

OFFICE OF THE ASSOCIATE VICE-PRESIDENT, ACADEMIC

8888 University Drive,

TEL: 778.782.4636

avpcio@sfu.ca

Burnaby, BC Canada V5A 1S6 FAX: 778.782.5876

www.sfu.ca/vpacademic

MEMORANDUM -

ATTENTION

Senate

DATE

June 7, 2013

FROM

Gordon Myers, Chair Senate Committee on PAGES

1/1

Undergraduate Studies

RE:

Faculty of Science (SCUS 13-28)

For information:

Acting under delegated authority at its meeting of June 6, 2013, SCUS approved the following curriculum revisions effective Spring 2014:

- 1. Department of Molecular Biology and Biochemistry (SCUS 13-28a)
 - (i) New Course Proposal: MBB 324-3, Protein Biochemistry
- 2. Department of Biomedical Physiology and Kinesiology (SCUS 13-28b)
 - (i) New Course Proposal: BPK 482-3, Ergonomics and Rehabilitation
 - (ii) Deletion of BPK 380, 488
 - (iii) Description and/or Prerequisite change to BPK 448, 484



NEW COURSE PROPOSAL

I OF 3 PAGES

COURSE SUBJECT/NUMBER MBB 324

COURSE TITLE LONG — for Calendar/schedule, no more than 100 characters including spaces and punctuation Protein Biochemistry	
AND SHORT — for enrollment/transcript, no more than 30 characters including spaces and punctuation Protein Biochemistry	
CAMPUS where course will be taught: Burnaby Surrey Vancouver Great Northern Way Off campus COURSE DESCRIPTION (FOR CALENDAR). 50-60 WORDS MAXIMUM. ATTACH A COURSE OUTLINE TO THIS PROPOSAL. An exploration of the fundamental aspects of proteins; their chemical and physical nature, their synthesis, stability and turnover, as well as their structure and function. Methods of protein analysis and structure determination will be presented	
REPEAT FOR CREDIT NO YES How many times? Within a term? YES NO LIBRARY RESOURCES NOTE: Senate has approved (S.93-11) that no new course should be approved by Senate until funding has been committed for necessary library materials. Each new course proposal must be accompanied by a library report and, if appropriate, confirmation that funding arrangements have been addressed. status approved http://www.lib.sfu.ca/collections/course-assessments Library report status	
RATIONALE FOR INTRODUCTION OF THIS COURSE	
The Department of Molecular Biology and Biochemistry has a number of 400 level advanced Protein Biochemistry courses. Included are courses on structure-function, biogenesis and degradation, biomembranes, transport and special topics. While MBB222 offers a basic introduction to protein biochemistry, what the MBB department has always lacked is a third year foundation course on the fundamental aspects of proteins that can serve as the foundation for our 400 level more specialized protein biochemistry courses. This new course will fill that gap in our current curriculum. Making MBB222 the pre-requisite for this course allows chemistry majors to include this course in their program.	
SCHEDULING AND ENROLLMENT INFORMATION Indicate effective term and year course would first be offered and planned frequency of offering thereafter: 1141; Spring 2014	
Will this be a required or elective course in the curriculum? What is the probable enrollment when offered? Estimate: 100 students FEBRUARY 201	3



NEW COURSE PROPOSAL

2 OF 3 PAGES

CREDITS

Indicate number of credits (units): three

Indicate number of hours for: Lecture Seminar Tutorial Lab Other

three one

FACULTY Which of your present CFL faculty have the expertise to offer this course?

M. Paetzel, E. Young, L. Craig, R. Cornell, M. Leroux, P. Unrau, D. Sen, W. Davidson

WQB DESIGNATION (attach approval from Curriculum Office)

none

PREREQUISITE

Does this course replicate the content of a previously-approved course to such an extent that students should not receive credit for both courses? If so, this should be **noted in the prerequisite**.

MBB222

COREQUISITE

none

STUDENT LEARNING OUTCOMES

Upon satisfactory completion of the course students will be able to:

Students will be able to explain the basic principles that underly protein biochemistry and apply these principles to experimental and conceptual situations.

Students will be guided in the use of molecular graphics and physical models to help in the understanding of the basic structural principles of proteins.

Students will be able to use these basic principles to recognize new instances where these concepts can be applied and predict consequences (cause and effect).

