

**Internal Academic Review 2005-2006**  
**Department of Physics, Engineering Physics and Astronomy**  
**Internal Academic Review Committee Report to Senate**

The Internal Academic Review (IAR) of the Department of Physics, Engineering Physics and Astronomy is now complete. The Internal Academic Review Committee (IARC) has taken into consideration all of the submissions related to the IAR of the Department of Physics, Engineering Physics and Astronomy and respectfully submits the following report. The IARC Report to Senate is intended to supplement the findings of the attached Review Team Report and to provide a mechanism for the Head of the Department, the Dean of the Faculty of Arts and Science and the Dean of the Faculty of Applied Science to jointly report on the progress in addressing the Review Team recommendations (please see the “Outcomes” section of this report).

**Summary of the Internal Academic Review of the Department of Physics, Engineering Physics and Astronomy**

The Department of Physics, Engineering Physics and Astronomy offers high quality, laboratory-intensive undergraduate and graduate programs to excellent students taught by a faculty complement comprised of innovative teachers and productive researchers. The Senate Internal Academic Review Committee (IARC) agrees with reviewers that a dedicated core of technical and administrative staff does an impressive job of supporting the work of faculty and students. The IARC would be remiss if it did not highlight the Department’s exemplary record of service and outreach as well as the research accomplishments across the spectrum in the department: and to note, in particular, those Queen’s researchers associated with the world-renowned Sudbury Neutrino Observatory.

The IARC joins reviewers with their praise for the quality of the critical self-assessment completed by the Department and its willingness to immediately take steps to address many of its challenges whether self-identified or identified by reviewers. The Department and the Faculties of Arts and Science and Applied Science are encouraged to continue addressing the most pressing issues such as a review of graduate programs, expanding technical resources and redesigning the web page, and to develop plans and approaches to deal with longer-term concerns such as space, low female enrolment and coordination of funding and teaching resources between the Faculties supporting the Engineering Physics program.

The IARC commends the Department and all participants for a comprehensive and thoughtful Internal Academic Review and wishes the Department and Faculty continued success in addressing the recommendations outlined in the following Review Team report:

**Outcomes of the Internal Academic Review of the  
Department of Physics, Engineering Physics and Astronomy**

*Joint response submitted by the  
Dean of the Faculty of Arts and Science, Dean of the Faculty of Applied Science and the  
Head of the Department of Physics, Engineering Physics and Astronomy*

*The Internal Academic Review Team, in conjunction with the External Consultants, highlight that the Department of Physics, Engineering Physics and Astronomy offers high-quality laboratory-intensive undergraduate and graduate programs to excellent students taught by a faculty complement comprised of innovative teachers and productive researchers. Of note is the fa*

*the world-renowned Sudbury Neutrino Observatory. The Internal Academic Review Team also recognizes the teaching excellence in the Department, but is mindful of the reliance on adjunct teaching.*

The Faculty of Arts and Science recognizes the significance of the excellent research and teaching profile in the Department, and is committed to its support and enhancement through seeking ways to refurbish and expand space, and to supply faculty complement in needed areas, such as particle astrophysics. In recognition of the importance of this area, the Faculty of Arts and Science has just released a full-time tenure-track position in nuclear particle astrophysics to replace a recently departed faculty member.

With respect to teaching, both the Faculties of Arts and Science and Applied Science recognize that the Department is reliant on adjunct teaching, and that every effort should be made to provide resources for more tenure-track teaching, especially in first-year courses, which is the norm in engineering departments.

Space:

*The Internal Academic Review Team recommends that the Department of Physics work with the Faculty of Arts and Science to find resources to renovate existing space and for creating new space that will be suitable for research and graduate students. The IART also recommends that the Department should seek advice from the Office of Advancement to identify fundraising opportunities to pay for the required renovations and expansion.*

The Faculty of Arts and Science is committed to seeking resources for space requirements in the Department. Funding for the renovation for the SNO research space in Stirling Hall, as well as funds to complete the laboratory for a recently arrived CRC I faculty member, provided by the Faculty of Arts and Science, are two recent examples of support in this area.

Both the Faculty of Arts and Science and Applied Science are actively involved in facilitating linkages between the Department and the Office of Advancement in order to secure financial support from external sources for the Department.

*Follow-up on these recommendations and issues will take place during annual budget and staffing meetings between the Dean of the Faculty of Arts and Science, the Dean of the Faculty of Applied Science and the Vice-Principal (Academic)*

**Attachment:**

Review Team Report

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## 2. Commendations

We commend the Physics Department on the strengths and accomplishments in teaching and research and service that are described below.

The Department of Physics expresses commitment to the ongoing development of educational practices and methodologies. Particular strengths in the Department include: faculty who are committed to education and invested in ensuring the excellence of graduating students; several

The Department has done an excellent job of hiring junior faculty members, many of whom hold Premier's Research Excellence Awards or Tier II Canada Research Chairs. Despite space

Queen's contributed to speaking skills; Queen's contributed to leadership skills; Queen's contributed to self-confidence; Queen's contributed to sensitivity to ethical issues; Queen's contributed to awareness of the rights and responsibilities of citizenship. Undergraduate students that we met desired more opportunities to enhance their knowledge and experience about Physics

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8. With assistance from the Chemistry Department, the Physics Department should undertake a review of the operation of its machine and electronics shops. The Departments should determine whether sufficient income from shop services could be generated to warrant hiring an additional full-time or part-time machinist or an apprentice.

9. The University should give priority to scheduling of upper year physics laboratory