

**REPORT OF THE ACADEMIC PLANNING COMMITTEE
TO THE REGULAR May 2014 SENATE**

FOR INFORMATION

RECOMMENDATIONS AND COMMENDATIONS OF ACAPLAN FOLLOWING THE CYCLICAL PROGRAM REVIEW OF LAURENTIAN UNIVERSITY'S UNDERGRADUATE PROGRAMS IN BIOLOGY / PROGRAMMES DE BIOLOGIE DE 1^{IER} CYCLE

Final Assessment Report & Implementation Plan November 2013

In accordance with the Laurentian University's Institutional Quality Assurance Process (IQAP), the Final Assessment Report has been prepared to provide a synthesis of the external evaluation and Laurentian's response and action plan. This report identifies the significant strengths of the program, opportunities for program improvement and enhancement, and sets out and prioritizes the recommendations that have been selected for implementation.

The report includes an Implementation Plan that identifies who will be responsible for approving the recommendations set out in the Final Assessment Report; who will be responsible for providing any resources made necessary by those recommendations; any changes in organization, policy or governance that will be necessary to meet the recommendations; who will be responsible for acting on those recommendations; and timelines for acting on and monitoring the implementation of those recommendations.

SUMMARY OF THE CYCLICAL PROGRAM REVIEW OF THE UNDERGRADUATE BIOLOGY PROGRAM

Laurentian University currently offers four specializations within the four-year undergraduate biology/biologie program:

- (1) Biomedical Biology/Biologie biomédicale
- (2) Ecology/Biologie environnementale
- (3) Restoration Biology
- (4) Zoology

The Department of Biology submitted its Self-Study (December 2012) to the Office of Vice-President Academic and Provost of Laurentian University. Volume One presented an overview of the two programs; the faculty; the physical resources available; the students of the past, present, and future; the program regulations and courses; the strengths and weaknesses; and the areas requiring improvement or enhancement. Five appendices were attached to the self-study: APPENDIX A: Current teaching loads (graduate and undergraduate); APPENDIX B: Laboratory Equipment available for core Faculty; APPENDIX C: Program curricula; APPENDIX D: Enrolment; APPENDIX E: Course Outlines. Volume Two provided a collection of the curricula vitae of core faculty members.

In April 2013, the Review Team conducted a site visit. Dr. Judy Anderson, Head of the Department of Biological Sciences at the University of Manitoba, acted as the External Consultant and chaired the team which included the following members, all from Laurentian: Dr. Rizwan Haq (Department of Physics) and Dr. Yvon Gauthier (Sciences de l'éducation), plus three students from the program: Erin Van Breda, Melissa Menard, and Guylaine Gauthier.

Over the course of two days, the team was able to see teaching and research laboratories (including the greenhouse, herbarium, and animal museum), the Vale Living with Lakes Centre, and the library. Meetings with students, the Vice-President Academic and Provost, the Vice-President Francophone Affairs & Research, the Dean of Science and Engineering, the Chair of Biology, the technologists, the faculty, the academic advisors in Biology, and the cross-appointed professors to Biology were also included.

The External Reviewer's Report (May 2013) praised the curriculum with respect to the current state of the discipline, the evidence of significant innovation of the program relative to other programs, the effectiveness of the modes of delivery in meeting the program's identified learning outcomes, the effectiveness of academic services to support the programs, the quality indicators, the faculty qualifications and their record of achievements, the graduate rates of graduation and employment after graduation, and the initiatives taken to enhance the quality of the program. The team noticed the level of dedication the faculty have for the students and the impacts it have on the student's life, both academically and personally.

However, the report listed a number of concerns as well: the program fails to appeal to the 3 cultures as outlined in the institution's mission (lacking initiative to engage or attract people of First Nations, Inuit, or Métis background), a need to revise the lab component in some courses (Animal Behaviour, BIOL-4717, and Genetics, Biol-2007, were specifically mentioned) as they did not incorporate useful laboratory exercises, existing facilities that "are barely enough for the desired high level of laboratory instruction," "the provision of effective levels of human resources is a huge issue" (attributing to the lack of staff), the department requires the development of new sources of data from the institution, and finally there is a major lack of assessment done on many issues that directly affect the students. Among them: "there is no specific oversight by the department of the consistency of courses offered in French and English" and its syllabus and methods, lack of data on admission averages for comparison against student performance in progressive semesters, there was no information on graduation rate or length of studies by students in the various programs, lack of summer or additional courses by distance to help spread out course loads, "the institution does not track student progress post-graduation or post-departure," and "no specific data available to the committee on the proportion of applications that result in registration, attrition rates in various program specializations, times-to-completion, grades and achievement by students in their final year, graduation rates, awards, or in-course reporting by students on teaching."

