

MEMORANDUM

ATTENTION: Senate

TEL

FROM: Peter Keller, Vice-President, Academic and Provost, and Chair, SCUP

RE: External Review Mid-Cycle Report for the Department of Biological Sciences (SCUP 17-01)

DATE: January 16, 2017

TIME

At its January 11, 2017 meeting, SCUP reviewed the Mid-Cycle Report for the Department of Biological Sciences which resulted from its 2013 external review. The report is attached for the information of Senate.



OFFICE OF THE
VICE-PRESIDENT, ACADEMIC

SCUP 17-01

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MEMORANDUM

ATTENTION: Peter Keller, Chair, SCUP	TEL
FROM: Gord Myers, Vice-Provost and Associate Vice-President, Academic	
RE: External Review Mid-Cycle Report for the Department of Biological Sciences	
DATE: December 8, 2016	TIME

The External Review of the Department of Biological Sciences was undertaken in April 2013. As per the Senate guidelines, the Unit is required to submit a mid-cycle report describing its progress in implementing the External Review Action Plan. The mid-cycle report, together with a copy of the Action Plan approved by Senate, is attached for the information of SCUP.

- c: Elizabeth Elle, Chair, Department of Biological Sciences
- Claire Cupples, Dean, Faculty of Science



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BIOLOGICAL SCIENCES**

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MEMORANDUM

ATTENTION	Glynn Nichols Director, Academic Planning and Quality Assurance	DATE	December 7, 2016
FROM	Dr. Elizabeth Elle Chair, Department of Biological Sciences	PAGES	1/1
RE:	Update to the Action Plan from the 2013 External Review of Biological Sciences		

Attached please find an update to our Action Plan, resulting from the External Review of Biological Sciences that occurred in April of 2013. We have made great progress on many of the items identified in the review and are looking ahead to further accomplishments prior to our next review in 2020.

External Review Update for the Department of Biological Sciences

Action	Progress Made
1. Programming	
1.1.1 Undergraduate	
<ul style="list-style-type: none"> • Address concerns about course access and time to degree completion by: <ul style="list-style-type: none"> a. Improving communication regarding our normal 2-year cycle of course planning. b. Determine mechanisms to improve orientation of first year students to SFU and the Biology program. Improved orientation should address long completion times when they occur for reasons other than student uptake in our excellent Co-Op program. c. Improving course availability in our popular Cells, Molecules, and Physiology stream. We will determine if we can streamline our curriculum to improve availability of essential upper-division offerings with no additional hires, and whether hiring sessionals or a lecturer to assist with the teaching of lower division courses could improve availability of research faculty to teach upper division. 	<ul style="list-style-type: none"> a. We have put our 2-year course plan in a more prominent location online, and post the schedule directly outside our advisor's office. Students are reminded of our planning cycle by our advisor and during the workshop mentioned in "b". b. We have a new 'Map My Degree' workshop offered by our Department Undergraduate Curriculum Committee (DUCC) Chair and our Undergraduate advisor (with the help of Biological Sciences undergraduates) in the fall semester. The first two workshops had an attendance of 43 (2015) and 35 (2016) across both the Burnaby and Surrey campuses and were very well received. We present student options in streams and programs, give advice on planning their course progression, and help de-mystify the registration process. We additionally have grown our spring Biology Day event which is both a social event for majors and those thinking about majoring in Biological Sciences, and an opportunity to celebrate undergraduate opportunities and successes in research and Co-Op. c. We are in the process of regularizing new courses that contribute to this stream (BISC 425 Sensory Biology, BISC 421 Models In Biology, a Cell Physiology Lab course we share with BPK). We have eliminated low enrollment courses from the calendar. We hired a Lecturer in this area (after a retirement) and find that course availability is improving. We continue to work on re-designing this stream to both maintain its attractiveness to students and to improve the efficiency of offering.