Students will learn to assess primary literature of protein biochemistry.

Students will understand the different experimental approaches that have been developed to help understand sturctures and mechanisms of protein biochemistry and be able to interpret experimental results.

FEES

Are there any proposed student fees associated with this course other than tuition fees?





NEW COURSE PROPOSAL

3 OF 3 PAGES

RESOURCES

List any outstanding resource issues to be addressed prior to implementation: space, laboratory equipment, etc:

Articu Exam	R IMPLICATIONS clation agreement reviewed? YES NO Not applicable required: YES NO NO NOT applicable NO NOT APPLICATIONS required: YES NO NOT APPLICATIONS	
APPR	OVALS: APPROVAL IS SIGNIFIED BY DATE AND APPROPRIATE SIGNATURE. Departmental approval indicates that the Department or School has approved the country with other Departments/Schools/Faculties regarding proposed course content and con	
	Chair, Department/School	Date
	Chair, Faculty Curriculum Committee	Date
2	Faculty approval indicates that all the necessary course content and overlap concern Faculty/School/Department commits to providing the required Library funds.	s have been resolved, and that the
	Dean or designate	Date
	which other Departments, Schools and Faculties have been consulted regarding the proposed conentary evidence of responses.	ourse content, including overlap issues. Attach
pre- Che wou	emistry has been consulted because this course would be available requisite of MBB222 - which is the only MBB course Chemistry semistry is highly supportive - see attached letter. Note that stude all also have access to this course since they also take MBB222 being the usual pre-req for MBB300 level courses but not for MB	students are required to take. nts in Bisc, BPK and HSCI (in addition to MBB231 with
	Faculties' approval indicates that the Dean(s) or Designate of other Faculties AFFECTED by the course:	e proposed new course support(s) the approval of
		Date
		Date
3	SCUS approval indicates that the course has been approved for implementation subbeing addressed.	ject, where appropriate, to financial issues
	COURSE APPROVED BY SCUS (Chair of SCUS):	
		Date



What is the probable enrollment when offered? Estimate: 30

Seminar

Tutorial

Lab

Indicate number of credits for: Lecture 3

CREDITS

NEW COURSE PROPOSAL

I OF 3 PAGES

COURSE SUBJECT/NUMBER			
COURSE TITLE LONG — for Calendar/schedule, no more than 100 characters including spaces and punctuation			
BPK 482-3 Ergonomics and Rehabilitation			
AND SHORT — for enrollment/transcript, no more than 30 characters including spaces and punctuation Ergonomics and Rehabilitation			
Examines the role of ergonomics within the rehabilitation process. Provides knowledge about tools and techniques for improving the rehabilitation process for patients, heath care providers and organizations.			
LIBRARY RESOURCES NOTE: Senate has approved (S.93-11) that no new course should be approved by Senate until funding has been committed for necessary library materials. Each new course proposal must be accompanied by a library report and, if appropriate, confirmation that funding arrangements have been addressed.			
Campus where course will be taught: Burnaby Surrey Vancouver Great Northern Way Off campus			
Library report status			
RATIONALE FOR INTRODUCTION OF THIS COURSE Provide details on how existing instructional resources will be redistributed to accommodate this new course. For example, will another course be eliminated or will the frequency of offering of other courses be reduced; are there changes in pedagogical style or class sizes that allow for this additional course offering?			
Our current concentration in Ergonomics is being replaced by a certificate in Occupational Ergonomics. The creation of this new course is tied to the deletion of BPK 380 and BPK 488. Content relevant to Ergonomics and Rehabilitation from these deleted courses has been refocused to align with the new certificate in Occupational Ergonomics.			
SCHEDULING AND ENROLLMENT INFORMATION			
Indicate effective term and year course would first be offered and planned frequency of offering thereafter:			
Summer 2014			
Will this be a required or elective course in the curriculum? Required Elective			



NEW COURSE PROPOSAL

2 OF 3 PAGES

FACULTY Which of your present CFL faculty have the expertise to offer this course?

