



8888 University Drive, Burnaby, BC
Canada V5A 1S6

TEL: 778.782.3925
FAX: 778.782.5876

vpacad@sfu.ca
www.sfu.ca/vpacademic

MEMORANDUM

ATTENTION Senate
FROM Bill Krane, Acting Vice-President, Academic and Provost, and Acting Chair, SCUP
RE: Faculty of Science: External Review Report of the Department of Biomedical Physiology and Kinesiology (SCUP 11-52)

DATE December 14, 2011
PAGES 1/1

A handwritten signature in blue ink, likely of Bill Krane, is written over the "PAGES" field.

At its November 23, 2011 meeting SCUP reviewed and approved the Action Plan for the Department of Biomedical Physiology and Kinesiology that resulted from its External Review.

Motion:

That Senate approve the Action Plan for the Department of Biomedical Physiology and Kinesiology that resulted from its External Review.

Encl.

c: G. Tibbits
C. Cupples



OFFICE OF THE ASSOCIATE VICE-PRESIDENT, ACADEMIC AND ASSOCIATE PROVOST

8888 University Drive, Burnaby, BC
Canada V5A 1S6TEL: 778.782.4636
FAX: 778.782.5876avpcio@sfu.ca
www.sfu.ca/vpacademic**MEMORANDUM**

ATTENTION Jon Driver, Chair, SCUP **DATE** November 10, 2011
FROM Bill Krane, Associate Vice-President, Academic **PAGES** 1/1
 and Associate Provost
RE: External Review of the Department of Biomedical Physiology and Kinesiology

Attached are the External Review Report on the External Review of the Department of Biomedical Physiology and Kinesiology and the Action Plan endorsed by the Department and the Dean.

Motion:

That SCUP approve and recommend to Senate the Action Plan for the Department of Biomedical Physiology and Kinesiology that resulted from its External Review.

Following the site visit, the Report of the External Review Team* for the Department of Biomedical Physiology and Kinesiology was submitted in April 2011.

After the Report was received, a meeting was held with the Dean, Faculty of Science, Department Chair, and the Director of Academic Planning and Budgeting (VPA) to consider the recommendations. The Department then prepared an Action Plan based on the Report and these discussions. The Action plan was then submitted to the Dean and the Dean endorsed this Action Plan.

The Reviewers stated that;

'it is notable that the general sense of the environment that was conveyed, integrating across all of our interactions, is that BPK enjoys a harmonious, efficient, happy, and engaged atmosphere in which academic and scholarly productivity is very high, and morale is very good.'

SCUP recommends to Senate that Department of Biomedical Physiology and Kinesiology be advised to pursue the Action Plan.

Attachments:

1. External Review Report – April, 2011
2. Department of Biomedical Physiology and Kinesiology - Action Plan

*** External Review Team:**

Dr. James Rush (Chair), University of Waterloo
Dr. Heather Durham, McGill University
Dr. Tessa Gordon, University of Alberta
Dr. Tony Williams (Internal), Simon Fraser University

CC Claire Cupples, Dean, Faculty of Science
 Glen Tibbits, Chair, Department of Biomedical Physiology and Kinesiology

**Department of Biomedical Physiology and Kinesiology
Simon Fraser University
External Review Committee Report
March 30-April 1, 2011**

Preamble/Overview

The site visit associated with external review of the Department of Biomedical Physiology and Kinesiology (BPK) at Simon Fraser University (SFU) occurred over the period March 30-April 1, 2010. The external review team (Drs. Rush, Durham, and Gordon) was joined for most of its meetings by the internal reviewer, Dr. Tony Williams of SFU. The review team was given the opportunity to meet individually and in groups with senior administrators, with all major sectors/stakeholders in the Department (Faculty, staff, graduate students, undergraduate students) as well as with individuals from service units that interact with the Department. In addition, we were given extensive tours of the main Departmental physical plant on the Burnaby campus, as well as the Department's Harbour Centre and Surrey campus facilities. Discussions were frank and open, and the reviewers are satisfied that we were provided with high quality objective information as well as opinion necessary to perform the task with which we were charged. In addition, it is notable that the general sense of the environment that was conveyed, integrating across all of our interactions, is that BPK enjoys a harmonious, efficient, happy, and engaged atmosphere in which academic and scholarly productivity is very high, and morale is very good.

The external review team has authored this report. We firstly and especially would like to thank Dr. Tony Williams who was an invaluable source of insight and perspective with respect to the SFU and Faculty of Science culture and norms. His wisdom, candor, and professionalism are all appreciated. He was an enormous asset to the review team, as he is undoubtedly an enormous asset to the Faculty of Science and SFU in general.

Executive summary

For convenience, we have itemized a number of important issues that were identified in the review under the categories of strengths, weaknesses, opportunities and related challenges. These issues have been highlighted because they involve or impact on multiple factors; they are expanded on in the body of this report, along with other findings.

Strengths

1. Undergraduate program: strategies employed to optimize teaching demands in light of resource limitations (teaching/research faculty balance, distance education)
2. Quality and quantity of research
3. Cohesiveness of the unit
4. Enthusiastic and committed faculty at all ranks
5. Engagement at all three SFU campuses;
6. Central role of the Department in the ongoing strategic mission of SFU
7. Excellent alignment of departmental and institutional priorities

Weaknesses

1. Number of courses taught by research faculty
2. Ability to attract a sufficient number of high quality and quantity of graduate students
3. Relationship/bridge between undergraduate and graduate/research programs
4. Limited level of exercise and nutrition expertise/research and teaching activity among research faculty
5. Limited level of faculty complement compared to program offerings and activities compared to other Science units

Opportunities

1. Implementing the exercise, nutrition and chronic disease initiative
2. Balancing the expertise in BPK for delivery of undergraduate and graduate/research programs , including expansion into that new initiative
3. Taking leadership in SFU's integrative health initiative with respect particularly to biomedical aspects of health research and program development

Related challenges

1. Articulating BPK's ideas and abilities to and through the Faculty of Science to have impact at other planning/decision levels of SFU
2. Obtaining support for BPK initiatives in light of competition for limited resources
3. Aligning of BPK ideas/initiatives with those of the Faculty of Health Sciences in achieving SFU's strategic initiatives in health sciences

Structure of the report

Three sets of guidelines were provided to the review committee regarding the issues to be covered in the review:

1. The Senate guidelines for the review, asking for assurances under four categories (A-D)
2. A list of six identified issues by the University and/or the Department for the review team to consider
3. A list of five additional areas of the Department to be considered by the review team

No rigid guidelines were provided concerning the structure of our committee's report. We have opted to structure our written report using the Senate guideline categories (A-D) as the main organizational guideline. Using this format, most of the issues raised in the other two lists are also covered under the various categories.