<p>d. Working with other Life Sciences Departments to improve and streamline the delivery of the lower-division core and increase cross-Department access to upper-division courses.</p>	<p>d. Biological Sciences has been working closely with Molecular Biology & Biochemistry (MBB) and Biomedical Physiology & Kinesiology (BPK) to evaluate overlap and omission in our programming. We hired a consultant to help produce a curriculum map and report. There have been fruitful meetings both among the three Life Sciences Chairs and among the faculty responsible for teaching high-enrollment courses required in multiple departments (such as BISC 202, Genetics). We now have a shared course between BISC and BPK and are discussing ways to re-envision pre-requisites to improve access across the three departments by students throughout the Life Sciences.</p>
<ul style="list-style-type: none"> We currently include student representatives from the Biology Student Union (BSU) on our Undergraduate Curriculum Committee, co-organize socials with the BSU, and consulted with the BSU during a recent lecturer hire. We will continue to engage with undergraduates in the BSU and will consult with them about other ways to support their endeavors. 	<p>We have strengthened our relationship with the BSU over the past three years. The DUCC Chair has met with the BSU president and DUCC rep at the start of each semester, and DUCC has sought greater input from students on curriculum issues (e.g. the BSU conducted a student survey on participation in the Honours Program; the results informed changes to this program). In addition, the BSU is now regularly involved in a number of outreach activities, such as Science Spooktacular.</p>
<ul style="list-style-type: none"> <i>Not part of the action plan:</i> update on development of educational goals 	<p>We have completed educational goals for our undergraduate streams, and learning outcomes for all of our courses. The course learning outcomes still require some work to make the format and content similar across all courses. We identified both core concepts and skills, and mapped these throughout our curriculum to learn where particular outcomes (e.g. "Identify sources that provide evidence-based scientific information") are introduced vs. reinforced. This provided us with some insight into which goals we could be reinforcing more or introducing earlier, and we are working towards doing this.</p> <p>We have also begun discussions about how we will assess our educational goals, in consultation with the TLC. We expect to have some early assessments complete before our next external review.</p>

1.1.2 Graduate	
<ul style="list-style-type: none"> We commit to ongoing review of our unique professional Master degrees in Pest Management (MPM) and Environmental Toxicology (MET), to ensure these degrees are of the highest quality. 	<p>We have continued to examine these programs, and supported the MET with a new faculty member, hired after a retirement. The Department Graduate Studies Committee (DGSC) recently implemented some changes to fall activities that would allow newly recruited students to identify a project sooner (e.g., earlier deadline for choosing supervisor- moved from end of 4th to end of 3rd semester). We remain concerned about the sustainability of the MET because we have had another retirement of a faculty member in this area and it is not clear if we will be approved for faculty renewal.</p> <p>More broadly, we have been reviewing our specialized degrees carefully but think it may be time to do another full review of all grad programs, rather than singling out the MET and MPM (as recommended by the ERC). We anticipate completing this prior to our next External Review.</p>
<ul style="list-style-type: none"> We will continue to improve our graduate curriculum, and among other actions will consider making BISC 800 (our "Basic Skills for a Career in Science" course) mandatory and integrating aspects of our orientation program within it, and implementing a core course structure specific to each of our two broad subdisciplines (Ecology/Evolution/Conservation and Cell/Development). 	<p>We have made BISC 800 (now entitled "Skills for the Successful Scientist") mandatory for Master-level students. DGSC has more clearly defined objectives and expectations of students and instructors for Directed Readings courses. We have the courses in the area of Ecology/Evolution/Conservation that are now considered "core" (BISC 806, Evolutionary Theory; BISC 830, Community Ecology & Macroecology; BISC 838, Population Ecology) and one in the area of Cell/Development (BISC 834, Essential Cell Biology). We are considering whether to add additional core courses in Cell/Development.</p>
<ul style="list-style-type: none"> We will improve advising and student-supervisor relationships in the Department. This will include consideration of how to enhance ongoing efforts to communicate policies, procedures, and mechanisms for dealing with conflict with our students. 	<p>We have tried some fun ways to improve communication, including posters and electronic displays. The Department Chair and Chair of the DGSC make an effort to attend meetings of our Graduate caucus at least annually if not semesterly. We revised and updated our document on expectations for both graduate students and faculty on their relationship and have publicized it. Our very active graduate caucus has been excellent at conducting polls and bringing any growing issues to the attention of the DGSC. We are an early adopter of the new Degree Audit Program to allow students and supervisors to better track progress through the degree.</p>

