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MEMORANDUM

ATTENTION Senate
FROM Gordon Myers, Chair
Senate Committee on
Undergraduate Studies
RE: Faculty of Science

DATE June 5, 2015
PAGES 1/1

A handwritten signature in blue ink, appearing to read "Gordon Myers", is written over the signature line.

For information:

Acting under delegated authority at its meeting of June 4, 2015 SCUS approved the following curriculum revisions effective Spring 2016.

1. Biomedical Physiology and Kinesiology (REVISED SCUS 15-12a)

- (i) Admission changes to the Behavioural Neuroscience Major program

2. Faculty of Science (SCUS 15-24a)

- (i) Revision of Faculty of Science Requirements calendar language in all Faculty of Science majors, joint majors, honours and joint honours

3. Department of Biomedical Physiology and Kinesiology (SCUS 15-24b)

- (i) Upper division requirement changes to the Kinesiology Minor

4. Department of Chemistry (SCUS 15-24c)

- (i) Prerequisite change for CHEM 121

5. Department of Biological Sciences (SCUS 15-24d)

- (i) Requirement changes to the Biological Sciences Honours program
- (ii) New Course Proposal: BISC 425-3, Sensory Biology

6. Department of Physics (SCUS 15-24e)

- (i) Temporary withdrawal of PHYS 131

BPK MOTION – Change the approval process for the Behavioural Neuroscience Major.

Rationale : This will allow students to enter the program earlier, gaining priority for enrollment in high demand courses. The proposed process aligns with current procedures for internal transfer and admission for other BPK and PSYC programs. This has been approved by the PSYC Department.

FROM:

Admission Requirements

The admission requirements for the entry routes appear below.

Post Secondary Transfer and Internal Transfer Applicants

Post-secondary transfer applicants may apply after at least 18 Simon Fraser University units are completed. Post-secondary transfer and internal transfer applicants are required to achieve a 2.5 cumulative grade point average (CGPA) for admission.

As well, applicants must have completed the following courses with a grade of C or better.

BISC 101 General Biology (4)
CHEM 121 General Chemistry and Laboratory I (4)
BPK 142 Introduction to Kinesiology (3)
PSYC 100 Introduction to Psychology I (3)
PSYC 102 Introduction to Psychology II (3)
PSYC 201W Introduction to Research Methods in Psychology (4)
PSYC 210 Introduction to Data Analysis in Psychology (4)

and one of

MATH 151 Calculus I (3)
MATH 154 Calculus I for the Biological Sciences (3)

and one of

PHYS 101 Physics for the Life Sciences I (3)
PHYS 120 Mechanics and Modern Physics (3)
PHYS 140 Studio Physics - Mechanics and Modern Physics (4)

TO :

Admission Requirements

Students may apply for admission to the Behavioural Neuroscience major program

through the internal transfer process as outlined here.

Applicants are selected based on an admission grade point average (GPA) calculated over five required courses (SET 1 below). Students should apply for admission as soon as these five required courses have been completed. Unsuccessful applicants may complete four additional courses (SET 2) and apply again. A C- grade or better is required in each course used for the admission application, except for PSYC 201W where a minimum grade of C is required. Those not meeting the admission GPA upon completion of all SET 1 and 2 courses should make an appointment with the program advisor.

Students transferring to Simon Fraser University from another post-secondary institution for the Behavioural Neuroscience major will first transfer into the Faculty of Science or Faculty of Arts and Social Sciences.

For students transferring some core courses from another post-secondary institution, only courses completed at Simon Fraser University (and not previously completed elsewhere) are used in the admission GPA. Normally, at least 12 units from core courses are required as a basis for the GPA calculation. The Behavioural Neuroscience Committee must approve all exceptions.

