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MEMORANDUM

ATTENTION	Senate	DATE	June 7, 2013
FROM	Gordon Myers, Chair	PAGES	1/1
RE:	Senate Committee on Undergraduate Studies 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



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? ☐ Required ☒ Elective

What is the probable enrollment when offered? Estimate: 100 students



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 structures 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? ☐ YES ☒ NO



RESOURCES

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

OTHER IMPLICATIONS

Articulation agreement reviewed? ☐ YES ☐ NO ☒ Not applicable
Exam required: ☐ YES ☒ NO
Criminal Record Check required: ☐ YES ☒ NO

APPROVALS: APPROVAL IS SIGNIFIED BY DATE AND APPROPRIATE SIGNATURE.

- 1 Departmental approval indicates that the Department or School has approved the content of the course, and has consulted with other Departments/Schools/Faculties regarding proposed course content and overlap issues.

Chair, Department/School

Date

Chair, Faculty Curriculum Committee

Date

- 2 Faculty approval indicates that all the necessary course content and overlap concerns have been resolved, and that the Faculty/School/Department commits to providing the required Library funds.

Dean or designate

Date

LIST which other Departments, Schools and Faculties have been consulted regarding the proposed course content, including overlap issues. Attach documentary evidence of responses.

Chemistry has been consulted because this course would be available to their students given the pre-requisite of MBB222 - which is the only MBB course Chemistry students are required to take. Chemistry is highly supportive - see attached letter. Note that students in Bisc, BPK and HSCI would also have access to this course since they also take MBB222 (in addition to MBB231 with 231 being the usual pre-req for MBB300 level courses but not for MBB324

Other Faculties' approval indicates that the Dean(s) or Designate of other Faculties AFFECTED by the proposed new course support(s) the approval of the new course:

Date _____

Date _____

- 3 SCUS approval indicates that the course has been approved for implementation subject, where appropriate, to financial issues being addressed.

COURSE APPROVED BY SCUS (Chair of SCUS):

Date _____



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

COURSE DESCRIPTION (FOR CALENDAR). 50-60 WORDS MAXIMUM. ATTACH A COURSE OUTLINE TO THIS PROPOSAL.

Examines the role of ergonomics within the rehabilitation process. Provides knowledge about tools and techniques for improving the rehabilitation process for patients, health 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

What is the probable enrollment when offered? Estimate: 30

CREDITS

Indicate number of credits for: Lecture 3 Seminar Tutorial Lab



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.** *AND*

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

1. Develop a framework of strategies to facilitate life-long learning in Ergonomics
2. Appreciate the multidisciplinary nature of occupational ergonomics
3. Describe the role of ergonomics in the rehabilitation process
4. 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.)

RESOURCES

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



APPROVALS

- 1 Departmental approval indicates that the Department or School has approved the content of the course, and has consulted with other Departments/Schools/Faculties regarding proposed course content and overlap issues.

Chair, Department/School

Date

Chair, Faculty Curriculum Committee

Date

- 2 Faculty approval indicates that all the necessary course content and overlap concerns have been resolved, and that the Faculty/School/Department commits to providing the required Library funds.

Dean or designate

Date

LIST which other Departments, Schools and Faculties have been consulted regarding the proposed course content, including overlap issues. Attach documentary evidence of responses.

No consultation as this area is unique to our Department.

Other Faculties approval indicated that the Dean(s) or Designate of other Faculties AFFECTED by the proposed new course support(s) the approval of the new course:

_____ Date _____

_____ Date _____

- 3 SCUS approval indicates that the course has been approved for implementation subject, where appropriate, to financial issues being addressed.

COURSE APPROVED BY SCUS (Chair of SCUS):

_____ Date _____

APPROVAL IS SIGNIFIED BY DATE AND APPROPRIATE SIGNATURE.



