UNIVERSITY OF TORONTO

OFFICE OF THE GOVERNING COUNCIL

FOR APPROVAL **PUBLIC** **OPEN SESSION**

TO:	Committee on Academic Policy and Programs
SPONSOR:	Mark Schmuckler, Acting Vice-Provost, Academic Programs
CONTACT INFO:	(416) 978-0490, vp.academicprograms@utoronto.ca
PRESENTER:	Same as above
CONTACT INFO:	
DATE:	December 14, 2020 for January 12, 2021
AGENDA ITEM:	5

ITEM IDENTIFICATION:

Program Closure: Specialist in Environmental Chemistry, 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 (UTQAP). *(AP&P Terms of Reference, Section 4.4.b.i.)*

GOVERNANCE PATH:

1. **Committee on Academic Policy and Programs [for Approval] (January 12, 2021)**

PREVIOUS ACTION TAKEN:

The proposal to close the Specialist in Environmental Chemistry was approved at the Faculty of Arts & Science Faculty Council meeting on December 9, 2020.

HIGHLIGHTS:

The Specialist in Environmental Chemistry, offered by the Department of Chemistry, was created approximately 20 years ago when Specialist programs were generally more popular with students. In recent years, the number of students enrolled in this program has dropped. Currently,

there are only four students enrolled, spanning from second year to fourth year. Admissions to the Specialist were administratively suspended for the academic year 2021-22 on November 1, 2020.

The last UTQAP review of the Department of Chemistry identified that students are increasingly choosing Majors rather than Specialists, and that Majors focused in the life sciences are increasingly popular. As well, in the past, Specialist students have expressed a desire for a Major program due to the restrictive nature of the Specialist's requirements. This prompted the Department to review its curriculum to consider how best to support the needs of students. As a result of the review, the Department has decided to close the Specialist and create a new Major in Environmental Chemistry to replace the Specialist. The new Major will better accommodate students in combining their study in Environmental Chemistry with another Major in areas such as Environmental Science, Cell & Systems Biology or Ecology & Evolutionary Biology. The Major was approved through a major modification process in the Faculty of Arts & Science on December 9, 2020, effective March 1, 2021.

The four students in the Specialist have been informed it is closing and that they will be supported to complete the program. As of October 2020, there are two inactive students in the Specialist program who enrolled during the last 10 years (in 2013 and 2019). These students could be easily streamed into the new Environmental Chemistry Major, given that all the CHM courses taught in the Specialist can be used to satisfy the requirements of the new Major. Alternatively, they would still be able to finish the Specialist program if they so wished.

Consultation has occurred with the School of the Environment. The School of the Environment is a co-sponsor of the Specialist and is highly supportive of the closure and new Major.

FINANCIAL IMPLICATIONS:

There are no negative implications to the closure of the Specialist.

RECOMMENDATION:

Be it Resolved,

THAT the proposed closure of the Specialist in Environmental Chemistry, Faculty of Arts & Science, dated October 22, 2020, to which admissions were administratively suspended on November 1, 2020, be approved with an anticipated program closure date of June 30, 2024.

DOCUMENTATION PROVIDED:

- *Proposal for the closure of the Specialist in Environmental Chemistry, Faculty of Arts & Science*

University of Toronto Proposal:

Closure of an Existing Program (Graduate or Undergraduate)

This template has been developed in line with the University of Toronto's Quality Assurance Process. The process followed for the closure of any program is the same as that required for the approval of any new such program.

Closure proposed; please specify precisely what is being closed: i.e., graduate diploma, field, certificate, option within a program (e.g., specialist, major or minor), entire program or degree (graduate or undergraduate).	Environmental Chemistry Specialist program
Department/unit if applicable:	Chemistry
Faculty/academic division:	Faculty of Arts & Science
Faculty/academic division contact:	Randy Boyagoda, Vice-Dean Undergraduate (vicedeanundergraduate@artsci.utoronto.ca) Martha Harris, Associate Director, Curriculum & Governance (martha.harris@utoronto.ca)
Department/unit contact:	Andrew Dicks (Associate Chair, Undergraduate): andrew.dicks@utoronto.ca
Effective date program will be closed to new admissions:	November 1, 2020
Effective date of full closure of program: date by which students currently in the program will be expected to graduate.	June 30, 2024
Version date: please change as you edit this proposal.	October 22, 2020

1 Brief Summary

- Please clarify precisely what is being closed.
- What is the relationship between what is being closed and any remaining offerings?

