



**FOR RECOMMENDATION**

**PUBLIC**

**OPEN SESSION**

**TO:** Committee on Academic Policy and Programs

**SPONSOR:** Sioban Nelson, Vice-Provost, Academic Programs

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**PRESENTER:** As Above

**CONTACT INFO:**

**DATE:** February 6, 2014 for February 25, 2014

**AGENDA ITEM:** 6

**ITEM IDENTIFICATION:**

Proposal for the closure of the Minor in Physics Life and Environmental Science, FAS

**JURISDICTIONAL INFORMATION:**

The Committee on Academic Policy and Programs approves the closures of undergraduate programs within an existing degree, as defined by the University of Toronto Quality Assurance Process. (*AP&P Terms of Reference, Section 4.4.b.i.*)

**GOVERNANCE PATH:**

Committee on Academic Policy and Programs (February 25, 2014)

**PREVIOUS ACTION TAKEN:**

This proposal was approved by the Faculty of Arts & Science Council February 5, 2014.

**HIGHLIGHTS:**

This is a proposal for the closure of the existing Faculty of Arts and Science Minor in Physics Life and Environmental Science. The decision to close this minor comes out of the ongoing Curriculum Renewal process in the Faculty of Arts and Science. It reflects the commitment of the Department of Physics to rationalize its program offerings to ensure quality and the most effective use of its resources and in support of its academic priorities.

The Department of Physics currently offers two minor programs: the minor in Physics Life and Environmental Science and a minor in Physics “Core” (which separately is being renamed simply “Physics”). The two overlap significantly. The Department feels that the remaining minor in Physics “Core” is academically stronger particularly because of the inclusion of a lab course and will better meet the needs of all students. Students will also have the option of pursuing a minor in Environmental Science which includes some physics content.

The minor in Physics Life and Environmental Science has always attracted limited enrolment. Students currently enrolled in the minor will continue to be able to access all required courses and complete the minor. As outlined in the proposal, the Department has consulted with students and colleagues in the School of the Environment.

**FINANCIAL AND/OR PLANNING IMPLICATIONS:**

None

**RECOMMENDATION:**

BE IT RESOLVED,

THAT the proposed closure of the Minor in Physics Life and Environmental Science, as described in the attached proposal from the Faculty of Arts and Science dated December 13, 2013, be approved, with an effective date of April 2014 for the closure of admissions and an anticipated program closure date of May 2017.

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**DOCUMENTATION PROVIDED:**

Closure Proposal for the Minor Physics Life and Environmental Science

# University of Toronto

## Closure of an Existing Program Proposal (Undergraduate)

*(This template has been developed in line with the University of Toronto's Quality Assurance Process.)*

### Section 1

**Closure Proposed: Physics Life and Environmental Science Minor**

**Department / Unit:** Physics

**Faculty / Academic Division:** Arts and Science

**Faculty / Academic Division contact:** Anne-Marie Brousseau

**Department / Unit contact:** Paul Kushner (Associate Chair, Undergraduate Studies)

**Effective date program will be closed to new admissions:** April 2014

**Effective date of full closure of program:** May 2017

**Version Date:** December 13, 2013

### Section 2

#### **Brief Summary**

The proposed closure of the Physics Life and Environmental Science Minor is part of the Department of Physics concerted effort to revise its connections to programs in Environmental Science (in consultation with the School of the Environment). The program provides a lower level of physics training when compared with our Physics "Core" Minor: it does not require a lab course and includes courses aimed at students with no physics background who wish to satisfy their degree requirements. The POST overlaps heavily with the Physics "Core" Minor, for which there is higher student demand. We consider it is best to consolidate the two programs, simplify our Minor program offering, and hopefully boost overall interest in pursuing a Physics Minor. In addition, the Department believes that the Physics "Core" Minor better meets the needs of students in the Life Sciences – which constitute a target clientele for the program – because of its emphasis on experimental physics (see below).

We have consulted with Physics faculty, Physics and Astronomy Student union, and the School of Environment, who agree with the proposed closure. The closure has also been discussed with and supported by the Life Sciences Curriculum Planning Committee.

#### **1. Rationale**

The proposed closure is coherent with the efforts made by the Faculty of Arts & Science to streamline programs in the context of the Curriculum Renewal and the UTQAP framework, as well as with the effort of the department to strengthen their programs according to their academic priorities and resources.

