternity. In addition, the academic unit should restore cash advances or develop an acceptable alternative.</p> | <p>Department to develop a plan to communicate effectively with students around timesheet deadlines and importance of maintaining valid student visas.</p> | | | |

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Recommendations

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|-----------------|---|--------------------------------------|-------------------------------------|--|
| | <p>Ensure TAs are completing mandated training in equity, teaching and supervision.</p> <p>Identify/provide training for TAs on building inclusive community.</p> | | | |

6c. That the academic unit be proactive about clarifying the ways in which learning structures and assessment structures are formed to handle students belonging to two different programs (Physics and Engineering Physics) in a single course, e.g., the Physics students see on the onQ system the grade distribution for Physics students only (likewise for the Engineering Physics students), which can lead to tensions between the two student cohorts.

Continue discussion begun at

| Recommendations | Proposed Follow-up | Responsibility for Leading Follow-up | Resource or Governance Implications | Timeline for Addressing Recommendation |
|--|---|--|-------------------------------------|--|
| <p>Physics students go directly to modernizing the upper year laboratory equipment.</p> | <p>Applied Science and Arts and Science on funding model for Engineering Science programs, including Engineering Physics.</p> | | | <p>Fall term 2023.</p> |
| <p>6e. That the academic unit regularly encourage instructors to be mindful of balancing the amount of material covered in a course and the efficacy of the learning process. Students reported concerns about such an imbalance in some upper-year courses.</p> | <p>Review upper-year courses alongside the full review of the BScH Physics Major and Minor, and BAsC Engineering Physics Major.</p> <p>Consider discontinuing specialization plans to direct more faculty resources to upper-year course offerings.</p> | <p>Undergraduate curriculum committees</p> | <p>None apparent at this time.</p> | <p>Exploratory work by end summer 2024. Proposals put forward to</p> |

Recommendations

Proposed Follow-up

Responsibility

The Deans of Arts and Science and Engineering and Applied Science are responsible for monitoring the implementation plan. The details of progress made will be presented in monitoring reports to the Vice-Provost (Teaching and Learning), submitted to the Senate Cyclical Program Review Committee (SCPRC) for approval and to Senate for information. All monitoring reports will be posted on the university web site.

Final Assessment Report & Implementation Plan

Date approved by SCPRC

January 22, 2024

Vice-Provost (Teaching and Learning)



Signature

Vice-Provost and Dean, School of Graduate Studies



Signature

Dean, Faculty of Arts and Science



Signature

Dean, Faculty of Engineering and Applied Science

Signature

Final status of academic programs Vip.004utm-5)-t (i)- of VVhnetVcs,l

Next Steps for Department

Monitoring reports to be submitted 18 months and 4 years after receipt of the signed Final Assessment Report: September 2025 and January 2028. The provost's office will remind the department of the deadlines nearer the time and provide a template for these reports.