Furthermore, the review team noticed that faculty members in the Department of Biology had "expressed many frustrations regarding the Dean's apparent disregard or unwillingness to pay much attention to their concerns," noting that the "teaching challenges and student and faculty success in Engineering and other non-Biology programs took more of his attention than responding to questions from the team." Moreover, the department expressed a tremendous uncertainty about the future of Biology Undergraduate Programs, fearing that the Biomedical

and Biomédicale programs would be lost (the French Biomédicale program being deliberately let go and the English Biomedical program moving to the new Faculty of Health Sciences). Despite the Vice-President Academic stating with certainty that no programs would be moved into another faculty nor the plan of pruning a French program, the department needs to know very soon with certainty that the Biology programs will all continue with necessary resources for academic and technical staffing before a toll on the level of collegiality, commitment to the department and Laurentian University, the moral of staff and students, and the quality of education provided to students begins to nosedive. Finally, the report stressed that “it is important for higher administration to confirm for the department that student demand for programs and courses is an exceedingly important driver for resource allocations” and that “the department should unite to decide how best to sustain and enhance the biomedical and biomédicale program.”

The Chair of Biology responded to the External Reviewers’ Report (June 2013), with which the Dean of the Faculty of Science and Engineering commented on and submitted to the Vice-President and Provost in mid-July.

SUMMARY OF THE REVIEW TEAM’S RECOMMENDATIONS (R), THE CHAIR’S RESPONSES (C), AND THE DEAN’S RESPONSES (D)

A) Recommendations for external action from outside the Department of Biology

R1): The University should clearly communicate to the Department of Biology that its undergraduate programs will be sustained. This includes the Biomedical and Biomédicale programs that have the majority of student enrollments and faculty engagement in teaching. With clear confirmation from the Vice-President Academic that no programs would be moved to another faculty and that the French program will be continued, the department can unite to plan accordingly for recruitment and use of resources.

C1): The University will hire a tenure-stream Francophone professor to support the Specialization Biologie Biomédicale; appointment to begin 1 July 2014. Nevertheless, better communication is required by the University. The University should clarify how student enrollment in programs and faculty replacements relate in order to make a meaningful planning by the Department possible.

D1) The hiring of a bilingual faculty member in biologie biomédicale/biomedical biology to replace the retiring Dr. Leo Leduc was set high in the faculty replacement priority list in order to maintain these high enrolment programs. The position has been approved and advertised.

The Department was concerned about losing some of its programs during the University wide Faculty restructuring exercise to the forthcoming Faculty of Health. This ended up being not true. However, discussing on the internal restructuring of the Faculty of Science and Engineering has also started this fall. There is a proposal to thematically group all five departments in the Faculty into three schools. One of the schools would be the School of Life Sciences which would include all life science related programs such as Biomedical Biology, Biochemistry, and Biomedical Physics. More discussion on this will take place in the next few months.

R2): Re-build appropriate levels of staffing to support programs (courses, delivery, laboratories) and the effectiveness of current staff (academic and technical).

C2): The Department should hire a bilingual technologist to fill the recent vacancy; appointment to begin 1 September 2013. **(updated: July 2014)**

The Ecology portable lab has URGENTLY to be replaced. Without this the labs of BIOL 2356 Principles of Ecology cannot be offered. This course is mandatory for a large number of programs and essential for the LU's signature programs in environment and in conservation/restoration. There will be 8-10 lab sessions each week during the fall term, as the student number is expected to increase due to new curricula (environment, biomedical).

D2) I will work on the replacement of the Ecology portable as it was shown this fall to be in a very bad shape.

