

**REPORT OF THE ACADEMIC PLANNING COMMITTEE
TO THE REGULAR May 2017 SENATE**

FOR INFORMATION

Eighteen-month follow-up from ACAPLAN's recommendations from the Undergraduate Program Review for the following program:
Chemistry and Biochemistry.

Below is an excerpt from the Institutional Quality Assessment Process at Laurentian University approved at the Quality Council in June 2011.

PROCESS FOR FOLLOW-UP

No later than 18 months after Senate submission, those responsible for implementing the changes writes a report to the Dean and to ACAPLAN, on the actions it has taken in response to the review. If ACAPLAN does not find the response satisfactory, it may ask the program for further actions.

**LAURENTIAN QUALITY ASSURANCE IMPLEMENTATION PLAN
FOR THE DEPARTMENT OF CHEMISTRY AND BIOCHEMISTRY
18-Month Report**

Recommendations of the external reviewers requiring follow-up (recommendation # in brackets)	Proposed follow-up (ACAPLAN)	Responsibility for follow-up	Timeline for addressing recommendations	18-month implementation report
<p>Maintain the curriculum in French at least for the two first years and, if possible, for the mandatory courses of the third and fourth years (#1)</p>	<p>The Unit should look within their own ranks to prioritize and organize their courses. The Unit should also consider a bilingual degree, and build opportunities for the students to obtain a certificate of bilingualism.</p>	<p>Unit</p>	<p>Fall 2016</p>	<p>1) In <i>Recommendation 1</i> of the External's report, Dean Abou-Rabia asked us to "look within to see what needs to be improved in order to recruit and retain students to its French (and English) programs". To recruit more students into our programs, we have increased our involvement in outreach activities both on campus (lab demonstrations) and via Skype (Virtual Researcher on Call / Experts Virtuels). We have also increased our participation to events such as the Ontario University Fair and the LU Open House. We have also revived our Chem-Biochem Student Club, and helped jump-starting a Facebook page for the Club. We have also modified the lab report format for our 2nd year courses, a move that, we believe, will help with student retention (see #24, page 6 of this document).</p> <p>2) As part of our response to ACAPLAN's program sustainability exercise, we are currently working on changing our "Biochimie" program to a bilingual one.</p>

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Pursue accreditation for the Biochemistry Program (#2)	The Unit will undergo CSC accreditation review in 2015. The unit agrees to apply for accreditation for the Biochemistry degree.	Unit	2015-16	3) CSC accreditation for our Biochemistry program was secured in June 2016.
Rationalize and plan course offerings on a 2-3 year cycle (#4, 28)	The Unit should find better ways to communicate the course offerings to the students.	Unit	Fall 2015	<p>4) For the 2017-2018 academic year, we have considerably limited the number of undergraduate low-enrolment 3rd and 4th year courses, which will then be offered through course cycling.</p> <p>5) During the preparation of teaching workloads, graduate students were consulted for their preference in a limited choice of 5000-level courses to be offered next year.</p>
Standardize syllabi forms (#8)	The Unit should use a recently adopted template by the Faculty.	Unit	Fall 2015	6) All faculty are now using a standardized form for their syllabi.
Harmonize the program of Biochemistry with that of Biochimie-option biotechnology to offer the same formation in French and in English. (#9)	The Unit has already implemented this recommendation by implementing a Program change in the French biochimie.	Unit	Fall 2016 (or after CSC accreditation review, and upon hiring)	7) The French "Biochimie" program is now identical to the English one.
Develop a course in Polymer Sciences (#10).	The Unit should decide how important this course, especially for the upcoming CSC accreditation review. If it is important, they should build a case for hiring.	Unit, Dean		8) A course entitled "Introduction to Polymers" (ENGR-3476) is offered by the Bharti School of Engineering. We are currently in discussion with the School to adjust the pre-requisite and allow our students to take this course.

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Improve training in analytical chemistry with newer equipment and facilities (#11, 20)	Unit to decide on discarding obsolete equipment and consolidating equipment in common rooms; Work with the Dean to find appropriate room, and renovate as needed.	Unit, Dean		<p>9) Upon his retirement, Dr. Ulibarri left several high-end pieces of instrumentation to the department. These will help us improve our analytical chemistry capabilities.</p> <p>10) The RIE building, now under construction and scheduled to be opened in 2018, will house a Central Analytical Facility. This will be a major asset for our analytical chemists and their trainees.</p>
Consolidate biochemistry and related courses, especially cell biology (#12), advanced cell biology (#13), DNA (#14), enzyme (#15); and review the delivery style of experimental biochemistry (#17).	This is potentially solved with a new person currently being hired in biochemistry. These opportunities to improve should be submitted as a part of the CSC accreditation review scheduled for 2015.	Unit	Fall 2016 (or after CSC accreditation review, and upon hiring)	<p>11) Cell Biology (BIOL 2126) is now a required course in the Biochemistry program.</p> <p>12) Advanced Cell biology (CHMI 4207) has been introduced as a new course.</p> <p>13) Enzymology (CHMI 3236) is now a new elective course in the Biochemistry program.</p> <p>14) Although we agree that adding a lab component to our Recombinant DNA Technology (CHMI 4226) course is a priority, this cannot be done at this time due to limited resources and staff (see 16 below).</p> <p>15) Experimental Biochemistry (CHMI 3227): In addition to the course coordinator and a graduate student, a professor has agreed (on a voluntary basis) to help in the evaluations of the student seminars.</p>