	Looking forward, the DGSC will create an attachment for the letter of acceptance sent to new students that contains information regarding expectations. We will encourage new students and their supervisor to discuss these within the first month of enrolment.
<ul style="list-style-type: none"> The External Review Committee noted that our salaries for graduate students are in line with other universities, but given the cost of living in Vancouver, and the requirement that students pay tuition from their stipend, the amount was too low. At the request of our graduate students, the Department will investigate, with the upper Administration, the possibility of tuition reduction or remission for graduate students. 	The Department Chair had discussions around tuition shortly after the external review was completed and was told there is no possibility of tuition reduction or remission. We recently increased the minimum salary that all graduate students must be paid to \$21,000, and as has been our policy for many years, faculty members must agree to provide about half of that salary (current requirement: \$12,000) for any graduate student they would like to accept to their lab
<ul style="list-style-type: none"> <i>Not part of the action plan:</i> update on development of educational goals 	We have adopted educational goals for each of our graduate degrees.
1.1.3 Post-doctoral	
<ul style="list-style-type: none"> Determine how we can better integrate PDFs into the Department, and consider their professional development alongside that of our graduate students. 	We have conducted polls of our PDFs to find out what they are interested in, and are in the planning stages for a 'meet and greet' between PDFs and the DGSC. The Office of Graduate Studies is responsible for oversight of PDFs on campus, and they have embarked on excellent new initiatives such as the Apex professional development program. We publicize these opportunities and our PDFs are taking advantage of them.
2. Research	
<ul style="list-style-type: none"> We are a broad-based Biology Department, with some overlap in teaching and research focus with other, more narrowly defined units on campus. Some recommendations of the External Review Committee suggest they did not understand the breadth of our mandate. We will clarify and better articulate our identity as a Department. 	We have a strong internal sense of identity but this does not always translate outside of our unit. Research interests are multidisciplinary and benefit from the blurred lines between Biological Sciences and other Departments and Faculties. Our recent curriculum mapping exercise, done collaboratively with the two other Life Science departments in the Faculty of Science, has clarified how unique Biological Sciences is; there is much less overlap than previously thought.
<ul style="list-style-type: none"> The Department strongly supports our current hiring plan, which prioritizes faculty renewal in Toxicology, followed as soon as possible with our planned hire in Development. 	We have hired a faculty member in Toxicology but have not yet had an opportunity to move forward with further faculty renewal.

<ul style="list-style-type: none"> We will evaluate and implement mechanisms to raise the profile of our small but excellent Cell and Developmental Biology group. 	<p>The Centre for Cell, Disease, and Developmental Biology (C2D2) is a cross-department and cross-Faculty initiative spearheaded by faculty members in BISC and MBB. This Centre has greatly increased the profile of Cell biology at SFU (through regular meetings, invited seminar speakers, and grant applications) and is enthusiastically supported by Biological Sciences, including by financial commitments for infrastructure improvements.</p>
<ul style="list-style-type: none"> Facilities are in dire need of replacement, as they are inadequate to support modern biological research. We will continue to work with the Administration to find ways to fund facilities renewal. 	<p>Over the past year there has been substantial planning for a new Life Science Research and Innovation building, and Chair Elizabeth Elle has been working with the planning team. We will continue to commit to this process.</p>
<ul style="list-style-type: none"> We recognize that there is an imbalance in the teaching load between faculty associated with our two undergraduate streams. This imbalance can have an impact on research productivity, primarily in our Cell and Developmental Biology Group. We will evaluate faculty teaching workload as associated with undergraduate enrollment, and consider solutions to any imbalance. Solutions could include any combination of changes in the faculty complement, stacking of teaching, streamlining of the curriculum, and collaboration with other Life Sciences Departments to improve course access and curriculum delivery. 	<p>The former imbalance no longer exists. Several faculty members on teaching reduction are back to normal teaching loads. We have brought new faculty into core course teaching to more equitably share the load, and have phased out courses that are no longer popular with students to more efficiently use our faculty teaching resources.</p> <p>Moving forward, we are working with the two other Life Science departments (MBB and BPK) to consider whether more teaching could be shared among units, and to improve the overall Life Science experience for SFU students.</p>
3. Administration	
<ul style="list-style-type: none"> We will implement changes in our Appointments Committee structure to give our teaching faculty greater voice in Departmental decision making. 	<p>We have added a teaching faculty member to our Appointments Committee. We have also revised most of our policies to make them more inclusive of <u>all</u> faculty (specifically policies on hiring, promotion, and evaluation). We will revisit these in the near future to ensure they are in line with the new Collective Agreement.</p>
<ul style="list-style-type: none"> We will review position descriptions of office staff (see "Working Environment") to better understand workloads. If warranted, we will make the case for either re-configuring job descriptions or hiring of additional staff. 	<p>Review of job descriptions is in progress although not yet complete. Our Manager of Administrative Services works closely with our office staff to ensure workloads are reasonable and all work is completed.</p>

