Cyclical Program Review of Life Sciences and Biochemistry

2021-2022 CPR Bridging Report

Date: September 1, 2021

In light of the COVID-19 pandemic and the subsequent delays to the cyclical program review (CPR) process, programs are being asked to provide an update on the final assessment report and implementation plan of their previous CPR cycle.

The plan and one year progress report below was agreed to by the Vice Provost (Teaching and Learning), Dean, Faculty of Arts and Science, and Executive Vice-Dean, Faculty of Health Sciences in April 2016. The Deans are responsible for monitoring the implementation plan.

Please complete the table below to report on any progress made. Add further explanation if necessary in the *additional notes* section. The table is to be completed by the relevant deans/associate deans.

Please complete this report and return it to quqap@queensu.ca by September 30, 2021. The Associate Vice-Principal (Teaching and Learning) will review this progress report. It will then be appended to the Dean's annual report for the 21-22 academic year, the program's delayed 2021-22 CPR, and filed in the Office of the Provost and Vice-Principal (Academic). Please note that monitoring reports will be posted on the university website.

Final Assessment Report and Implementation Plan				One Year Follow-up	Bridge to Next CPR
Recommendation	**Proposed Follow-up**	**Responsibility for Leading Follow-up**	**Timeline for Addressing Recommendation**	**Please indicate whether the implementation is on target and on time, and provide a brief description**	**Please indicate whether the implementation is on target and on time, and provide a brief description**
A complete curriculum review of both the LISC (Life Sciences) and BCH (Biochemistry) programs should be undertaken in consultation with the Centre for Teaching and Learning. The aim of the review should be to determine the optimal number of core courses in both the LISC and BCH programs and to ensure that degree requirements are linked closely with learning outcome expectations. The review should also focus on implementing new strategies in educational delivery of core courses, especially in light of planned expansion of LISC enrollment. Creation of a comprehensive and cohesive curriculum plan must be grounded in best practices in teaching and learning numbers of core units to achieve the LISC SSP has been modified to reflect this change.	A curriculum mapping of all courses to DLEs, LOs and other indicators of achievement	Associate Dean Life Sciences and Biochemistry	Dean of Health Sciences' *Annual Report* to the Provost 2015	Since the Cyclical Program Review, the LISC BCHM Education Committee has undertaken several substantive changes to the core requirements in both degree plans: 1)3.0 units have been removed from the core requirements of the degree plans for LISC (SSP and MAJ) and BCHM (SSP and MAJ) in 2ndyear –that is, BIOL 205 was removed as a core requirement in all 4 degree plans. 2) The number of units for BCHM 310 (a core requirement in the LISC SSP degree plan) has been increased from 6.0 units to 9.0 units, to accurately reflect the workload. As such the number of core units to achieve the LISC SSP has been modified to reflect this change. 3)The number of units for the 8 research project 499 courses (a core requirement for many students in the LISC SSP degree plan) has been increased from 9.0 units to 12.0 units, to accurately reflect the workload. As such the numbers of core units to achieve the LISC SSP has been modified to reflect this change. 4) Many new on-line courses have been made available to LISC and BCHM students to offer a variety of delivery methods, including the core course BCHM 218 which is required by all	Since the Cyclical Program Review and the One Year Follow-Up, the LISC BCHM Education Committee, which meets monthly, has continued to make several substantive changes to the core requirements in both degree plans: This includes the addition of the online MICR 271 course, which provides further flexibility in the LISC second-year core courses. This is along with the added flexibility of the previously core STAT 263 (for both LISC and BCHM students), which has been changed to include more options including BIOL 243 or STAM 200. Finally, online offerings of the core PHGY 215 and PHGY 216 provide second year LISC students with significant choices with respect to both timetabling and preferred course delivery modes. Additionally, two second year laboratory offerings have been developed as options for LISC students, MICR 290 and PHGY 290. In addition, LISC 300 has been developed. This course is built on the strength of team-learning where teams of students identify critical questions that need to be answered and work in teams to discuss major controversies or gaps of knowledge that impede the application of fundamental knowledge in life sciences to health care.