There is no academic rationale to support the continuation of the program in its current format, given its lack of specificity with regards other programs. The current Physics "Core" Minor (to be renamed Physics Minor) overlaps significantly with this program, and provides the training required to give students a reasonable background in physical science. The principal differences between the Physics "Core" Minor and the "Physics Life and Environmental" minor are that 1) the latter lacks the 1.0 FCE of physics laboratory (PHY224H1, PHY324H1) required in the former; and

2) the latter permits students to count breadth-level courses (e.g. PHY201H1, PHY205H1) towards the POST. The Department strongly prefers that students in a Physics Minor achieve the competencies developed through laboratory training and that they do not fulfill their Minor requirements with breadth courses aimed at students with no physics background.

Programs and physics offerings in Environmental Science have evolved with the establishment of the School of the Environment, the Environmental Science Major, and the renewed Environmental Science Minor. The Department of Physics believes that its new program offerings should reflect this evolution. Students with an interest in pursuing a minor with some physical science in the context of environmental science are better served by taking the recently modified Environmental Sciences Minor, which includes the physics course ENV237H1/238H1 and optional upper year physics courses PHY392H1/PHY492H1. The Department of Physics hopes in the coming years (subject to available resources) to offer a follow-on course to ENV237H1/238H1 that will further enhance its contribution to the School, and that this new course could be built into Environmental Science programs.

The Life and Environmental Science minor has had an average enrolment of 22 students over 2008-2013, with 23 currently enrolled, and a decreasing trend. The Core Minor has had an average of 27 students over the same period, with 36 currently enrolled and an increasing trend. Because of the strong overlap in the programs, we do not expect total enrolment in physics programs to be adversely affected by the proposed closure and will work hard to promote the Physics Minor in the coming years.

For students interested in pursuing a physics minor in the setting of Life Science programs, the Department of Physics strongly prefers that students take the Physics "Core" Minor, with its laboratory requirements. This will ensure that students gain the analytical and experimental skills required to apply physical science training to their Life Science training.

## 2. Impact on Other Programs/Units of the Proposed Closure

We have consulted with the colleagues in Physics, with the Director of the School of the Environment, and with Life Sciences units through the Life Sciences Curriculum Planning Committee. The proposed closure will not adversely affect other programs.

## 3. Student Accommodation and Consultation

- *Current enrolment showing breakdown by year in the program/option being closed.*

	<i>Year one</i>	<i>Year two</i>	<i>Year three</i>	<i>Year four</i>
<i>Current enrolment</i>	0	7	6	10

All current students will be allowed to complete their program as planned. As all the courses required for the program are also offered for the other Physics programs, there will be no impact on the students currently enrolled in the program, even if their time to completion extends beyond the expected date of May 2017. Inactive students in the program at this time will be permitted to complete the program should they become active again.

As stated above, students with an interest in pursuing a minor with some physical science within the context of Environmental Science can pursue a superior learning trajectory in the revised Environmental Science Minor program. Students interested in pursuing a physics minor in the setting of Life Science programs will be better served by the Physics "Core" Minor, with its laboratory requirements.

The Physics and Astronomy Student Union was the principal body consulted about the proposed closure. On September 24, 2013, the PASU executive replied to our request for consultation with an email cc'd to the entire PASU exec: *The PASU exec team discussed the removal of the Physics 'Life and Environmental' Minor. One of our execs ... was formerly enrolled in the minor. The general feeling was that the removal is a good idea. It was pointed out that the major difference it has with the Physics 'Core' Minor is the lab course requirement in the latter, which we felt is a beneficial course for all physics students.*

#### **4. Faculty / Staff Accommodation**

We are aware of no impact. It is expected that total enrolment in Physics courses will not change substantially as a result of this closure. Furthermore, the proposed closure does not entail course deletions.

#### **5. Governance Process**

	<i>Levels of Approval Required</i>
<i>Decanal / Provostial Sign Off</i>	
	Faculty/Divisional Council (approval of closure of minors, where there is a continuing specialist or major)
<i>Submission to Provost's Office</i>	
	AP&P (approval of program closures: undergraduate minors where there is no corresponding specialist/major)
<i>Inclusion in Annual Report to Quality Council</i>	
<i>Inclusion in Annual Report to MTCU (in case of closure of degree)</i>	