- If only part of a program is being closed, please clarify the relationship between this and those portions of the program that will remain open.

The Department of Chemistry proposes to close the Environmental Chemistry Specialist program. The main reason for the closure is a decline in enrolment over the last several years due to its intensive requirements, and student enrolment trending towards Majors rather than Specialists. Over the last 5 years, enrolment has been less than 10 students in total per year. There are currently 4 students in the Specialist who are aware that this proposal is being made and will be supported to complete the program: admissions were administratively suspended for the academic year 2021-22 on November 1, 2020.

At the same time, enrolment in the Environmental Chemistry Minor, and the core courses CHM210H1 Chemistry of Environmental Change and CHM310H1 Environmental Chemistry remain healthy. The Department has decided through curriculum renewal discussion to create a new Major in the same subject with a focus on courses in Chemistry. This Major is expected to better meet student demand for a program in Environmental Chemistry, and a Major will give students considerably more latitude to couple the program with other Majors, such as Environmental Science or a subject from the biological sciences. The existing Environmental Chemistry Minor program remains unchanged.

2 Rationale

Background:

- You may wish to speak to when the program was first created; how long has it been offered; past success of the program.
- What has led to the decision to close the program?
- Please provide a full academic rationale:
  - You may wish to refer to changing enrolment; changing disciplinary landscape; shifting expertise of the professoriate; poor quality of the academic offering; overlap with other existing programs.
  - Where appropriate, you may want to quote from recent unit or program reviews.
  - Explain alignment with the unit's academic plan.

The Environmental Chemistry Specialist program was created roughly 20 years ago, when Specialists were generally more popular among students, and has many strict course requirements (it should be noted that the Environmental Science Major program offered by the School of the Environment in the Faculty of Arts and Science

did not exist when the Environmental Chemistry Specialist was first instituted). Unfortunately, the numbers in this specialist have been falling, to the point that there are currently only four students enrolled (Year 2 = one student, Year 3 = two students, Year 4 = one student). This approach is consistent with a focus on flexibility within undergraduate programs of study at both the Department of Chemistry and the faculty level.

The most recent UTQAP review of the Department of Chemistry identified that students are increasingly choosing Majors rather than Specialists, and the increasing considerable popularity of Majors focused in the life sciences. This prompted a review of our curriculum to consider we can best support the needs of both Chemistry and non-Chemistry undergraduates. Many Faculty of Arts & Science students now prefer to enrol in one or two major programs, since they can often provide more flexibility and breadth in terms of course selection.

Environmental Chemistry as a subject requires students to have a fundamental background in core areas of chemistry and an ability to perform quantitative science. As well, they need to be able to apply this knowledge to different earth and life science fields, to understand the environment in which we live. Given this context for the subject, we believe that the newly-proposed Environmental Chemistry Major program will enable more students to choose Environmental Chemistry as a degree pathway by combining it with other Major programs such as Environmental Science, or programs in the life sciences offered by departments including Cell & Systems Biology and Ecology & Evolutionary Biology.

3 Impact on Other Programs/Units of the Proposed Closure

- Please provide evidence of consultation with any programs/units/faculties that will be affected.
- What are the positive and negative implications that need to be considered in the closure?
- Impact on the nature and quality of the division's program of study.
- Impact of closure on other units including inter-divisional and inter-institutional agreements/contracts.
- Please mention if the courses that supported this degree, program or program option will continue to be offered.

We have consulted with the School of the Environment (in particular, its undergraduate student advisor (David Powell) and its Undergraduate Director (Christian Abizaid)) which co-sponsors the specialist program in Environmental

Chemistry that is being closed. The School of the Environment is highly supportive of these changes, in particular opening up the possibility of double majors between Environmental Science and Environmental Chemistry: “I agree that this sounds like a great initiative that expands our partnership and offers increased opportunities for our students.” and “I think that students who combine a major in Environmental Chemistry with a major in Environmental Science get a better combination of environmental chemistry and interdisciplinary environmental science than they do with the Environmental Chemistry specialist.” The Departments of Physics, Ecology & Evolutionary Biology, Cell and Systems Biology, Geography, Statistical Sciences and Mathematics have been consulted about this closure and no concerns have been raised that are associated with the change. Since the enrolment in the Specialist is low, there is little impact to these units expected for the closure.