Anne-Kristina Arnold, Tony Leyland and Stephen Brown

WQB DESIGNATION (attach approval from Curriculum Office)
PREREQUISITE Does this course replicate the content of a previously-approved course to such an extent that students should not receive credit for both courses.? If so, this should be noted in the prerequisite. BPK (or KIN)180W, 201, 326, 381.Students must successfully complete a Criminal Record Check.
COREQUISITE
BPK 481
STUDENT LEARNING OUTCOMES Upon satisfactory completion of the course students will be able to: Learning Outcomes
 Develop a framework of strategies to facilitate life-long learning in Ergonomics Appreciate the multidisciplinary nature of occupational ergonomics Describe the role of ergonomics in the rehabilitation process Engage in systems design analysis and appreciate the influence of elements and interactions FEES Are there any proposed student fees associated with this course other than tuition fees? YES NO (If yes, attach mandatory supplementary fee approval form.)
List any outstanding resource issues to be addressed prior to implementation: space, laboratory equipment, etc:
Articulation agreement reviewed? YES NO Not applicable OTHER IMPLICATIONS Two courses are being deleted, some of the material is being combined into this new course.
Exam required: YES NO Criminal Record Check required: YES NO NOVEMBER 201



NEW COURSE PROPOSAL

3 OF 3 PAGES

APPROVALS

	Chair, Department/School	Date
	Chair, Faculty Curriculum Committee	Date
2	Faculty approval indicates that all the necessary course content and of Faculty/School/Department commits to providing the required Library	
	Dean or designate	Date
	Γ which other Departments, Schools and Faculties have been consulted regarding	the proposed course content, including overlap issues. Attach
	umentary evidence of responses.	
	umentary evidence of responses. o consultation as this area is unique to our Department	
No Oth		
No Oth	o consultation as this area is unique to our Department are Faculties approval indicated that the Dean(s) or Designate of other Faculties Anew course:	
No Oth	o consultation as this area is unique to our Department there Faculties approval indicated that the Dean(s) or Designate of other Faculties Annew course:	FFECTED by the proposed new course support(s) the approval o
Oth the	o consultation as this area is unique to our Department there Faculties approval indicated that the Dean(s) or Designate of other Faculties Annew course:	FFECTED by the proposed new course support(s) the approval o Date Date
No	o consultation as this area is unique to our Department of the Paculties approval indicated that the Dean(s) or Designate of other Faculties Anew course: SCUS approval indicates that the course has been approved for implementations.	FFECTED by the proposed new course support(s) the approval o Date Date

APPROVAL IS SIGNIFIED BY DATE AND APPROPRIATE SIGNATURE.



COURSE CHANGE/DELETION

EXISTING COURSE, CHANGES RECOMMENDED

SCUS 13-28b (ii)

Please check appropriate revision(s):	3003 10 205
Course number Credit Title Description	Prerequisite Course deletion Learning Outcomes
Indicate number of hours for: Lecture Seminar	Tutorial Lab
FROM Course Subject/Number_BPK 380 Credits 3	Course Subject/Number BPK 380 Credits 3
TITLE	
(1) Long title for calendar and schedule, no more than 100 characters inclu FROM: Occupational Biomechanics	ding spaces and punctuation. TO:
(2) Short title for enrollment and transcript, no more than 30 characters in FROM:	cluding spaces and punctuation. T0:
DESCRIPTION FROM:	DESCRIPTION TO:
PREREQUISITE Does this course replicate the content of a previously approved course to s If so, this should be noted in the prerequisite. FROM:	PREREQUISITE uch an extent that students should not receive credit for both courses? TO:
LEARNING OUTCOMES	
RATIONALE	
Our current concentration in Ergonomics is being replaced b BPK 488 are being deleted from our program and will be rep Rehabilitation.	
Effective term and year Spring 2014	



COURSE CHANGE/DELETION

EXISTING COURSE, CHANGES RECOMMENDED

Please check appropriate revision(s):	
Course number Credit Title Description I	Prerequisite Course deletion Learning Outcomes
Indicate number of hours for: Lecture Seminar	Lab
FROM Course Subject/Number_BPK 488 Credits 3	Course Subject/Number BPK 488 Credits 3
TITLE	
(1) Long title for calendar and schedule, no more than 100 characters inclu FROM:	ding spaces and punctuation. TO:
Ergonomics Laboratory	
(2) Short title for enrollment and transcript, no more than 30 characters in FROM:	TO:
DESCRIPTION FROM:	DESCRIPTION TO:
PREREQUISITE Does this course replicate the content of a previously approved course to so If so, this should be noted in the prerequisite . FROM:	PREREQUISITE uch an extent that students should not receive credit for both courses? T0:
LEARNING OUTCOMES	
RATIONALE	
Our current concentration in Ergonomics is being replaced by BPK 488 are being deleted from our program and will be rep Rehabilitation.	y a certificate in Occupational Ergonomics. BPK 380 and laced by one new course, BPK 482 Ergonomics and
Effective term and year Spring 2014	