As articulated in the Senate guidelines, the purpose of the external review process is to provide the University with assurances that:

- A) The quality of the Unit's teaching programs is high and there are measures in place to ensure their evaluation and revision**
- B) The quality of faculty research is high and faculty collaboration and interaction provides a stimulating academic environment and to identify new or emerging areas that should be pursued**
- C) The Department members participate in the administration of the unit and take an active role in the dissemination of knowledge**
- D) The environment is conducive to the attainment of the objectives of the Department**

A) Addressing the Senate guideline related to assurance that *The quality of the Unit's teaching programs is high and there are measures in place to ensure their evaluation and revision*

Course/Instructor evaluations and the feedback received from undergraduate and graduate students suggest a generally high level of satisfaction with the courses and programs that the Department offers. Responses for undergraduate and graduate programs are provided under separate sections. We have highlighted the main strengths, weaknesses and opportunities identified during the review, and have made specific recommendations.

Undergraduate Program:

The design of the undergraduate program provides a number of choices for students with a variety of interests: Kinesiology and Biomedical Physiology majors as well as a number of specializations. Information that we received indicated that there is an appropriate and ongoing process of review of programs and courses to ensure adequate attention to revision and ongoing evaluation of the undergraduate program. The undergraduate program committee is well constituted with teaching and research faculty, staff, and students. This committee is very enthusiastic, engaged, and responsive to student concerns. There is a palpable sense of concern for providing a very high quality of 'student experience'. The openness of the undergraduate program committee and of the entire department to suggestion for improvement at all levels suggests a very positive environment, appropriately focused on providing the best quality experience to its students within the resource constraints of the Department and Institution.

The fact that the Department provides opportunities for new faculty to develop specialty undergraduate courses is a strong positive of the BPK undergraduate program, as this provides one of the highest quality student-engagement experiences, and is critical in making links for the undergraduate students between theoretical material relevant to their program of study, and its application in 'real-life' situations. These links are extremely important to BPK undergraduate students with respect to career planning, research exposure, etc. The review team believes that it is very important to preserve the capacity for research faculty to teach this type of course. This is one specific example of a vehicle through which the links between the undergraduate program and the graduate program/research interests of the faculty can be strengthened, and through which the scholarly development of the undergraduate students can be enhanced to epitomize the symbiosis of the teaching-centered and research-driven guiding principles of SFU.

A

Balance between resources available and teaching demands of the undergraduate program

BPK exemplifies the general SFU ethos to be teaching centered, research driven and community engaged. One profound way that the BPK unit demonstrates this commitment is via delivering programming at all of the campuses (Burnaby, Harbour Centre, Surrey). At the undergraduate program level, this multi-centre approach puts a large burden on the teaching resources of the Department, which BPK has accommodated by making a strategic decision to invest in a number of permanent teaching faculty. The distance education system is another component of the current mechanism of undergraduate program delivery that helps offset the burden of the multi-centre delivery. Distance education provides flexibility to both the students and to the Department's faculty and staff involved in offering courses. Indeed, this is the *raison d'être* of distance education programs. Student satisfaction with BPK offerings is high, and many positive assessments of the role of distance education were articulated by students and faculty. Within BPK, there is a good level of involvement in distance education, and the support framework for offering courses through this system is well established.

Thus, the review team recommends that the BPK undergraduate program continue to utilize the distance education system at current or expanded levels in order to continue to effectively and resource-efficiently deliver the undergraduate programs through available resources. Indeed, the current level of utilization of distance education opportunities is probably one of the main reasons why BPK has been able to maintain its high level of student service within the counterbalancing constraints of its total undergraduate student enrollment compared to its current faculty complement and resources.

Additional sources of stress on the teaching resources of BPK originate from both the number of teaching 'buyout' arrangements associated with major research awards obtained by research faculty, and the assumption of senior University administrative roles by two senior members of the research faculty (Parkhouse and Ruben). These factors are, of course, extremely positive, reflecting both the excellent research success of the BPK research faculty, and the willingness of the research faculty to contribute to governance of the Faculty of Science and SFU. However, taking on these responsibilities creates a collateral situation of reduced involvement of the research faculty in delivering the teaching undergraduate programs. These factors should place BPK in a favourable position within the Faculty of Science and SFU with respect to priority for hiring of research faculty. Otherwise, important elements of program delivery and student experience will be compromised. *Opportunities to hire up to the regular faculty complement and to create additional positions in support of BPK's contribution to SFU's initiatives in the health sciences should be vigorously pursued at the Department and Faculty levels.* With respect to the latter point, many similar Departments/Universities employ a model for bridging loss of teaching resources by creating additional faculty positions using the resources provided by the source of the teaching buyout (i.e., CRCs and

other major salary awards). BPK would be a very appropriate target for allocation of such bridging resources. It should be recognized that the SFU institutional reputation benefits greatly from the research success and profile of the BPK research faculty and that in order to continue to provide quality teaching and student experience at the same time as enjoying the benefits of exponential growth in high quality research, an investment in research faculty positions should be made by the University/Faculty. It also requires on the part of the research faculty a continued commitment to excellence in research productivity and to enhancing the training of students (and other high quality personnel **HQP**).

Currently the ratio of teaching faculty to research faculty is higher in BPK than it is in other units within the Faculty of Science. However, it is the understanding of the review team that the ratios of research dollars-to-research faculty members, the percentage of research faculty with substantial salary awards, and the teaching load per faculty member are all higher within BPK than in other units in the Faculty of Science. The Department, Faculty and University have obviously collectively endorsed the model of pushing and rewarding research excellence in BPK as the success of these individual researchers has been endorsed at all levels by consenting to the teaching buyout arrangements that contributed to the opportunity to hire the current complement of teaching faculty in order to help meet the teaching demands on the Department's academic programs.

Teaching faculty

The teaching faculty conveyed that collectively they are very happy with their roles in BPK. They have extensive involvement in the undergraduate program committee, are treated equitably to research faculty with respect to full participation in the Department, and are very much respected by other members of the Department. They were universally positive about the distribution of teaching assignments and other tasks.

It is notable that the teaching faculty in BPK, unlike in other Science units, have minimal technical support (i.e. the teaching faculty themselves do a lot of equipment/apparatus set-up and maintenance). The teaching faculty indicated that the positive aspect that it allows them to control quality and consistency of the apparatus providing the students with the best possible experiences in the laboratories.