EXISTING COURSE, CHANGES RECOMMENDED

SCUS 13-28b (ii)

Please check appropriate revision(s):

☐ Course number ☐ Credit ☐ Title ☐ Description ☐ Prerequisite ☒ Course deletion ☐ Learning Outcomes

Indicate number of hours for: Lecture _____ Seminar _____ Tutorial _____ Lab _____

FROM TO
Course Subject/Number BPK 380 BPK 380
Credits 3 Credits 3

TITLE

(1) Long title for calendar and schedule, no more than 100 characters including spaces and punctuation.

FROM: TO:

Occupational Biomechanics

(2) Short title for enrollment and transcript, no more than 30 characters including spaces and punctuation.

FROM: TO:

DESCRIPTION

FROM:

DESCRIPTION

TO:

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

LEARNING OUTCOMES

RATIONALE

Our current concentration in Ergonomics is being replaced by a certificate in Occupational Ergonomics. BPK 380 and BPK 488 are being deleted from our program and will be replaced by one new course, BPK 482 Ergonomics and Rehabilitation.

Effective term and year Spring 2014



EXISTING COURSE, CHANGES RECOMMENDED

Please check appropriate revision(s):

☐ Course number ☐ Credit ☐ Title ☐ Description ☐ Prerequisite ☒ Course deletion ☐ Learning Outcomes

Indicate number of hours for: Lecture _____ Seminar _____ Tutorial _____ Lab _____

FROM **TO**
Course Subject/Number BPK 488 Course Subject/Number BPK 488
Credits 3 Credits 3

TITLE

(1) Long title for calendar and schedule, no more than 100 characters including spaces and punctuation.

FROM: **TO:**

Ergonomics Laboratory

(2) Short title for enrollment and transcript, no more than 30 characters including spaces and punctuation.

FROM: **TO:**

DESCRIPTION

FROM:

DESCRIPTION

TO:

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

LEARNING OUTCOMES

RATIONALE

Our current concentration in Ergonomics is being replaced by a certificate in Occupational Ergonomics. BPK 380 and BPK 488 are being deleted from our program and will be replaced by one new course, BPK 482 Ergonomics and Rehabilitation.

Effective term and year Spring 2014

**EXISTING COURSE, CHANGES RECOMMENDED**

Please check appropriate revision(s):

☐ Course number
 ☐ Credit
 ☐ Title
 ☐ Description
☒ Prerequisite
☐ Course deletion
☐ Learning Outcomes

Indicate number of hours for: Lecture _____ Seminar _____ Tutorial _____ Lab _____

FROMCourse Subject/Number **BPK 448**Credits **3****TO**Course Subject/Number **BPK 448**Credits **3****TITLE**

(1) Long title for calendar and schedule, no more than 100 characters including spaces and punctuation.

FROM:**TO:**

(2) Short title for enrollment and transcript, no more than 30 characters including spaces and punctuation.

FROM:**TO:**

Rehabilitation of Movement Control

DESCRIPTION**FROM:****DESCRIPTION****TO:****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:

Prerequisite: BPK (or KIN) 201, 207 and 306, or for biomedical engineering students, BPK (or KIN) 201, 208 and 308.

PREREQUISITE**TO:**

BPK (or KIN) 201 or 207, and 306, or for biomedical 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**

**EXISTING COURSE, CHANGES RECOMMENDED**

Please check appropriate revision(s):

☐ Course number ☐ Credit ☐ Title ☒ Description ☒ Prerequisite ☐ Course deletion ☐ Learning Outcomes
Indicate number of hours for: Lecture 1 Seminar _____ Tutorial _____ Lab 4**FROM**Course Subject/Number BPK 484Credits 3**TO**Course Subject/Number BPK 484

Credits _____

TITLE

(1) Long title for calendar and schedule, no more than 100 characters including spaces and punctuation.

FROM:**TO:**

Altitude and Aerospace Physiology

(2) Short title for enrollment and transcript, no more than 30 characters including spaces and punctuation.

FROM:**TO:**

Altitude and Aerospace Physiology

DESCRIPTION**FROM:**

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.

DESCRIPTION**TO:**

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

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:**

BPK (or KIN) 305, 306. Recommended: BPK (or KIN) 407

PREREQUISITE**TO:**

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