COURSE CHANGE/DELETION

EXISTING COURSE, CHANGES RECOMMENDED Please check appropriate revision(s): Description Course deletion Learning Outcomes Title Prerequisite Course number Credit Indicate number of hours for: Lecture _ Seminar_ Tutorial _____ TO FROM _____ Course Subject/Number BPK 448 Course Subject/Number_BPK 448 TITLE (1) Long title for calendar and schedule, no more than 100 characters including spaces and punctuation. FROM: (2) Short title for enrollment and transcript, no more than 30 characters including spaces and punctuation. FROM: Rehabilitation of Movement Control DESCRIPTION DESCRIPTION TO: FROM: **PREREQUISITE PREREQUISITE** Does this course replicate the content of a previously approved course to such an extent that students should not receive credit for both courses? If so, this should be noted in the prerequisite. FROM: TO: Prerequisite: BPK (or KIN) 201, 207 and 306, or for biomedical BPK (or KIN) 201 or 207, and 306, or for biomedical engineering students, BPK (or KIN) 201, 208 and 308. engineering students, BPK (or KIN) 201, 208 and 308. **LEARNING OUTCOMES**

RATIONALE

Allowing either BPK 201 or BPK 207 instead of both, will open up this course to all Majors in our programs.

Effective term and year Spring 2014



COURSE CHANGE/DELETION

EXISTING COURSE, CHANGES RECOMMENDED

Please check appropriate revision(s):	
	rerequisite Course deletion Learning Outcomes
Indicate number of hours for: Lecture Seminar	Tutorial Lab
EDOM	TO Course Subject/Number BPK 484
Credits 3	Credits
TITLE	
(1) Long title for calendar and schedule, no more than 100 characters include FROM:	ding spaces and punctuation. TO:
	Altitude and Aerospace Physiology
(2) Short title for enrollment and transcript, no more than 30 characters inc FROM:	luding spaces and punctuation. To: Altitude and Aerospace Physiology
DESCRIPTION FROM:	DESCRIPTION TO:
The theme of this course is human physiology in environments of decreased atmospheric pressure, high G-force, and weightlessness. The course will deal with acute and chronic adaptations to these environments as well as life support systems and "countermeasures" developed to expand the envelope of human performance. Developments of breathing apparatus and G-suits for high performance aircraft will be examined as they relate to solving the physiological problems of exposure to these environments. Effects of short and extended periods of weightlessness on cardiovascular, cerebrovascular, musculo-skeletal, neural, hormonal and vestibular systems will be explored.	A laboratory based examination of human physiological systems during exposure to aerospace related conditions of altered atmospheric content and G-forces. Developments of breathing apparatus, pressurized flight suits and anti-G-suits for high performance aircraft will be examined as they relate to solving the physiological problems of exposure to these environments. The effects of weightlessness during spaceflight will also be explored through lecture, literature review and current research data. An investigation of the biomedical monitoring of pilots and astronauts will be explored as they relate to health and safety.
PREREQUISITE	PREREQUISITE
Does this course replicate the content of a previously approved course to su	ch an extent that students should not receive credit for both courses?
If so, this should be noted in the prerequisite . FROM:	TO:
BPK (or KIN) 305, 306. Recommended: BPK (or KIN) 407	BPK (or KIN) 305 or 308
LEARNING OUTCOMES	

RATIONALE

Most of the material requires advance understanding of the cardiovascular and respiratory systems therefore BPK 305 is required. BPK 205 is sufficient for the neural and hormonal content covered in more depth in BPK 306. BPK 205 does not have to be listed as it is a prerequisite for BPK 305. Principles of laboratory study and writing will be covered in more detail in the course than in its previous offerings. Therefore BPK 407 no longer needs to be recommended. BPK 308 is required for Biomedical Engineering majors, including this as a prerequisite will allow these students to take this course as an option.

Effective term and year Spring 2014