Students appreciate the quality of the teaching by the teaching professors, as is evident in the formal evaluations and in the comments provided by students during our interviews. The model of utilising teaching faculty is sufficient to help meet the teaching demands of the core and early components of the program, as well as some of the upper year elective courses. With the unique demands of the SFU trimester system, three campuses and teaching relief for a number of the research faculty, it

8

would be impossible to deliver the BPK academic programs without the number of teaching faculty currently in the Department.

The model of balance between teaching and research faculty is not without some drawbacks, however. Limited exposure to Research Faculty in the undergraduate curriculum was articulated as a concern by undergraduate students. Research faculty members on reduced teaching loads teach at least one course per year. In many cases this is a senior undergraduate course or a split undergraduate/graduate course. The quality of these offerings is regarded as high and well-aligned with both faculty and student interests, as indicated by enrollments and course ratings. However, undergraduate students, graduate students, and teaching and research professors all expressed the opinion that more interaction of research faculty with senior undergraduate students is desirable and important (1) to provide the highest quality undergraduate student experience; (2) to expose students to the full spectrum of departmental activities, research and career opportunities, and (3) to aid in recruitment of the most talented students to the research laboratories, thereby helping to address the perceived limitation in both the quantity and quality of available students for graduate studies (see below-graduate studies section).

The review team recommends that a systematic attempt be made to address the issue of exposure of undergraduate students to teaching and interaction with research faculty, while also respecting the demands on research faculty and the various arrangements for teaching relief. This might include modifying delivery to include more split courses, team-taught courses, and seminars. For instance, if research faculty were to distribute their teaching hours over multiple courses, rather than in one course, there would be increased exposure of research faculty to undergraduate students without increasing the overall teaching workload drastically (although some courses might not be amenable to this style of delivery). Another strategy is to offer topics/issues courses, whose content and faculty participation could be flexible according to interest of students and availability of faculty.

It is further suggested that *existing courses incorporate more information on research, knowledge translation, and career opportunities* to give the students the perspective to develop skills with an appreciation for the spectrum of career and professional goals available to them. For instance, some similar programs at other universities use a first year required course to give an overview of the program and include introductions to a variety of applications and career paths related to the program of study (these might require some customization to students in the Kinesiology vs Biomedical Sciences Majors).

The upper year program requirements need to be optimally aligned with both the educational goals of the program and the practical ability to deliver the program with available teaching resources. It is recognized that one factor that can impact the quality of delivery of courses at the senior undergraduate level is the class size (the number of students that can be enrolled in any one section of a course). However, a common complaint from undergraduate students was limited

7

availability and ease of enrolment in certain upper level courses, both the terms in which the courses are offered and long wait lists for those that are. Recognizing that a finite number of courses can be offered by a finite number of faculty, perhaps *other underlying factors need to be seriously considered in order to find solutions to mitigate these complaints and to improve the undergraduate student experience.* This could involve changing the format etc. of the courses themselves in order to facilitate increasing the upper limit of enrollment, within the constraints of room size and availability/scheduling conflicts, lecture vs laboratory course, and other physical/financial resources required for effective course delivery. Perhaps expanded distance education offerings may contribute to solving this problem.

The problems with delivery of the undergraduate program are in part symptomatic of the larger issues being faced by BMK and their mitigation should be part of an overall plan (teaching/research faculty ratio, lack of undergraduate student contact with research faculty, bridging the undergraduate to the graduate program, new program implementation), in a manner respecting the totality of the SFU vision regarding teaching, research and community engagement.

Comments on other specific aspects of the undergraduate program

Ergonomics The ergonomics specialization is under-enrolled (12 students) as a program of study *per se*, whereas a number of courses in ergonomics are offered because these courses intersect with the core and elective components of other program paths within BPK. Notably, no current permanent faculty members identify with the ergonomics area, and thus delivery of the necessary ergonomics courses relies on a sessional instructor. Thus, the area of ergonomics presents a dichotomy for the Department in being a valued part of the overall program for breadth, but without any real commitment to maintaining research expertise or depth in this area. *The Review Team recommends that the Department make a strategic decision regarding the extent to which they wish to support the ergonomics component of the undergraduate program as part of their overall medium-term resource planning.* Elimination of the formal stream/specialization as it currently exists (as a conduit toward preparing students to meet professional standards) was articulated by BMK staff during our visit and seems inevitable without a major commitment of resources. Incorporation of a limited number of ergonomics courses focused on occupational and rehabilitation into the active health and rehabilitation area of concentration is a reasonable approach given the current availability of resources and the waning level of commitment of the Department to the area of ergonomics. The Department should systematically determine what direction it wishes to take with respect to ergonomics and adjust resources accordingly. The ultimate decision will have to be balanced against the ability to pursue other initiatives that require resource investments, so there should be a clear plan of how to balance current programming versus new and emerging areas of opportunity.

Nutrition The review team is also under the impression that the offerings in the area of nutrition and the Certificate in Applied Human Nutrition are mostly

dependent on sessional instructors and distance education offerings with little leadership in this area by permanent research faculty. This has been brought to our attention as being problematic when courses (such as 111, 212) come up for revision and evaluation. It seems *critical that the Department utilize its hiring priority to recruit research faculty in the area of nutrition who also fit the overall mission of the Department and aspirations for development.* The difference from problems with the ergonomics stream is that a long term investment in nutrition will not only support the excellence of the current program, but will be required for offering the pending exercise nutrition and chronic diseases program.

The Co-op program in BPK is strong with respect to the variety and quantity of placements made available and the interest level amongst BPK students in utilizing co-op opportunities at some point during their undergraduate degree program. This program provides opportunities for students to see other views of professional development, gain experience in workplace, and help make career decisions. Participation in co-op by BPK students is high compared to other science units and a large fraction of BPK students gain at least some coop experience, even if they do not complete the specialization in co-op. The co-op program exemplifies knowledge translation in action. Thus, even for students who do not complete the required number of work terms to receive the co-op degree designation, any co-op experience gained contributes to development of practical knowledge translation skills. Thus, the high participation rate in co-op in the BPK Department represents a tangible way in which BPK undergraduate students are enjoying the benefits of a value-added program compared to peers in other units at SFU and at other universities. Notably, co-op opportunities for research exposure, honours thesis and research projects reinforce contact with research professors.

The BPK co-op program director is enthusiastic, dynamic and proactive. Her office is a major point of contact with the undergraduate student population. This turns out to be a fortuitous arrangement because one of the undergraduate students' complaints is that there is no designated student lounge or dedicated centralized space for them to get information, announcements, etc. and to interact. The review team has no specific recommendation regarding this issue, other than to bring it to the attention of the Department as a source of frustration on the part of the undergraduate students.