SET 1

Students complete both of

- BPK 142 Introduction to Kinesiology (3)
- PSYC 201W (4)

and one of

- BISC 101 General Biology (4)
- CHEM 121 General Chemistry and Laboratory I (4)

and one of

- MATH 154 Calculus I for the Biological Sciences (3)
- PHYS 101 Physics for the Life Sciences I (3)

and one of

- PSYC 100 (3)
- PSYC 102 (3)

SET 2

Students complete one of

- BISC 101 General Biology (4) If not taken as part of Set 1

- **CHEM 121 General Chemistry and Laboratory I (4) If not taken as part of Set 1**

and one of

- **MATH 154 Calculus I for the Biological Sciences (3) If not taken as part of Set 1**
- **PHYS 101 Physics for the Life Sciences I (3) If not taken as part of Set 1**

and one of

- **PSYC 100 (3) If not taken as part of Set 1**
- **PSYC 102 (3) If not taken as part of Set 1**

and

- **PSYC 210 (4)**

Application Procedure

Students should complete a program approval form available on the Biomedical Physiology and Kinesiology (BPK) website and submit it to the BPK academic advisor by June 1 for fall term approval, October 1 for spring term approval, or February 1 for summer term approval.



FACULTY OF SCIENCE
Dean of Science

SCUS 15-24

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MEMORANDUM

ATTENTION	Senate Committee for Undergraduate Studies, SFU	DATE	May 25, 2015
FROM	Carl Lowenberger, Chair, Science UCC		
RE:	Submission of Undergraduate Curriculum Business from the Faculty of Science for inclusion on the Agenda of the June 2015 SCUS Meeting		

FACULTY OF SCIENCE

Motion: Removal of *Faculty of Science Requirements* calendar language from all Faculty of Science majors, joint majors, honours, and joint honours

BPK

Motion: Add BPK 301-Biomechanics Laboratory (3) and BPK 402 – Mechanical Behaviour of Tissues (3) as upper division options for the Kinesiology Minor

CHEMISTRY

Motion: Proposed addition of CHEM 109 to the prerequisites for CHEM 121

BIOLOGY

Motion 1: To reduce the Biology Honours Requirement from a minimum of 132 credits to a minimum of 124 credits.

Motion 2: To approve BISC 425 Sensory Biology (3-0-0) as a new 4th year course.

PHYSICS

Motion: Request for temporary withdrawal of PHYS 131 from calendar



FACULTY OF SCIENCE
Dean of Science

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May 14, 2015

Senate Committee on Undergraduate Studies (SCUS)
Simon Fraser University
8888 University Drive
Burnaby, BC V5A 1S6

Attention: Jo Hinchliffe

The below mentioned Motion was passed by the Faculty of Science (FoS) UCC on May 14, 2015.

1. Motion: Removal of *Faculty of Science Requirements* language from all Faculty of Science majors, joint majors, honours, and joint honours

Rationale: removal of outdated language.

Deletions in ~~striketrough~~

Faculty of Science Major Requirements (example)

- In addition to the above requirements, students must also satisfy Faculty of Science major program requirements to complete a minimum of 120 units including additional upper division units to total a minimum of 44 upper division units (~~excluding EDUC 401 to 406~~)
- ~~students who were enrolled at Simon Fraser University between fall 1991 and summer 2006 are required to complete a minimum of 12 units in subjects outside the Faculty of Science (excluding EDUC 401 to 406) including six units minimum to be completed in the Faculty of Arts and Social Sciences~~

Sincerely,

Carl Lowenberger
Associate Dean, Academic
Faculty of Science



SCUS 15-24b

Department of
Biomedical Physiology and Kinesiology
Faculty of Science

May 6, 2015

Faculty of Science
Simon Fraser University
8888 University Drive
Burnaby, BC V5A 1S6

To: Carl Lowenberger Associate Dean, Faculty of Science;

RE: Undergraduate Program changes for the Department of Biomedical Physiology and Kinesiology

1. BPK Motion: Add BPK 301-Biomechanics Laboratory (3) and BPK 402 – Mechanical Behaviour of Tissues (3) as upper division options for the Kinesiology Minor

Rationale: BPK would like to increase the upper division options available for students looking to complete a kinesiology minor.