<ul style="list-style-type: none"> We have begun consultation with our technical staff regarding workload, and are actively exploring ways to address occasional workload issues that are consistent with union regulations. 	<p>We are pleased that the one-time workload issues that occurred shortly before the visit of the External Review Committee are no longer an issue.</p>
4. Working Environment	
<ul style="list-style-type: none"> The review strongly recommends major renovations to improve our physical space. The condition of our facilities negatively impacts our teaching and research, and aspects of the deterioration cause health and safety concerns. 	<p>Obviously our physical space will continue to be an issue until the Province or the University are able to locate funding for renovations or a new building. We remain optimistic!</p>
<ul style="list-style-type: none"> As noted under "Administration", we will review the position descriptions and workload of office and technical staff to ensure they are reasonable and equitable. We will be proactive about instituting changes should they be required. 	<p>All job descriptions for technical staff have recently been reviewed and some have been updated. The review of job descriptions for our office staff is in progress and we expect it to be complete soon.</p>
<ul style="list-style-type: none"> Continue and expand our tradition of celebrating successes and contributions by all members of the Department. 	<p>We have fantastic people working in our Department, who have been recognized with internal, national, and international awards. We celebrate these over email and on our web page. See "kudos" and "in the news" sections: http://www.sfu.ca/biology.html</p>
5. Faculty Renewal	
<ul style="list-style-type: none"> The Department strongly supports a hire in Environmental Toxicology, the top priority of our hiring plan. We disagree with the External Review Committee that we change our hiring priorities, especially given their acknowledgement of the strength and profile of our Masters in Environmental Toxicology program. 	<p>We have proceeded with this hire which has energized our MET program and is making it possible to bring back our undergraduate minor in toxicology.</p>
<ul style="list-style-type: none"> We agree that we should quickly move ahead with our second planned hire in Development, as supported by the External Review Committee, as there are clear research and teaching benefits for doing so. 	<p>We have not had this position approved. We are working with the Dean, acknowledging our challenging financial times, to consider ways to build the Cell/Molecular/Developmental portion of our faculty complement, and also are in discussions with the other Life Science departments on ways to work on this collaboratively.</p>



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MEMORANDUM

ATTENTION Elizabeth Elle
Chair, Department of Biological Sciences

DATE October 20, 2016

FROM Glynn Nicholls
Director, Academic Planning and Quality Assurance

PAGES 1

COPY Claire Cupples
Dean, Faculty of Science

RE: External Review Update for the Department of Biological Sciences

As per Senate guidelines, the Department of Biological Sciences is to report on progress being made in the implementation of the Action Plan that resulted from its external review in April 2013. This report will be presented to SCUP and Senate for information. The Chair will be asked to attend the SCUP meeting to provide comment and answer any questions about the update on the Action Plan. The Dean may choose to attend the meeting at her discretion.

Please submit your progress report, using the attached template, by Thursday, December 1, 2016 to Bal Basi at bbasi@sfu.ca. Also attached, for ease of reference, is the Action Plan that was approved by Senate on December 2, 2013.

Although your external review took place prior to the requirement to develop educational goals and assessment beginning with the 2013-14 external review cycle, any progress being made in your Department in defining program and/or course level educational goals for academic programs would be welcome in your progress report.

Please contact me at 2-6702, glynn_nicholls@sfu.ca, or Bal Basi at 2-7676, bbasi@sfu.ca, if you have any questions or concerns regarding the external review update process.

Attach.