For these reasons, the review team believes that it is a distinct advantage that the co-op officer has a presence right in the Department (not the central co-op office). Not only is this a valuable venue for conveying information, but her interactions with the students provide a 'home' within the unit for students to bring their questions and concerns.

Link between the undergraduate and graduate/research programs

A 'disconnect' between the undergraduate program and the graduate program/research faculty was articulated at several times and in several contexts during the site visit. One way to help rectify this would be to hire more research faculty with disciplinary expertise in exercise and nutrition (which are traditional areas of emphasis in Kinesiology programs) to fill out the current program. Ideally, these faculty members would also have cross-over interests in one of the traditional areas of strength in the BPK Department (cardiovascular physiology, neuromechanics/neuroscience, chronic disease), thereby increasing opportunities for research collaboration, while adding breadth at the graduate and research levels in areas of interest that would clearly bridge with the instructional needs of the undergraduate program. *The review team does not wish to be prescriptive about this issue, but it seems to make imminent objective sense to proceed in this direction not only to improve delivery of undergraduate and graduate programs and their confluence, but also to provide a foundation from which the Department could implement the exercise, nutrition, and chronic diseases program when the full resourcing becomes available.*

Graduate Program:

Information that we received indicated that there is an appropriate and ongoing process of review of programs and courses to ensure adequate attention to revision and evaluation of the graduate program. The graduate program committee is well constituted with teaching and research faculty, staff, and students with broad representation across interest areas. The graduate program committee and its chair are enthusiastic and actively engaged in both the administrative and the planning aspects of the graduate program. The committee has recently been active in revising the format of the PhD comprehensive examination to reduce its complexity, emphasizing milestones to meet degree requirements, and in revising course requirements to bring these into line with other similar units. These issues had previously been raised in feedback received from students and others as sources of dissatisfaction and recruitment difficulties. Thus, the current graduate program committee has taken some very positive steps to improve the graduate program. The graduate program director is enthusiastic and has already initiated action on a number of issues that need improvement.

The revision of graduate student support materials, websites, graduate handbook, etc is recognized as an ongoing process. *The review committee encourages the Department to arrange for the appropriate resources to be channeled to these efforts and the graduate program committee to continue to evaluate and update these resources on both a regular basis and when changes are implemented.* The website needs to be attractive to prospective students, informative about policies, procedures and activities, and to reflect the high quality of the programs and the research. It is particularly important to have a detailed and up-to-date student

handbook to serve as a resource for both students and faculty supervisors regarding policies, procedures and resource commitments, etc. related to graduate studies.

Compared to the many other indices of research and teaching quality and quantity in which BPK excels, there is an enigmatically low average level of graduate student supervision or graduate student/research faculty ratio. It should be noted that there is wide variability among the faculty with respect to this parameter, however, and that there are very high quality graduate students in the program. Research faculty interviewed suggest that there is collectively both a willingness and a desire to take in more graduate students, but that there are problems recruiting additional high quality individuals. *The remainder of the comments in this section on the graduate program are meant to provide recommendations both for improving the experience of current graduate students and their supervisors, and to improving recruitment of graduate students to BPK in the future.*

The review team became aware of some confusion/differing opinions regarding funding guarantees, funds available and funding obligations among supervisors, graduate students, and administrators. *It is imperative that a clear and consistent departmental policy on student funding should be implemented and conveyed from the chair and graduate program committee to supervisors and students.* Letters of offer to applicants should be of a standard format and must be clear about guarantees of funding from the Department and the supervisor. These should include the total funding for the year and length of program (time limitations, full-time/part-time status), when the funding will be provided in terms of anticipated study duration and from what source(s), and what contingencies are in place for events that alter funding availability/need (such as external scholarships obtained, and the possibility that a supervisor fails to obtain grant funds on application for renewal). The understanding of the review team is that other units in the Faculty of Science provide such explicit funding information with their offer letters. These templates should be consulted to construct a BPK version. *Thus, the review team recommends that a standard offer letter, with a clear guarantee of funding including the above listed information should be implemented.*

The review team became aware that some faculty believe that the course load demands for the MSc degree are a disincentive to supervisors to take on MSc students; i.e., they are remunerating students to take either too many or too time-consuming courses. *The graduate program committee should determine how widespread this sentiment is, how requirements compare to other similar programs, and how balance could be achieved on this issue.* Resolving this issue could remove one of the perceived barriers to expanding graduate student enrollment.

Other suggestions to improve recruitment and retention of graduate students include:

1. Diverting some Departmental funding designated for graduate student support to recruitment-related scholarships in order to capture good students that are deserving, but not yet in receipt of external award.
2. Allowing direct entry into the PhD program for highly qualified students with high GPA and research experience.
3. Producing and including in the graduate handbook clear guidelines and procedures for fast-tracking from MSc to PhD
4. Integrating the path to graduate studies with the undergraduate curriculum by, for example: making strategic use of split courses (undergraduate/graduate), optimizing contact of research faculty with undergraduates, developing a combined BSc/MSc degree program, providing incentives to faculty to utilize the co-op system as a potential source of undergraduate research assistants.
5. Organizing an event well before the autumn of every year to showcase research and graduate studies as a career option, and to identify extramural scholarship and award opportunities that have deadlines in autumn. This could be combined with an expanded career opportunities session in which it could be made clear to students that graduate studies is not just for those with an interest in careers in academia.

The review team was made aware that there has been a notable retention problem with later stage PhD students in certain cohorts over the past several years (16 withdrawals in the period 2006-2010; 12 of whom were PhD students). It is suggested that a *systematic way to track students through their program milestones would be a positive step toward improving retention, and identifying students who are not succeeding as early as possible*. Such a system would either provide assistance to struggling students sufficiently early to help them succeed, or to precipitate withdrawal from the program at an early stage. This is in the best interests of all parties involved: student, supervisor, and Department.

A need for 'soft skills' training of graduate students was articulated. Specifically, a need was expressed for training/professional development opportunities for graduate students related to writing, presentation skills, communicating science, etc. that would be beneficial for those graduate students considering any of the career paths open to them. *Investigation of whether these programs exist or could be possible with central graduate studies office support and/or support through the library learning commons should be explored by the graduate program committee.*

Coursework masters program

This program is unsustainable in its present form. The program is not regarded by the review committee as a Departmental priority, especially considering other pressing Departmental priorities that could impact the graduate program. It should not be engaged in without a clear market analysis and business plan.