There will be no negative program impacts given that the Environmental Chemistry specialist program is a stand-alone program being fully replaced by a major on the same topic. The CHM courses that were part of the specialist program will still be taught to meet the requirements of the new major program. There will additionally be no impacts on the ENV courses that were part of the specialist program due to the low enrolment.

4 Student Accommodation

- Please include the current enrolment showing breakdown, by year, in the program or option being closed.

Table 1: Undergraduate

	Year 1	Year 2	Year 3	Year 4
Current enrolment for 2020-21	0	1	2	1

- Provide details concerning how students in progress will be accommodated.
  - Will students be allowed to complete their program or be transferred to another program? In the latter instance, please comment on the ease with which they can complete the requirements of the new program and show evidence of consultation, if relevant.
  - Deadline by which accommodated students must complete the program—if there are grounds for concern, what are their options if they have not completed the program by that deadline?
  - Capacity/course availability to accommodate affected students.
  - Can inactive students reactivate to the closed program?

- What will the impact of the proposed closure be on the range of academic options available to students in the future (i.e., are there other programs or options that will fill the void that may or may not be created by the closure)?
- Consultation with students.
  - Please provide details concerning consultation with students around the proposed change, including:
    - meetings, town halls, emails, questionnaires
    - any response or feedback received
  - How will students be notified of the change following approval?

No courses required towards the Environmental Chemistry Specialist program are being cancelled, and so current students will have no issues completing their program. The nominal deadline for these students to complete the Environmental Chemistry Specialist program is June 2024, although taking longer than this would be possible. There are no impacts on the range of options for future students because a new Environmental Chemistry Major program will take the place of the specialist. Students within the specialist program would be able to transfer to the major program As of October 2020, there are two inactive students in the specialist program who enrolled during the last ten years (in 2013 and 2019). These students could be easily streamed into the new Environmental Chemistry major, given that all the CHM courses taught in the Specialist can be used to satisfy the requirements of the new major. Alternatively, they would still be able to finish the specialist program if they so wished.

In past one-on-one meetings, specialist program students have expressed a desire for a major program, saying that the specialist was too restrictive. In particular, a number of students have opted to take the Chemistry Major program or Specialist program because they have not wanted to take the ENV courses required in the Environmental Chemistry Specialist program. Others have expressed an interest in environmental science but could not accommodate all those interests with the current requirements in the Environmental Chemistry Specialist program. For this latter group of students, there will now be the attractive option of a double major in Environmental Chemistry and Environmental Science.

All current specialist program students were contacted by email in June 2020 in order to gather feedback on this proposal. Of the four students currently enrolled in the program, two responded by email. Both students were very positive in their comments about the specialist program and disappointed to see a proposal to retire it, but were very supportive about the idea of the Environmental Chemistry Major, particularly as it would pair well with other environmentally-focused majors. Below is a quote from one of the respondent's emails:

"I find the Env. Chem. major more attractive than the Specialist, if paired with, for example, an Environmental Studies major. This would give a more in-depth study of

not just the chemistry of how the environment works, but also social justice issues tied to this subject."

The Department of Chemistry-sponsored Chemistry Students Union (CSU: https://csu.sa.utoronto.ca/) were additionally contacted by email in July 2020 for their input. They were supportive of the change and had no additional comments.

5 Faculty/Staff Accommodation

- What is the impact, if any, on faculty and staff of the closure?

None. As stated above, Chemistry taught as part of the Specialist will continue to be taught and included in the new Major in Environmental Chemistry that has been proposed and is going through governance as a parallel, separate proposal.

6 UTQAP Process

The governance pathway is summarized in the table below.

Steps	**Approvals**
Decanal sign-off	
Provostial sign-off: November 6, 2020	
November 25, 2020	Sciences Undergraduate Curriculum Committee
December 9, 2020	Faculty/divisional council (approval of closure of minors, where there is a continuing specialist or major)
Submission to Provost's office	
January 12, 2021	AP&P (approval of program closures: undergrad specialists/majors; minors where there is no specialist or major; graduate fields or diploma; and collaborative programs)
Not applicable	Academic Board (approval of degree, graduate program, diploma closures)
Not applicable	Executive Committee of Governing Council (executive confirms degree, grad program, closures)
Inclusion in annual report to Quality Council	July 2021
Inclusion in annual report to MCU (in case of closure of degree)	