STATE OF CALIFORNIA - DEPARTMENT OF REVENUE

PROPERTY TAX STATEMENT

EXTERNAL REVIEW – ACTION PLAN

Section 1 – To be completed by the Responsible Unit Person e.g. Chair or Director			
Unit under review	Date of Review Site visit	Responsible Unit person,	Faculty Dean
Biological Sciences	April 3-5, 2013	Elizabeth Elle	Claire Cupples
<p><i>Note: It is not expected that every recommendation made by the Review Team be covered by this Action Plan. The major thrusts of the Report should be identified and some consolidation of the recommendations may be possible while other recommendations of lesser importance may be excluded. Should an additional response be warranted, it should be attached as a separate document.</i></p>			
1. PROGRAMMING			
1.1 Action/s (description what is going to be done):			
<p>1.1.1 Undergraduate:</p> <ul style="list-style-type: none"> • Address concerns about course access and time to degree completion by: <ol style="list-style-type: none"> a. Improving communication regarding our normal 2-year cycle of course planning. b. Determine mechanisms to improve orientation of first year students to SFU and the Biology program. Improved orientation should address long completion times when they occur for reasons other than student uptake in our excellent Co-Op program. c. Improving course availability in our popular Cells, Molecules, and Physiology stream. We will determine if we can streamline our curriculum to improve availability of essential upper-division offerings with no additional hires, and whether hiring sessionals or a lecturer to assist with the teaching of lower division courses could improve availability of research faculty to teach in the upper division. d. Working with other Life Sciences Departments to improve and streamline the delivery of the lower-division core and increase cross-Department access to upper-division courses. • We currently include student representatives from the Biology Student Union (BSU) on our Undergraduate Curriculum Committee, co-organize socials with the BSU, and consulted with the BSU during a recent lecturer hire. We will continue to engage with undergraduates in the BSU and will consult with them about other ways to support their endeavors. <p>1.1.2 Graduate:</p> <ul style="list-style-type: none"> • We commit to ongoing review of our unique professional Master degrees in Pest Management (MPM) and Environmental Toxicology (MET), to ensure these degrees are of the highest quality. • We will continue to improve our graduate curriculum, and among other actions will consider making BISC 800 (our “Basic Skills for a Career in Science” course) mandatory and integrating aspects of our orientation program within it, and implementing a 			

core course structure specific to each of our two broad subdisciplines (Ecology/Evolution/Conservation and Cell/Development).

- **We will improve advising and student-supervisor relationships in the Department. This will include consideration of how to enhance ongoing efforts to communicate policies, procedures, and mechanisms for dealing with conflict with our students.**
- **The ERC noted that our salaries for graduate students are in line with other universities, but given the cost of living in Vancouver, and the requirement that students pay tuition from their stipend, the amount was too low. At the request of our graduate students, the Department will investigate, with the upper Administration, the possibility of tuition reduction or remission for graduate students.**

1.1.3 Post-doctoral:

- **Determine how we can better integrate PDFs into the Department, and consider their professional development alongside that of our graduate students.**

1.2 Resource implications (if any):

- **The External Review team suggested we needed to hire more sessionals to address imbalances in our undergraduate program and uneven workloads of faculty. Should an analysis of our program (and possible streamlining/reconfiguring) suggest we need additional teaching support, we argue that students would benefit more by having an additional lecturer as a permanent member of our faculty, rather than sessionals. Either way there are clearly resource implications if additional instructors are needed.**
- **Ongoing discussions with other Life Science Departments regarding the undergraduate curriculum have no resource implications beyond those addressed by the INSPIRE program of the Dean of Science.**
- **Changes in the graduate curriculum should have no major resource implications, and neither should any efforts to better integrate and engage students and postdocs.**

1.3 Expected completion date/s:

- **Some actions (communication-related for instance) can happen immediately, and in fact have been ongoing.**
- **Revision of the curriculum will have a timeline of 2-3 years at the graduate level, and 3-5 years at the undergraduate level.**

2. RESEARCH

2.1 Action/s (what is going to be done):

- We are a broad-based Biology Department, with some overlap in teaching and research focus with other, more narrowly defined units on campus. Some recommendations of the External Review Committee suggest they did not understand the breadth of our mandate. We will clarify and better articulate our Identity as a Department.
- The Department strongly supports our current hiring plan, which prioritizes faculty renewal in Toxicology, followed as soon as possible with our planned hire in Development.
- We will evaluate and implement mechanisms to raise the profile of our small but excellent Cell and Developmental Biology group.
- Facilities are in dire need of replacement, as they are inadequate to support modern biological research. We will continue to work with the Administration to find ways to fund facilities renewal.
- We recognize that there is an imbalance in the teaching load between faculty associated with our two undergraduate streams. This imbalance can have an impact on research productivity, primarily in our Cell and Developmental Biology Group. We will evaluate faculty teaching workload as associated with undergraduate enrollment, and consider solutions to any imbalance. Solutions could include any combination of changes in the faculty complement, stacking of teaching, streamlining of the curriculum, and collaboration with other Life Sciences Departments to improve course access and curriculum delivery.