The review team encourages the Department and the graduate program committee to consider not only the proposed undergraduate program in exercise, nutrition and chronic disease, but to develop a complementary opportunity at the graduate studies level. The review team believes that this initiative has excellent possibilities for expanding BPK's presence in the health care sector and that there is a window of opportunity given the expansion at the Surrey site. The current resources of BPK are not sufficient to launch the undergraduate program. Thus, a vision for hiring research faculty with relevant research interests would serve multiple purposes: delivery of the proposed undergraduate program, extending opportunities to recruit highly qualified graduate students, and maximizing the opportunities for interaction with the Health Authority at the Surrey campus. It is recognized that there is an existing 'chronic disease stream' in the graduate program and that could serve as the immediate interface between this new undergraduate program and the graduate program, but that the streams within the graduate program would evolve to optimize program options and delivery. The addition of research faculty with exercise and nutrition disciplinary expertise and with cross-over expertise in existing areas of departmental strength is quite possibly the critical strategic step for BPK to take in order to:

1. Balance the scholarly expertise in BPK to enable the Department to better offer its current program using permanent/continuing resources
2. Provide better linkages between the already existing undergraduate and graduate/research programs in BPK
3. Facilitate program expansion and provide the resources and expertise to offer the proposed exercise, nutrition and chronic disease undergraduate program and a complementary graduate level program
4. Increase awareness of how BPK is an integral and leading element in the future of health-centered programmatic activities at SFU

Further energization of BPK as a Department, and of BPK teaching and research faculty, and an enhanced appreciation of their value will all result from this initiative.

B) Addressing Senate guideline related to assurance that *The quality of faculty research is high and faculty collaboration and interaction provides a stimulating academic environment and to identify new or emerging areas that should be pursued*

The opinion of the review team is that the quality of the faculty research is very high. There is excellent tangible evidence of very healthy grant funding and publication records across most of the research faculty. This places the research strength of the unit overall as extremely strong in and of itself. In addition, compared to similar Departments at other North American universities, BPK surely ranks among the best on this metric. Compared to other units in the Faculty of Science at SFU, BPK is extremely strong based on traditional metrics of scholarship and research intensity.

Direct interactions with the faculty revealed their enthusiasm and excitement for their work and for their collaborative efforts locally and abroad. There was a sense of engagement within the Department at the level of research. Importantly, there were many examples of junior-senior faculty collaboration/mentorship arrangements, and many examples of community-based research and collaborations.

No concerns were heard related to any perceived limitations in the stimulatory nature of the academic environment in BPK.

Since community-centered research and teaching initiatives are one way in which BPK exemplifies the SFU mission, *the review committee suggests that perhaps a common clinical infrastructure with Departmental support could facilitate best use of the Harbour centre and Surrey campuses for research subject evaluations.* For example, Dr. Lear has successfully established a very functional and efficient operation at the Harbour Centre campus. It would be ideal if this sort of approach could be used as a model for the Faculty/Department to invest in the infrastructure necessary to establish a similar facility in a portion of the BPK space at the Surrey location in order to engage community participants/research subjects at that site as well in an efficient manner. This facility could be a shared facility among any faculty members who have community-based research in the Surrey area. Ideally, some regular/permanent research faculty presence at the Surrey site would help to seed the potentially comprehensive initiatives at this site with respect to research/graduate studies, delivery of the current BPK programs, and to build toward the potential initiative in exercise, nutrition and chronic disease.

Regarding new and emerging areas of opportunity. *Adding research faculty with expertise in exercise and nutrition is an important strategic step for the Department.* This will allow BPK to balance the expertise of the Department in terms of its current mission and undergraduate program. Furthermore, it will allow for the development of graduate and research programs that will balance the Departments

offerings and create better bridges between undergraduate and graduate programs (which is identified as one of the major programmatic weaknesses). It will also provide some of the expertise necessary to implement the proposed undergraduate program in exercise, nutrition and chronic disease.

Taking advantage of the potential opportunity at the Surrey campus is vital to this initiative and will allow BPK to be ready to better collaborate with partners in the Faculty of Health Sciences and in other health related units on campus in order to strategize the best plan for implementation of the Health –related programming at the Surrey campus. When positions become available this is clearly the highest priority area for the Department's development and growth. Ideally systems researchers associated with exercise nutrition and chronic disease areas will provide the needed expertise to advance the Department's current mission and proposed initiatives. Care should be taken in selecting the new faculty such that they also integrate well with existing research strengths in the Department (cardiovascular, neuromechanics/neuroscience, chronic disease).

Exercise, Nutrition, and Chronic Disease Program proposal.

Given the uncertainty regarding government funding, even with full support of the University, it is important for the Department to build a clear and dynamic vision of what the exercise, nutrition and chronic diseases program could become and to champion BPK as the natural core of the program, but with an integrated vision that includes input from the Faculty of Science and Faculty of Health Sciences in order to improve the chances of making real progress on this initiative and making it a University-level priority. Doubtless this will require a Department-based champion for the program (perhaps the next Chair of BPK, or Dr. Ruben in his new role as Associate Dean), but that will not be enough. The vision and the advocacy must extend to the level of the higher administration, including the Dean of Science and the relevant Vice-Presidents. *The initiatives and goals of BPK need to be presented in the context of an overall University initiative.* BPK is in a unique position to contribute by making initial programmatic investments and by having a clear Departmental plan for undergraduate and graduate programming as well as postdoctoral and faculty research, and by defining the complement of new hires that are necessary to achieve the objective as well as improve the quality of current programs.

Thoughts regarding this program, its importance to the Department, and possible synergies with other Department initiatives:

- the program needs to be comprehensive (including undergraduate and graduate programming as well as research activity)

- the program will help balance expertise and interests among research faculty that a BPK Department should have and thus help build better links between undergraduate and graduate programs

- is it possible to realize synergies between this program and the proposed Burnaby Mountain Sports Medicine initiative ?

- Is there a possible synergy with the Environmental chamber facilities and the environmental physiology group? During the review we were made aware of the initiatives to make the Environmental chamber for outside uses via links to community and industry. One of these potential uses was identified as as a potential site for hyperbaric oxygen therapy for diabetic wound healing. This would certainly suggest a potential opportunity to fit with the chronic disease program. This could be attractive/useful for instance in recruiting a chronic diseases researcher with interests in diabetes and diabetic therapies. The collateral benefit of course is enhanced utilization and increased collaborative opportunities in the environmental chamber facilities. The profile of such an individual would fit very well with that necessary to support the exercise, nutrition and chronic diseases program.

C) Addressing Senate guideline related to assurance that *The Department members participate in the administration of the unit and take an active role in the dissemination of knowledge*

Dissemination of knowledge in many formats is apparent in the publications, presentations, patents, regular local, national, and international media attention to research results, etc. for many projects and laboratories in BPK. Community engagement is strong through research links utilizing members of the local population as study subjects. There are many examples of knowledge translation emanating from BPK.