Sincerely,

A handwritten signature in black ink, appearing to read "Ryan Dill", with a stylized flourish at the end.

Ryan Dill
Senior Lecturer
Undergraduate Program Committee Chair
Department of Biomedical Physiology and Kinesiology
Faculty of Science
SFU

BPK Motion for Faculty of Science UCC – May 2015 – Ryan Dill

1. BPK Motion: Add BPK 301-Biomechanics Laboratory (3) and BPK 402 – Mechanical Behaviour of Tissues (3) as upper division options for the Kinesiology Minor

Rationale: BPK would like to increase the upper division options available for students looking to complete a kinesiology minor.

Kinesiology Minor

Program Requirements

and four of

BPK 301 - Biomechanics Laboratory (3)

BPK 303 - Kinanthropometry (3)

BPK 305 - Human Physiology I (3)

BPK 306 - Human Physiology II (Principles of Physiological Regulation) (3)

BPK 310 - Exercise/Work Physiology (3)

BPK 311 - Applied Human Nutrition (3)

BPK 312 - Nutrition for Fitness and Sport (3)

BPK 325 - Basic Human Anatomy (3) +

BPK 342 - Active Health (3) +

BPK 375 - Human Growth and Development (3)

BPK 381 - Psychology of Work (3)

BPK 382 - Workplace Health (3)

BPK 402 - Mechanical Behaviour of Biological Tissues (3)

BPK 420 - Selected Topics in Kinesiology I (3)

BPK 421 - Selected Topics in Kinesiology II (3)

BPK 422 - Selected Topics in Kinesiology III (3)

BPK 423 - Selected Topics in Kinesiology IV (3)

BPK 431 - Integrative Cancer Biology (3)

BPK 461 - Physiological Aspects of Aging (3)

COURSE SUBJECT	CHEM	NUMBER	121	TITLE	General Chemistry and Laboratory
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INSTRUCTIONS (OVERALL):

1. Using Microsoft Word draft changes using the following guideline. Paste in box below.
2. Rationale must be included. If more space is needed than provided below, please use the provided text box on page 2 of this document.
3. Indicate term = Fall, Spring, Summer

TYPE OF CHANGES RECOMMENDED

Please type 'X' for the appropriate revision(s):

☐	Course number	☐	Credit	☐	Title	☐	Description	☒	Prerequisite	☐	Deletion
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WORDING/DESCRIPTION EDITS

1. Indicate deleted or changed text using striketrough.
2. Indicate added or new text using underline.
3. Equivalent courses: preclusion statement should read:
 - a. Students with credit for x cannot take y for further credit.

Prerequisite: BC high school chemistry 12 or CHEM 109 or CHEM 111.

SAMPLE

POL 223 ~~Canadian-American~~ Political Economy (3)

~~An introductory study of America's Canada's political economy, stressing the interrelated nature of Canada's economic and political life. The course focuses on current economic problems and policies, taking into account the geographical, historical and political environments. Topics include the resource and industrial structures, research and development, the public sector, fiscal and monetary policy, the role of the state, trade and foreign ownership, energy, regional disparity, corporate concentration and the political economy of federalism.~~

~~This course is identical to CNS 280 and students cannot take both courses for credit. Students with credit for CNS 280 cannot take POL 223 for further credit.~~

~~Recommended Pre-requisite:~~ POL 100 or 101W.

Breadth – Social Sciences.

RATIONALE

If more space is needed, please use the provided text box on page 2 of this document

This housekeeping change formally includes CHEM 109 (Introduction to Chemistry for Health Careers), a high-school equivalency course only open to students in the Aboriginal Pre-Health program, as an allowed prerequisite for CHEM 121 (the university-level introductory chemistry course). Many CHEM 109 students continue on with permission to CHEM 121, thus this change codifies current practice in the Department.