A lab assistant was hired this fall on a part time basis from the Dean's budget to alleviate the technical shortage in one area. However, I will conduct a full review of the technical staffing in Biology before committing to a new full time technologist.

R3): Ensure the Faculty priorities are congruent with Laurentian University's institutional priorities to support French and English programming. This will ensure that department planning can be effective and extend past the immediate term into the future. This includes but is not limited to recruitment priorities to sustain programs of required courses. It also relates to sustaining the 'three cultures, two languages' initiative of the institution.

C3): The Department will develop a vision and strategy with clear deliverables and timelines. The future of the Francophone programs has to be clarified. To increase the appeal for Francophone students, the Specialization "Biologie Environnementale" is in the process of being changed to Specialization "Zoologie". The Department should hire an indigenous person to teach a Biology course in Ecological Traditional Knowledge to fulfill the University's tricultural mandate.

D3) The University's support to the French/English Biomedical Biology programs was made clear by committing the resources to replace Dr. Leo Leduc.

I do support introducing indigenous components to the Ecology/Environment programs. However, with the bringing of the School of the Environment to the Faculty of Science and Engineering, it is yet unclear whether such a new hiring would take place in the Department of Biology or the School of the Environment. This will be part of the discussion on the internal restructuring of the Faculty in the incoming months.

R4): Teaching assessments by students are mandatory and need to happen on a consistent basis. Summaries of teaching evaluations on each course and for every instructor would be valuable for the Department Chair in ongoing mentorship and feedback to faculty, and for evaluation of program outcomes in relation to teaching assignments.

C4): The Department should work with the Centre for Academic Excellence to create a voluntary standardized departmental teaching evaluation that goes to the Department Chair.

R5): The institution should aim to provide better and more data for program review and improvement, as institutional data are essential evidence for use in assessing the quality of education.

C5) Yes, please.

R6): Foster improved communications between the department and the Dean of Science & Engineering. This is essential to sustaining the programs and the morale of the Department of Biology, including respectful interactions related to development of priorities.

C6) Communications between the Department of Biology and the Dean of Science & Engineering are currently EXCELLENT! There has been a tremendous improvement since last spring when the review was conducted.

D6) I have been meeting regularly with the Department Chair as well as with many faculty members individually. I also had a meeting with the Department Council as a whole. A sense of openness and trust has been building up. This has led to quite an improvement in the morale of the Department.

R7): Continue improvement of the university website, so ensure access to information for faculty and students.

C7): Departmental information available on the University website should be improved. It may happen with the new University website. There is some improvement, but progress has so far been slow.

B) Recommendations for the Department of Biology

R8): Improve communications with students by seeking student input and feedback, and provide uniform and systematic information in a timely manner by utilizing D2L and an improved departmental website. Increased opportunities (and necessary support) for distance-education and summer-session courses should be explored.

C8) The Department will maintain a 2-year plan of offered courses and teaching loads. The Department will regularly organize meetings with the students to obtain feedback about the program, and host an annual Student Open House for second and third year students. The open house will provide information about different specializations and curricula, and about the procedure and topics for 4th year theses.

The website committee of the Department will investigate ways to improve information about the structure of the programs, curricula, opportunities for students etc. As the limiting factor with respect to information on the website is the University, the Department will investigate alternative ways to bring such information to the students.

R9): Activate a strategic plan for effective recruitment to sustain all the programs (French and English), with particular attention to recruiting faculty who conduct research in areas outside ecology, an area of strength in the department's research. This will restore the necessary

balance of expertise in Biology-related disciplines and enable effective teaching in biology and biomedical programs (French and English).

C9) The answer originally was: The Department has in the last few years produced a few plans, including a strategic plan. However, there has been no sign that the University would have taken any of those seriously. The indecisiveness from the part of the Department about its commitment to directions of Biomedical and/or Restoration Ecology is at least partially a consequence of not being clear about factors determining the allocated resources in the future. On the one hand, the University emphasizes recruitment and growth in student numbers as important (Biomedical), but on the other hand it seems to commit future support only on areas specially mentioned in the strategic plan (Restoration Ecology). Hence, any further planning in the Department will be futile without a clear communication from the University what it actually will support. How would the resource allocation look to a Department with undergraduate programs only in the area of Restoration?