There was general expression of harmonious administration of the unit, leadership, and committee participation across faculty of all ranks, staff, and students.

Next Chair of BPK. The recruitment of Dr. Ruben to another senior administrative role in the Faculty created a void that had to be filled at a most inopportune time. At the time of our review, this was a major concern. We have been made aware that this situation has been resolved through the appointment of Dr. Glen Tibbits as the Chair. The review committee commends Dr. Tibbits for accepting this role, in keeping with the history of senior BPK faculty of stepping up to take on senior administrative positions. Given the extensive involvement of senior research faculty (including Dr. Tibbits) in diverse leadership and service activities including large-scale collaborative research programs, clinical duties, and leadership roles in other professional organizations it is certainly understandable that there was some difficulty identifying an internal candidate that was willing and able to take on this responsibility. In fact, during the site visit, the clear preference expressed by all faculty interviewed (almost everyone) was to search for an external candidate for this position.

During our interviews, the Dean of Science gave a clear message that the ability to nominate an internal candidate for Chair would provide additional opportunities for hiring of new research professors in BPK. Given the new situation, in which Dr. Tibbits has taken on the responsibility, *the review committee therefore recommends that BPK be given priority for resources necessary to fulfill their current mandate and to take advantage of the new opportunities to develop SFU's presence in training and research in healthcare fields.* BPK as it is currently staffed, and considering the programs it delivers, the number of students it serves, etc., compares very favorably with other Science units with respect to a need to expand its faculty complement. It is assuring therefore that the Dean supports this expansion and that a new chair is in place to proceed on this as soon as possible.

D) Addressing Senate guideline related to assurance that *The environment is conducive to the attainment of the objectives of the Department*

The mission of the Department is to improve human health by advancing the understanding of physiology, movement, and human health through fundamental and applied research, education, and service, by providing opportunities for outstanding learning, world-class research, and active engagement with the community. This is completely consistent with the academic mission and vision of SFU, with the strategic research plan of the Institution, and with the President's agenda: Building on Success—Looking to the Future. Particularly forward-looking is the BPK program proposal in exercise, nutrition, and chronic disease. *There is a need for the senior administration to provide a framework to guide and coordinate the development of the health sciences mission of the University so that individual initiatives such as the proposal for this program are recognized and coordinated to increase opportunities and align the future direction with the strategic plan.*

We see the possibility of an important role for Prof. Ruben, as the new Associate Dean of Graduate Studies and Research for the Faculty of Science, to take a leadership role in this coordination by continuing to promote the goals and aspirations of BPK, working to integrate their initiatives with those of other units in the Faculty of Science, promoting integration with the activities of the Faculty of Health Science, and playing a role in coordination of the health science mission across the university. During our visit, the review committee was rather perplexed about how this mission was being coordinated and advocated, and the level of responsibility being placed upon BPK for that initiative. During our visit to the Surrey campus, we met Joanne Curry, the executive director for SFU Surrey who is actively engaged in community and government outreach. However, others need to be engaged and the University needs to devote the resources to take advantage of a significant opportunity. In support of BPK, this includes continued lobbying of government to champion funding of the new undergraduate program in exercise, nutrition and chronic disease.

Other issues:

Departmental Handbook. *The Review Committee recommends assembling a Department handbook for faculty, so that all new faculty are oriented to policies and procedures as well as resources of the Department. A formal mentoring program might be helpful to new faculty for their transition to their roles and responsibilities. This handbook might also help new faculty identify resources and opportunities available to them, and help them to understand University policies and procedures related to their career development. There was some concern expressed on related issues by some, although not all, new faculty members*

Support Staff. The review committee interviewed and interacted with members of BMK's support staff throughout the visit. Overall, the support staff is extremely competent and enthusiastic, and sufficient for support of academic activities of the Department, although the level of technical support for laboratories falls behind that of other units (see above). The staff have high morale and are happy, although frustrated with certain systems—financial, student management, etc, that are not 'user-friendly' (consistent with experience at our institutions).

Library Services. The review committee met with the Director of Libraries and was impressed by the adaptation to new expectations of the research community in services provided by Libraries to research and teaching, including electronic resources. Inquiries to research faculty did not reveal significant concerns, nor did the Director indicate that she had received complaints.

Animal Care Facility. The review committee toured the animal care facility during the visit. This is a new and impressive state-of-the-art facility, maintaining a clean environment for animal housing and conducting surgical and other experimentation. Maintaining a clean facility has costs in terms of inconvenience to certain research faculty who must take their animal subjects out of the facility for procedures at other institutions, and therefore are not able to return them to the clean area of the facility. The group conducting research on pigs stated they had come to terms with their situation, but another investigator working with transgenic mice expressed concerns. *The Facility is encouraged to make adequate housing available for animals involved in such studies such that their experiments are not compromised.*

Environmental Chamber. The review committee toured the Environmental Physiology unit hosting the hyperbaric chamber and environmental chamber. The existence and sustainability of these chambers relies on Faculty of Science funding and income from contracts for clinical and industrial research activities. The facility is unique and certified by Underwriters laboratories. The research faculty involved are connected with their national peers, including the Defence Research Establishment Toronto (formerly DCIEM). The climatic chamber is central to Dr. White's research. Plans for reconstruction of the chamber, and its value to industrial partners were explained to the review committee. A main challenge is to

revitalize the graduate stream for this Environmental Physiology Group. Support for the environmental chamber was stated as being the initial reason for bringing a medical doctor into the Department. *The multitude of potential uses of this facility and the possible overlap of this resource with other Department initiatives should be considered as the Department plans to pursue new and emerging areas and initiatives in order to identify synergies.*

Electronic Course Calendar: There appear to be issues regarding implementation of the electronic course calendar at SFU, including listing of courses that are not offered. These could be typical growing pains related to moving to an electronic format, but care should be taken not to present students with opportunities that do not exist.

Future Direction

There seems to be a reasonable amount of recognition by senior administration that BPK is a major strength in the biomedical health research portfolio of SFU.

Furthermore, it was clearly articulated that the Faculty of Health Sciences does not control or embody the spectrum of the health research profile of SFU and should not be a barrier to recognizing BPK's importance in health initiatives at SFU. *The senior administration is encouraged to foster communication of BPK, other units in the Faculty of Science and the Faculty of Health Science and find a way to integrate their activities and the way they are presented by SFU.*

The plans of BPK are appropriate and consistent with the strategic plan of SFU. The support of senior management will be required to fulfill their aspirations, particularly development of new programs to be delivered at the SFU campus, and maximizing the opportunity for leadership in the health sector.