2.2 Resource implications (if any):

- Clearly a new or renovated building has major resource implications and it is impossible to suggest a completion date.
- As noted under programming, the hiring of a lecturer or sessionals has resource implications (salaries). Stacking of teaching does not have resource implications, nor does it have any cost for the curriculum if implemented wisely.

2.3 Expected completion date/s:

- Clarification of our Departmental identity is ongoing but we expect new focus prior to the midterm report.
- The implementation of our current hiring plan is ongoing. The Environmental Toxicology hire was approved in 2013 and we have struck a search committee.
- Changes to raise the profile of our Cell and Developmental Biology Group: 1-3 years to decide on actions (such as whether we should form a Centre for Cell Biology) and implement them.
- Renovations are outside of the Department's control and the timeline cannot be predicted.
- A careful analysis of our curriculum and our teaching needs and how we can address imbalance between undergraduate streams in faculty workload will occur over the next 1-2 years.

3. ADMINISTRATION

3.1 Action/s(what is going to be done) :

- We will implement changes in our Appointments Committee structure to give our teaching faculty greater voice in Departmental decision making.
- We will review position descriptions of office staff (see "Working Environment") to better understand workloads. If warranted, we will make the case for either re-configuring job descriptions or hiring of additional staff.
- We have begun consultation with our technical staff regarding workload, and are actively exploring ways to address occasional workload issues that are consistent with union regulations.

3.2 Resource implications(if any):

- None for Appointments Committee.
- If more support staff are determined to be required after a careful review, this has resource implications.

3.3 Expected completion date/s:

- 1 year to a) update our Constitution and b) complete a workload review for both office and technical staff.

4. WORKING ENVIRONMENT

4.1 Action/s(what is going to be done) :

- The review strongly recommends major renovations to improve our physical space. The condition of our facilities negatively impacts our teaching and research, and aspects of the deterioration cause health and safety concerns.
- As noted under "Administration", we will review the position descriptions and workload of office and technical staff to ensure they are reasonable and equitable. We will be proactive about instituting changes should they be required.
- Continue and expand our tradition of celebrating successes and contributions by all members of the Department.

4.2 Resource implications(if any):

- Clearly renovations are costly.
- If a review of position descriptions and workloads suggests we are under-staffed, there will be resource implications associated with new hires.

4.3 Expected completion date/s:

- Physical space: unknown
- Review of workloads: 1 year

5. FACULTY RENEWAL

5.1 Action/s:

- The Department strongly supports a hire in Environmental Toxicology, the top priority of our hiring plan. We disagree with the External Review Committee that we change our hiring priorities, especially given their acknowledgement of the strength and profile of our Masters in Environmental Toxicology program.
- We agree that we should quickly move ahead with our second planned hire in Development, as supported by the External Review Committee, as there are clear research and teaching benefits for doing so.

5.2 Resource implications(if any):

- Faculty renewal in Toxicology has already been approved by SFU, so no additional resource implications.

5.3 Expected completion date/s:

- We expect to begin the hiring process for an Environmental Toxicologist in summer/fall of 2013.

The above action plan has been considered by the Unit under review and has been discussed and agreed to by the Dean.

Unit Leader (signed) Name <u>Elisabetta</u> Title <u>Dept-Chair</u>	Date <u>17 Sept 2013</u>
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Section 2 – Dean's comments and endorsement of the Action Plan:

The Department of Biological Sciences is the largest department in the Faculty of Science, and arguably the one with the most disciplinary breadth. As the reviewers point out, and the department acknowledges in its response, the need to balance cell and developmental biology (CDBG) disciplines on the one hand with ecology, evolution and conservation (EEC) areas on the other presents challenges for both research and teaching. An additional challenge is the presence of two other life science departments in the faculty: Molecular Biology and Biochemistry (MBB), which split off from Biology 13 years ago, and Biomedical Physiology and Kinesiology (BPK), a fairly recent addition to the faculty. Among them, these three departments produce about 70% of our undergraduate science degrees. The department is to be congratulated on its ability to maintain internal harmony, and on the extent of its collegial interactions with other departments. Nevertheless, the department is under some strain as it contemplates rebalancing its undergraduate curriculum in consultation with other units, while making decisions about future faculty hires that also have an impact on graduate training and research.

