



Senate Committee on University Planning

Academic Unit Review Summary: Department of Chemistry and Biochemistry

Site Visit	October 25-26, 2018
Informal Response to Planning	January 22, 2019
Formal Response to Planning	March 25, 2019
Implementation Update	October 2019
Midterm Review	2022-23

Review Team Members:

- Dr. Brian Wagner, University of Prince Edward Island (Chair, Review Team)
- Dr. Valerie Booth, Memorial University of Newfoundland
- Dr. Laurie Ricker, Math and Computer Science, Mount Allison University

Note: The following recommendations are taken mostly verbatim from the external review. For context they should be read in conjunction with the department's formal response.

Recommendations of the Academic Program Review

Recommendation 3.1.1. The Department should consider areas of potential growth and collaboration with another unit on campus to develop and propose a new interdisciplinary, cross-appointed tenure-track position which could enhance the current faculty complement in the Department, and potentially bring new students through new programming.

Recommendation 3.1.2. The Department should work on ways to encourage and convince the university to restore 12-month contracts for lab technician positions. This full-year presence of the lab technicians is essential for proper planning, revising, and development of the undergraduate labs.

Recommendation 3.2.1. With the student lab priorities and modernization identified via the previous recommendation in mind, the Department, including both faculty and lab instructors should draw up a prioritized list of equipment purchases needed for the teaching labs. Then, the Department should think strategically about sources of funding for this equipment, including via the small budget from the Dean of Science, possible re-allocation of endowed funds, industry connections, provincial funding pools, and/or other potential sources.

Recommendation 3.2.2. The Department should maintain the standards in terms of required and elective courses and lab hours to continue to meet the CSC accreditation criteria and should re-apply for accreditation when it comes up again. The Department should also leverage the fact that its undergraduate programs are accredited in its recruitment efforts, in conjunction with those of the University.

Recommendation 3.2.3. The Department drastically reduce, or eliminate, the Independent Study courses and strategically redeploy faculty time thus freed-up to implement more efficient mechanisms to offer upper year courses to students. Since so much time and effort has gone into supporting strong lab and critical thinking skills in the first two years of their education, students are well prepared to take more specialized courses in their upper years and will be able to contribute to the presentation of material in such courses. There are a number of different mechanisms to more efficiently offer upper year courses suggested in the report.

Recommendation 3.2.4. If the Independent Studies courses are to be continued, there needs to be a standard, rational, well-communicated (to both faculty and students) method to assign grades to students. The grading scheme should involve a faculty member beyond the main supervisor – e.g., a component that comes from a short talk or poster presentation graded by a panel of faculty. It would be very do-able and beneficial to organize all the students doing Independent Studies projects in the same semester to present on the same day to each other, as well as to as many faculty members as can feasibly attend.

Recommendation 3.2.5. The Department should re-examine the program requirements and course time tabling to identify ways to reduce the number of course requirements for biochemistry degrees, and to avoid stacking some semesters with many required courses and while other semesters have a dearth of relevant courses for students to take.

Recommendation 3.2.6. The number of labs and particularly lab reports should be strategically reduced according to where the Department feels their priorities lie (while still meeting minimum requirements for CSC accreditation). The faculty and lab instructor time freed-up by this change should then be used to update the lab components of courses and to better harmonize the lab and lecture component of courses.

Recommendation 3.2.7. With privacy concerns in mind, the Department should consider making it standard practice to pass information about students with learning disabilities on to lab instructors.

Recommendation 3.3.1 The Department should encourage individual faculty members to take more advantage of the various sources of funding for undergraduate summer researchers, and thereby increase the research activities in the summer months.

Recommendation 3.3.2 The Department should make sure that they have an active presence, as far as possible, in any University Strategic planning, to ensure their needs and concerns are addressed, and to help establish the balance and synergy between the teaching and research missions of the University, in a way that supports the integrated approach of the Department.

Recommendation 3.3.3 The Department should develop a strategy to prioritize and fund repairs and replacements for obsolete or failing research instrumentation.

Recommendation 3.4.1. The Department should review its current working relationship with the Library, and make sure that all available resources are being used in a way that most benefits the department. A Library representative should be assigned within the faculty in the department to liaise with the librarians on important and relevant decisions in terms of subscriptions and holdings.

Recommendation 3.4.2. The Department should consider establishing librarian-run library orientation session for all majors and honours students in the Fall of their second year, so that students have a better understanding of the electronic and physical resources available to them, with the possibility of a refresher session for Honours students in the Fall of their fourth year.

Suggestion 3.3.1 The Department could explore ways to encourage graduate student participation in research programs, including: updating and promoting the current available Master's program in Science at Mount Allison; investigating the development of a new graduate program which better reflects the Department's needs and mission; or through Adjunct positions of Departmental faculty at other institutions (including those with PhD programs).