				BCHM (SSP and MAJ) students and all LISC SSP students. 5) All of the above changes have been made to the LISC and BCHM degree plans to enhance the learning experiences and to give due recognition for course level participation.	With respect to BCHM, as indicated blended and online versions of BCHM 218 are being offered and a new BCHM second year laboratory is being developed to replace CHEM 211. Since the One Year Follow-Up over 20 new online courses have been developed that can be used as option courses. These include courses at all levels from first to fourth year. Importantly, program learning outcomes have been developed for all programs in consultation with the Centre for Teaching and Learning and will be clearly articulated in the up-coming Self-Study. Finally, the introduction of the Direct entry pathway for LISC/BCHM has allowed for significant discussions surrounding changes to the first-year curriculum. This includes the proposal to reduce the MATH and PHYS requirements to 3U, while adding a first-year computing course and the choice between a first year PATH (PATH 120, blended course) or a first-year biochemistry course (BCHM 10X, course being developed for first time offering in Fall 2022). These proposed curriculum changes will be put forward this fall but have been approved by the key stake holders, including MATH, PHYS and CISC.
To increase the number of students self-identifying as visible minorities or Aboriginal, the Faculty of Health Sciences should	Consult with Four Directions Aboriginal Centre, the Faculty of	Associate Dean Life Sciences and Biochemistry	Dean of Health Sciences' *Annual Report* to the Provost 2015	Engagement continues with the 4 Directions Director and the Centre to address strategies to increase numbers of self-identified Aboriginal students in LISC and BCHM.	A significant step to increasing students self-identifying as visible minorities or Aboriginal has been the introduction of the Direct entry LISC/BCHM program which has its first in-

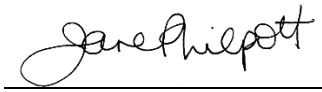
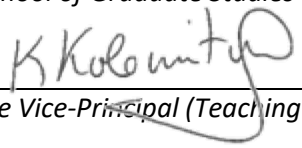
explore the feasibility of creating alternative pathways to the LISC and BCH programs for designated groups.	Engineering and Applied Science (Aboriginal Access to Engineering), the University Registrar and other Canadian universities to identify best practices				coming class this Fall 2021. The significant advantage of the new direct entry path from a student point of view is the assurance of acceptance into their desired plan of study at their time of admission to Queen's. Previously, it has been thought that some students may not have chosen to apply to the general Science program en route to LISC or BCHM because of the uncertainty of the two-step process. Queen's also offers Indigenous candidates an additional and alternative pathway for admission to the first year of a full-time, first-entry undergraduate degree program, known as the Indigenous Admission Policy. This policy may not have been viewed as helpful under the uncertainty of the two-step process. Similarly, it is also anticipated that the Equity Admission Self-Identification process for first year admissions will increase the number of students self-identifying as visible minorities or Aboriginal. Engagement with the 4 Directions Director and the Centre to address strategies to increase numbers of self-identified Aboriginal students in LISC and BCHM is ongoing, although issues with Program delivery during COVID have slowed down these discussions. However, they will be rejuvenated in the coming months.
To increase student engagement and satisfaction, the LISC and BCH programs are encouraged to explore alternatives to traditional lecture-based courses, including active and collaborative learning	The Associate Dean Life Sciences and Biochemistry should engage with the Vice-Dean Education and the Centre for	Associate Dean Life Sciences and Biochemistry	Dean of Health Sciences' *Annual Report* to the Provost 2015	More courses throughout the LISC and BCHM degree plans have been adopted that offer more blended learning options. Moreover, other courses (including core requirements such as BCHM 218) are now available as on-line courses.	As indicated above a significant number of courses, including both core and option courses for both Programs have been developed as either fully online or blended.

opportunities, experiential learning and blended or online learning.	Teaching and Learning				Another significant improvement was the introduction of the Independent Project course that MAJ students in both LISC and BCHM can take during their fourth year.

Additional Comments:

Please note any additional issues affecting progress.

Signatures:

	*September 17, 2021*
Dean, Faculty of Arts and Science	*Date*
	*September 28, 2021*
Dean, Faculty of Health Sciences	*Date*
N/A	*N/A*
Dean, School of Graduate Studies (if applicable)	*Date*
	November 23, 2021
Associate Vice-Principal (Teaching and Learning)	*Date*

Approved by the Senate Cyclical Program Review Committee:

November 26, 2021

Date