Addition in December 2013: It seems that the capacity to teach Biologie Biomedicale can be maintained when a new faculty member in this field will be hired. This is, however, a minimalistic solution. In the long term collaboration with other related programs will be intensified, and more hires in the field should be considered.

The Department certainly has to improve its efforts to attract more students in other fields than Biomedical Biology. The new major and minor in Restoration Ecology will hopefully be the beginning of this.

R10): Seek new ways to provide additional opportunities for students to complete an Honours thesis research project, and take steps to standardize communications (and their timeliness) regarding opportunities, timelines, and research-related matters between the department (through the course director and a small committee) and the student body.

C10) The Departmental Chair is closely collaborating with the Instructor of the honours's thesis course on possibilities to improve the flow of information between students and Department. Possibilities are annual meeting with third-year students as suggested in the report, written information about the process of conducting a thesis and available topics, and if possible, an improved website for this purpose.

The department will increase possibilities for 4th-year theses with core faculty and cross appointees, including better coverage for costs of research.

R11): Work to resolve the frustratingly large burden of scheduling issues that interfere with the effectiveness of student learning, the quality of the programs, and effectiveness of staff and faculty in providing the programs.

C11) The issues around scheduling are indeed frustrating and time-consuming. To resolve it the Department needs advance knowledge about available instructors, including the number of sessionals. Last-minute negotiations about available overloads are not a way to provide a schedule which would allow long-term planning by the students. The Department also needs the University to support the maintenance of the long-term teaching plan in case of unpredictable events, and help in solving problems arising if wishes of individual faculty do not match the needs to provide all necessary courses.

R12): Evaluate the course load required of students in senior years, particularly related to the expectations of students in lab assignments and in the number and type of contact hours required to complete programs.

C12) The Department has heard from the students that a large variety of labs and assignments is valued by the students, but is also aware of the stressfully high workload many of the assignments cause. The issue has to be discussed in the Department, with a thorough input from the students. The Department will discuss whether it is possible to better coordinate assignments among different courses to reduce the stress while maintaining quality of the courses. The Department will evaluate student total workload during the term for quality and quantity, and adjust if necessary.

However, the problem is probably not limited to Biology and there is some information that some of the problems of a high workload may relate to non-biology courses. If that should be the case, a solution would require discussions between the Departments.

R13): Replace the lost technologist position in order to support laboratory teaching, especially but not exclusively for the French programming. Utilize the insights of faculty and technical staff to maintain morale and engage their problem-solving skills for longer-term planning.

C13) The lost technologist should be replaced, preferably with a bilingual person with expertise in the fields of microbiology and molecular methods.

R14): Ensure that student evaluations of teaching are conducted uniformly across courses, making some changes in the survey tool to improve their value, and then use those assessments to address problems that are consistently identified by students. This will increase student (and faculty) faith in the mechanism.

C14) The Department agrees that the students indeed do not feel the evaluations being very valuable. And as mentioned earlier in the executive summary of the report (Point A-iv) the evaluations are currently not even available for the Department. However, the Department cannot do much on this issue, but encourages the University to take steps to improve the situations so that students feedback would be acted upon and that the students would feel that their feedback is a valuable tool to improve teaching.

R15): Address instances of inappropriate faculty behaviour toward students.

C15) The University should establish an independent ombudsman (e.g., in the Centre for Academic Excellence) to handle concerns of students across the Faculty of Science and Engineering.

When students come to see the Chair of the Department about behaviour by faculty members towards students which may have been inappropriate, the Chair always discusses the issues with the students, and then discusses the issues with the corresponding faculty member. Then he reports back to the students what the outcome of the discussion with the Faculty was. Beyond such a discussion with the faculty member there is not much the Department can do.

Students rarely pursue their issue further. Students often say that somebody listening to their complaint already helped, and also agree that not much actually can be done. But as in previous point (vii), Department would welcome efforts by the University to improve the procedures so that in case of justified complaints faculty behavior could be easily addressed. A possibility would be an “ombudsman” in the Dean’s office, who has time to deal with the concerns of the students, time to evaluate the validity of the complaints, and power, together with the Dean, to ensure that corrections are done if deemed necessary.