If the appropriate resource commitments are made to BPK, the demonstrated excellence of this Department will continue. The Department has a forward looking plan for new and emerging areas in which it can thrive and continue to increase the profile of SFU as a teaching centered, research driven and community engaged university.

Respectfully submitted,

Dr. James Rush, University of Waterloo

Dr. Heather Durham, McGill University

Dr. Tessa Gordon, University of Alberta

EXTERNAL REVIEW – ACTION PLAN

Section 1 – To be completed by the Responsible Unit Person e.g. Chair or Director

Unit under review Biomedical Physiology and Kinesiology	Date of Review Site visit March 30 /April 1 2011	Responsible Unit person, Glen Tibbits	Faculty Dean Claire Cupples
---	--	---	---------------------------------------

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.

1. PROGRAMMING

a. Action/s (description what is going to be done):

1.1.1 Undergraduate:

- **Increase number of research faculty involved in UG core courses (ER)**

We have already begun an implementation of team teaching in our core courses. This semester we introduced it into Kin205 and it is part of a revamping of our entire core curriculum. A committee has been struck which is being led by Mr. Craig Asmundson to re-examine our core offering in terms of content, instructors (sessionals vs. instructors vs. research faculty), continuity, integration and development of ideas. This committee is very active, has their own website and very enthusiastic and broad participation from the faculty. We are also evaluating the role of research faculty in core courses (Mr. Stephen Brown has been asked to analyze this on a semester basis) and are setting targets for the involvement of research faculty in core cores. In addition, we are investigating our role in the Biomedical Engineering program which uses several of our research faculty, limiting their capacity to teach within our own unit and how to better integrate it into our own curriculum.

- **Better match between UG program and research faculty interests (ER)**

This is a real challenge to resolve and is deeply rooted in the politics and history of our department. However, the undergraduate program committee (UPC) has been asked to earmark undersubscribed courses and programs for possible elimination. The ER suggested that we hire faculty in nutrition to help resolve this issue but this has already been done with limited success. We are currently entertaining the possibility of this being part of the expertise of the next faculty recruit. The Ergonomics stream has now been reduced to a certificate program allowing us to reduce our course offerings in this area by three courses.

- **More expertise in exercise, nutrition (Surrey Initiative)**

This has not been a goal of our program in Burnaby. However, it is a major focus of the Surrey Initiative. Unfortunately, the ENHD program is highly dependent on provincial funding for which there are no guarantees. If the plan is implemented as articulated then this will more than adequately address this concern. However, in the interim we are forging ahead with a scaled down Surrey initiative. I have asked Dr. Diane Finegood to head up the Surrey Initiative. The Dean of Science has been asked for a faculty replacement in this area that is

26 based on our limited faculty roster relative to our FTEs. This new faculty member will be recruited under the umbrella of Chronic Diseases (one of 3 major research thrusts of BPK) and we believe that this individual will become an integral member of the Surrey Initiative. Drs. Lear and Finegood are also proposing to develop an Institute (which will be before Senate shortly) which will partially allay this concern.

- **Limited number of faculty relative to load (reduced faculty complement) (ER)**

The Dean is well aware that we are “understaffed” relative to other departments within the Faculty of Science (including Biosciences and MBB) and the number of FTEs that we teach. We hope that this will be rectified by growth of the department over the next few years.

1.1.2 Graduate:

- **Increase quality and quantity of graduate applicants to our program (ER).**

1. The top graduate students in BPK are excellent; we have 2 Vanier award recipients. Furthermore, the BPK Graduate Program has grown since the external review, from 47 students in 2009/10 academic year to 57 (60 including qualifying students) in Sept. 2011. This may in part reflect the departmental name change and the faculty association which was one of the intentions of these recent changes. There is still a need, however, to increase the average quality of the applicants so that BPK faculty can be more selective about which students they accept. To accomplish this, we plan the following actions:

- a. The BPK website is currently being redesigned and updated to attract more HQ students [grad students in particular but also HQ undergraduates (UGs)]. Features under consideration include the use of videos of labs, faculty and graduate students to convey the high quality and innovative research done in BPK and the learning opportunities here.
- b. The number of courses for the M.Sc. has been reduced from 6 to 4 (now approved by Senate) to facilitate progress through the course component of this degree program and allow the student to spend more time on their thesis research.
- c. For the Fall of 2012, the department has agreed to provide three ‘Chair’s Research Assistantships’ valued at \$3,000 each to attract new HQ grad students who are not yet in receipt of an external award. Future allocations will depend on availability of funds.
- d. The GPC will review and discuss direct entry into the PhD program for highly qualified students with high GPA and research experience
- e. The GPC will clarify, and provide within the graduate handbook clearer guidelines and procedures for fast-tracking from MSc to PhD.
- f. The GPC will systematically track student progress through the graduate program. In 2011 the GPC has improved the graduate student annual report form, which now contains all information necessary to check graduate student progress. In 2012, we will convert this to a more user-friendly online format so that data can be uploaded and databased for efficient review by GPC members.
- g. Recently, the requirements for the PhD including changes to the comprehensive exam, have been streamlined and are now more in line with those in Biosciences and MBB facilitating progress through the degree while maintaining stringent criteria for the program.

2. Bridge more effectively between the UG and grad programs by increasing exposure to and interactions with research faculty for undergraduates.

We have recently made progress by requiring UG participation in BPK’s 3rd Annual Research Day. Students in KIN 305 (a physiology course required for KIN majors) and KIN 304 were asked to attend Research Day instead of their class that day, and to vote for and make a group choice of the best poster. In consultation with the UPC, we will explore operationalizing the following ER Team suggestions:

- a. Incorporate more guest lectures by research faculty into undergraduate courses
- b. Consider more split courses, team-taught courses and seminars; spreading the teaching hours of research faculty over multiple courses
- c. Offer flexible ‘topics and issues’ courses reflecting research faculty strengths
- d. Incorporate more research, knowledge translation and career pathways information into UG courses, highlighting that a graduate degree can lead to many different career paths within and outside of academia. Consider a first year ‘overview’ course that encompasses this material.

Diversify BPK Careers Day, an existing yearly event for UG students, to represent more non-academic careers.

e. Increase upper level UG class sizes where needed (eliminating wait lists) to maximize the pool of high level UGs in BPK

f. Increase interaction of high level UGs with Grad students by seeking a venue and event in which they can mix.