Specifically, one of the biggest challenges facing the department is the fact that undergraduate students prefer to study CDBG subjects while graduate students are in EEC fields. Thus, I endorse the department's plan to first address the gaps in the CDBG curriculum by a combination of curriculum revision and collaboration with both BPK and MBB, before contemplating changes in faculty complement. My office has offered substantial financial and personnel assistance to facilitate the curriculum revision process. At the same time, I welcome proposals from departments, including Biology, on how to adjust teaching assignments across the Faculty to ensure equity for faculty members and course access for students.

Professional masters programs, such as the MPM and MET, are traditionally popular with students but poorly supported by faculty members. I will work with the department to find a means to maintain these more applied programs without weakening the more academically oriented MSc and PhD programs.

The sorry state of the department's infrastructure is a major concern. This past year, the Faculty has assisted with the purchase of new lab and field equipment, the financing of essential renovations to first year labs, and safety upgrades to the Biology Office. However, as everyone recognizes, these measures are stopgap. Thus, the Dean's Office is working with Facilities Management and the department in planning for substantial renovations, or a new life sciences building – a high priority for the university.

Some of the issues faced by Biology such as course availability, time to degree completion, student advising, graduate student stipends, attracting excellent undergraduate and graduate students, etc. are university- and/or Faculty-wide. In consultation with departmental chairs, the Dean's office is making an effort to address all of these issues across the Faculty; staff reorganization in the office over the last year has resulted in more support for student advising and recruitment, and IT support in particular.

In summary, the Department of Biological Sciences has tremendous strength in both research and teaching. Its recent history of collegiality in problem solving gives me confidence that it will find solutions to the issues identified by the external appraisers, and will continue to build on its strengths.

Faculty Dean

...Claire Cupples.....



Date

.....16 September, 2013.....

Additional Response to the External Review of Biological Sciences, 2013

Events during this past year have been hugely helpful for the Department of Biological Sciences, as the External Review process motivated us to have a retreat where we had a very collegial discussion of our goals, to hold several meetings of Departmental committees and of the entire Department to evaluate our strengths and weaknesses, and to prepare a self-study document that identified our many strengths as well as areas where we are working to improve. We looked forward to receiving the External Review Report (ERR) and have now had a chance to discuss it and to vote on an action plan (Departmental meetings June 17th and July 29th).

Although there were suggestions of merit in the ERR, the Department in general was disappointed with the document. In many cases, the suggestions were vague, and in others, although the suggestions were quite specific, they did not accurately reflect the conversations they were meant to reflect, according to Department members who were present. False statements include the suggestion that our Strategic Planning Committee “voiced reservations” about hiring a Toxicologist, the statement that a priority hire in Pest Management would be one that is shared with Business, and the conclusion that the issues discussed with the technicians indicate our lab system is headed for “eventual total breakdown”. The ERR additionally suggested that our professional Master’s degrees (MET, Master in Environmental Toxicology, and MPM, Master in Pest Management) should be discontinued or brought in line with our Ecology, Evolution, and Conservation undergraduate stream, and that the committee was concerned about the “idea of overlap” with the Faculty of the Environment. These statements demonstrate a fundamental lack of understanding of the scientific basis or strengths of the MET and MPM, in which research spans the breadth of Biological Sciences, from molecules to ecosystems.

Perhaps because the External Review Committee failed to understand the nature of our professional Master’s degrees, their report recommended a change in our hiring priorities. The ERR recommended that we not hire in the area of Toxicology at all, but instead proceed to what was our second priority, Developmental Biology. This recommendation was made despite the indication in the ERR that the External Review Committee considers the MET and MPM to be strong in both the caliber of associated faculty and the rate of employment of graduands. A Toxicologist has been a priority hire for our Department since our last External Review in 2007. We once again discussed our hiring priorities at our June 17th 2013 Departmental meeting, followed by a web ballot, in which the Department indicated strong support for our current hiring plan. Specifically, the Department advocates hiring a Toxicologist immediately, in support of our MET program, as well as other aspects of our undergraduate and graduate programs. We agree with the ERR recommendation that we should then quickly move forward with another hire in support of our Cell and Developmental Biology Group, specifically in the area of Developmental Biology.