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Boost human resources: Faculty, technologist (#19)	Replacing departed Faculty members should be done on a case-by-case basis and based on needs. (Unit) Hiring of a second technologist (electronics) has been recognized by the Dean.	Unit, Dean		<p>16) In our staffing plan submitted to Dean Abou-Rabia in the fall 2016, we reiterated our need to replace 6 faculty members and 1 laboratory technologist who resigned/retired in recent years. Considering the current budgetary climate at LU, it is undetermined whether any of these positions will be filled.</p> <p>17) No decision has been made by the administration regarding the recruitment of a second electronics technologist, even though Dean Abou-Rabia agreed that this should be a priority.</p>
Establish a formula for team teaching and with cross-appointees (#19)	Unit, to draw a Table of cross-appointees and their contribution. The Unit should work with the Dean for assigning credit formula.	Unit, Dean	Fall 2015	<p>18) Currently, one cross-appointed faculty (Dr. Caron – School of the Environment) is actively teaching in our department. This involvement of cross-appointees is now more difficult due to the recent efforts by the administration to reduce overloads.</p>
Put in place a plan for replacing obsolete equipment and create centralized facility (#20, 21)	Unit and Dean to find and assign the room, renovate as needed. Ideally, this should be done with the Campus renovation initiative.	Unit, Dean	Fall 2016	<p>19) As stated above, the RIE building will go a long way to improve our access to modern equipment. However the nature of the equipment housed at the RIE facility remains to be determined.</p>
Find quality space for students, instead of labs (#22)	Unit and Dean to find and assign the room, renovate as needed. (include as part of Campus upgrade)	Unit, Dean		<p>20) Our department has recently converted office S-515 into a graduate student office.</p>

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Clean-up the Web page for the degree options, majors, minors, certificates, and what these mean (#23, 24)	Unit (clean-up the web site); Unit and Dean: to work on an accounting formula for enrolment in minors, majors, certificates, options for proper credit to the Program and student advising.	Unit, Dean	Fall 2015	<p>21) We have worked with IT to clean up our programs page on the LU website.</p> <p>22) The departmental Web page is now live: English: https://laurentian.ca/dept/chemistry Français: https://laurentienne.ca/dept/chimie</p> <p>23) Five members of the department have volunteered to act as academic advisors for the Biochemistry (Drs. Gauthier, Siemann and Omri) and Chemistry programs (Drs. Gauthier, Gray-Munro, Arteca). Students are frequently reminded that they can approach any of these individuals for information or counseling regarding their academic career.</p>

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Review reasons for low enrolment in the Program, and remedy for the situation (#25);	The Unit should undertake a critical self-review of the reasons why enrolment in their Program is low. The CSC accreditation review is a good occasion to undergo this exercise, and they should come up with a solution with a 5-year plan.	Unit	Submit plan in Fall 2016	<p>24) During the CSC site visit, several of our students have complained of the heaviness of the workload in their second year. In particular, having to complete 3 to 4 lab reports every week was seen as a major challenge by the students. In order to lighten their workload (and hopefully improve retention), all the faculty teaching second year CHMI courses have met in the summer of 2016 and have agreed to a) limit full lab reports to one per week, the other lab reports being more succinct, and b) ramp up the writing of the long lab report over several weeks in order to better teach students how to present their data. We have implemented this change in the fall of 2016, and will evaluate its success at the end of this academic year.</p> <p>25) Data obtained from Tableau indicates that the enrolment in the Specialization in Chemistry is on the way up (from 16 students in 2013-14 to 27 students in 2014-15 and 36 students in 2015-16.). That have witnessed an increased interest in our Chemistry programs at the last 3 OUF and LU Open House events is indicative that this trend in increased enrolment is not a temporary spike.</p>

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Address the long time to graduate (Graduate students) (#27)	The Unit should do a self-analysis to solve this issue. For example, the Unit should implement more frequent committee meetings, and rigorously implement it.	Unit		<p>26) Traditionally, the scheduling of supervisory committee meetings has been the responsibility of the student, with the supervisor ensuring that these meetings occur on a regular basis (normally every 6 months). Our graduate coordinator is now taking a proactive role in this process by communicating with both students and supervisors when it is time to schedule a committee meeting.</p> <p>27) One ongoing issue is that a number of students finish their experimental work on time, but take much longer than expected to complete their thesis. This is often the case when students have found employment while writing their thesis.</p>
Seriously consider co-op or placement (#29)	Unit to work with the Dean to include Placements as a part of the degree (a new centralized Co-op office has been proposed)	Unit, Dean		<p>28) Our Departmental Experiential Learning Committee is currently studying the implementation of a Co-Op component as part of the Specialization in Chemistry.</p>