- **Several perceived problems with the course based Master's Degree (ER).**

This program has been abolished. There is a committee of two led by Ms. AK Arnold which is looking into the possibility of a highly focused, profession-oriented course based Master's in Rehabilitation Medicine. A presentation has been made to the Graduate Program Committee which has asked for further information and subsequent presentations will be made to the GPC and the department as a whole.

h. Resource implications ((if any):

Increased number of research faculty. We have also asked for IT support for at least one year to facilitate the processing of admissions, recruitment and general administrative functions.

i. Expected completion date/s:

June 2013.

2. RESEARCH

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

- We currently have a strong research program in place. However, to improve on this we are looking to strengthen the three existing clusters (Chronic Disease; Neuromechanics and Cardiovascular) rather than expand the breadth of the research profile of the department. The Surrey initiative, of course, if funded is a partial exception to this. Thus any future hirings will be made to strengthen existing clusters.

2.2 Resource implications ((if any):

Limited with the exception that this is predicated on the hiring of additional faculty.

2.3 Expected completion date/s:

On going.

3. ADMINISTRATION

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

- Overall of IT infrastructure (Dr. Max Donelan will oversee the IT initiative and the group is making steady progress)
- Streamlining of protocols
- More responsibilities divided among faculty

3.2 Resource implications(if any):

We have requested IT support for at least one year.

3.3 Expected completion date/s:

Dec 2012 and ongoing.

4. WORKING ENVIRONMENT

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

- The working environment is collegial and very functional a situation which was commented on by the ER Committee. One of the self-imposed duties of Chair is to groom several junior colleagues to be candidates for the Chair position when the current Chair's term is up.

4.2 Resource implications(if any):

None

4.3 Expected completion date/s:

N/A

5. (OTHER)

5.1 Action/s:

-
-
-

5.2 Resource implications(if any):

5.3 Expected completion date/s:

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)



Digitally signed by Glen Tibbits
DN: cn=Glen Tibbits, o=Simon Fraser
University, ou=Biomedical Physiology and
Kinesiology, email=tibbits@sfu.ca, c=CA
Date: 2011.11.29 16:53:28 -0800

Date

Name ...Glen Tibbits..... Title...Professor and Chair.....

.....2 November 2011.....

Section 2 - Dean's comments and endorsement of the Action Plan :

The Department of Biomedical Physiology and Kinesiology (BPK) has undergone significant change in the last couple of years, transferring from the Faculty of Applied Science to the Faculty of Science, and changing its focus (and name) by adding a strong component of physiology to its historical roots in kinesiology. Members of the department and of the external appraisal committee are to be commended for their clear-sighted view of BPK's strengths and weaknesses, and of the opportunities and challenges that accompany this ongoing period of departmental change.

As identified by the appraisal report, there is an imbalance between the numbers of students in BPK and the number of full time, research faculty available to teach them. My own analysis of data available from Institutional Research and Planning shows that BPK is comparable to Biological Science and Chemistry in AFTE's while having only 55% and 67% of the CFL's of those two departments. Although one new research faculty member joined the department in 2010, and two more are scheduled to join in the 2011-2012 academic year, the imbalance persists. BPK makes a strong case for increasing their faculty complement. I am supportive, and have made a BPK hire one of the top priorities in the Faculty's 2012-2013 faculty hiring plan. To ensure the success of this hire and future ones, and ensure that they build on the current strengths and future aspirations of the unit, I strongly encourage the department to clearly define hiring priorities, specifically the academic discipline(s) of the scientist(s) that they seek to hire.

30 The needs of the undergraduate program(s) are not the only consideration when planning for the recruitment of new faculty members. As outlined below, and addressed in the report, the potential needs of the ENHD program, the desire to maintain leadership in health-related research and teaching, and the future of the graduate program must also be taken into account. In addition, the department should discuss whether it wishes to capitalize on the EPU unit. Faculty member support is essential if this unit is to fit into the academic needs of the Faculty and not become just a fee-for-service facility primarily for non-SFU users. Thus, I strongly encourage the department to develop a strategic plan upon which to build their faculty-hiring plan. While the needs of the ENHD and EPU must be taken into account, they should not restrict the scope of the planning exercise

Adding additional faculty members is only part of the solution. I recommend that BPK consider the costs and benefits of "teaching reductions" among research faculty. Streamlining the curriculum is also of benefit. Thus I am pleased that members of the department have started to take a close look at course offerings and have recognized the need for extensive curriculum analysis, including the elimination of poorly subscribed electives. As recommended in the report, it is starting to rationalize its low enrolment programs (e.g. ergonomics) and is taking a reasoned approach to the role of research faculty in lower as well as upper courses.

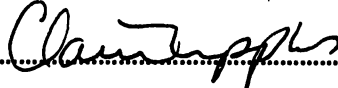
BPK has one of the highest levels of external research funding per faulty member in Science, comparable with MBB and Chemistry. However, members of the department have fewer graduate students on average than faculty in these and other life-science programs. BPK's numbers are even lower when one considers that many BPK graduate students are enrolled in the coursework masters program not in thesis based programs. I strongly encourage the department to continue its examination and reform of its graduate programs, as recommended in the appraisal report. I applaud the strong start that they have made in re-assessing the graduate course requirements and taking steps to increase their ability to attract higher quality graduate students. I am pleased that BPK has taken to heart the report's recommendation that they bring the undergraduate programs more into line with the research

interests of the faculty, to the benefit of undergraduate teaching and graduate student recruitment.

The department anticipates further major changes as it seeks to continue its leadership in SFU's expanding health research and education sector. This includes the implementation of the department's Exercise and Nutrition in Health and Disease Program (ENHD). Approved by Senate, this program is still awaiting provincial approval and funding. Establishing this new program, while maintaining established undergraduate teaching programs, improving graduate student recruitment, retention and programming, and maintaining faculty research strength, will be challenging particularly as we enter an era with little anticipated net growth in student numbers or government funding.

The ENHD program attracted enthusiastic support from the appraisers, with good reason. It fits with SFU's strategic research and academic plans. Based at Surrey, it should provide a community link with the burgeoning population south of the Fraser River, and fit well with other health related initiatives planned for the Surrey campus. However, provincial government funding for the program is by no means certain I strongly encourage the department to develop a plan for dealing with this uncertainty. Specifically, it should consider how to mount the program if funds are available, and how to move the department forward in that or other directions if they are not. Either way, there needs to be substantial faculty buy-in. I commend the new Chair for striking an ENHD steering committee. However, I strongly encourage the department to maintain ownership of this important initiative. Research Institutes, such as the one currently being proposed to Senate under the leadership of Drs. Finegood and Lear, are excellent ways to encourage research synergies but their mandate prevents them from offering undergraduate programs such as ENHD.

Faculty Dean

..........

Date

.....1 Nov. 2011.....

7