**LAURENTIAN QUALITY ASSURANCE IMPLEMENTATION PLAN FOR THE DEPARTMENT OF BIOLOGY
NOVEMBER 2013**

Recommendations Requiring Follow-up	Laurentian Follow-up	Responsibility and Timeline
1. Hire a tenure-stream Francophone professor to support the Specialization in Biologie Biomédicale; appointment to begin 1 July 2014.	Dean will consult all department / schools within his purview concerning their faculty needs, will prioritize and make recommendations to Provost	Ongoing Dean of Science and Engineering
2. 13. Staffing to support delivery of the programs and laboratories should be reestablished.	Dean will conduct a full review of the technical staffing in Biology and make recommendations to Provost	Ongoing Dean of Science and Engineering
3. The Faculty priorities need to be congruent with those of the institution, i.e., the ‘three cultures, two languages’ initiative of the institution.	Dean in consultation with the Provost, and Associate V.P.s Francophone and Indigenous programs will review the strategic plan of the Faculty to provide guidance for departmental planning.	December 2015 Dean of Science and Engineering, Provost, Associate V.P. Francophone and Associate V.P. Indigenous Programs
4. 14 Chair needs information from the students’ assessment of teaching in ongoing mentorship, feedback to faculty and for evaluation of program outcomes in relation to teaching assignments.	In preparing the annual reports, the Dean will flag and investigate with faculty members, reasons for teaching evaluations that are significantly below average. Strategies to remedy the deficiencies will be sought but shall not include sharing these evaluations with the Chair since that is precluded by the Collective Agreement.	Annually Dean of Science and Engineering
5. Data related to entrance grades (from high school),	The Provost will work with the Office of Institutional	Provost and the Office of Institutional Research

catchment area, years to program completion, student performance in all courses in a program, etc. should be available to allow the department to make the appropriate adjustments to their programs and to facilitate program reviews.	Research to ensure that Deans and Departmental Chairs/School Directors are provided with access to the data along with the necessary training.	
7. Continue improvement of the university website.	Provost will make every effort to impress on the IT department the urgent need for programs to have accurate program information on the university website. The Departmental Website committee will continue to work on improving the information on programs on the website.	Ongoing Provost Departmental Website Committee
8, 10, 12. The department needs to deal with students' concerns with respect to issues such as course offerings, the timetable, the relevance of laboratory exercises, the opportunities for Honours thesis projects, perceived inequality between offering in English and in French, etc.	The Chair of the Department and the coordinators of the various programs will meet regularly with the students to obtain feedback on program issues with the view of addressing problems in a timely fashion. The department will host an annual Open House for 2 nd and 3 rd year students to provide information on the thesis options and curricula.	Ongoing Chair and program coordinators
9. Activate a departmental strategic plan with attention being paid to areas outside of ecology.	Department must produce a strategic plan. Dean must review the departmental strategic plan and give guidance to help the department set achievable goals.	December 2015
11. Work to resolve scheduling issues related to allocating classes in French and scheduling the many laboratory sessions.	Dean will review the department's difficulties related to the classes in French and laboratory sessions and make recommendations to Provost and or the Associate V.P.	December 2015

	Francophone.	
15. Address instances of inappropriate faculty behavior toward students.	Inappropriate faculty behavior towards students cannot be tolerated. Chair must evaluate, to the best of their ability, the gravity and the validity of the student's complaint and discuss problems with the faculty member. Repeated inappropriate behavior or situations the Chair deems that they are not able to handle should be reported to the Dean of the Faculty.	Chair, Immediate
Ensure that the Ecology portable lab is replaced.	The Chair and the Dean will work with the Director of Physical Plant and the lead of Campus Modernization to develop a plan for the replacement of the portable for September 2014.	September 2014 Chair, Dean of Science and Engineering, Director of Physical Plant and the lead of Campus Modernization.

MONITORING THE PLAN

The Dean of the Faculty of Science and Engineering shall be responsible for monitoring the implementation plan. The details of progress made shall be presented in the Dean's Annual Report and filed with the Vice-President Academic and Provost. After an elapse of 18 months, and per Laurentian's IQAP policy, the Dean will report on each of these recommendations to ACAPLAN. An Executive Summary and the monitoring reports will be posted on Laurentian University's web site.