EFFECTIVE TERM AND YEAR, FOR CHANGES

SPRING 2016



DEPARTMENT OF
BIOLOGICAL SCIENCES

Erin Barley
Lecturer
Chair, DUCC
Dept Biological Sciences

Simon Fraser University
Department of Biological
Sciences
8888 University Drive,
Burnaby, BC, Canada
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May 11, 2015

ATTENTION: Carl Lowenberger,
Associate Dean, Faculty of Science

RE: Proposed changes to undergraduate program from Department of
Biological Sciences

Motion 1: To reduce the Biology Honours Requirement from a minimum of
132 credits to a minimum of 124 credits.

Rationale. SFU has recently lowered our institutional Honours requirement
to a minimum of 120 credits. This was done to bring our requirements in line
with those of other institutions (e.g., UBC, UVic). Other Departments are
also in the process of lowering their requirements (e.g., MBB to 124, CHEM
to 122). Biology Honours students must currently complete a 15 credit ISS;
this will remain unchanged. Honours students can meet all their requirements
in 124 credits by taking fewer electives. The Biology Major requirements
remain unchanged at 120 credits.

Motion 2: To approve BISC 425 Sensory Biology (3-0-0) as a new 4th year
course.

Rationale: The External Review reported that “*students indicated that the
[Cells-Molecules-Physiology] stream would benefit from ... additional upper
division lecture courses.*” Sensory Biology will contribute an additional
upper division elective in the CMP stream, and complements other
physiology courses (Environmental Physiology, Proposed new Cell
Physiology course). Sensory Biology has been offered 3 times as a special
topics course.

Sincerely,
Erin Barley

Motion 1. To reduce the Biology Honours Requirement from a minimum of 132 credits to a minimum of 124 credits.

Rationale: SFU has recently lowered our institutional Honours requirement to a minimum of 120 credits. This was done to bring our requirements in line with those of other institutions (e.g., UBC, UVic). Other Departments are also in the process of lowering their requirements (e.g., MBB to 124, CHEM to 122). Biology Honours students must currently complete a 15 credit ISS; this will remain unchanged. Honours students can meet all their requirements in 124 credits by taking fewer electives. The Biology Major requirements remain unchanged at 120 credits.

Deletions in ~~striketrough~~, additions in **bold**.

Biological Sciences Honours

Bachelor of Science

This honours program offers independent research and in-depth study. It requires minimum of ~~132~~ 124 units as specified below. Entry requires a cumulative grade point average (CGPA) of 3.0 or higher (B standing), and department permission. Students complete all lower division requirements as shown below, and at least 15 upper division units in biological sciences prior to application for entry. Students should contact an advisor before enrolment.

Program Requirements

Students should complete the lower division core requirements within the first 60 units (four terms).

Students are encouraged to choose their stream upon lower division core completion. Students who have had more than five course repeats are normally not permitted to remain in the program. Direct entry to the BISC major upon acceptance to the University is possible if Faculty of Science criteria is met.

Basic unit requirements include

- BISC/MBB (lower division) 20 units
- non BISC/MBB (lower division) 27 units
- BISC/MBB (upper division) 45 units
- electives (**including Breadth requirements**) ~~25~~ 17 units
- honours thesis 15 units
- total (minimum) ~~132~~ 124 units



COURSE SUBJECT/NUMBER BISC 425

COURSE TITLE

LONG — for Calendar/schedule, no more than 100 characters including spaces and punctuation

Sensory Biology

AND

SHORT — for enrollment/transcript, no more than 30 characters including spaces and punctuation

Sensory Biology

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.

This course will examine the basic physiological mechanisms underlying various senses including vision, audition, olfaction, gustation, and touch. Non-mamalian senses like polarization sensitivity and mechanoreception will also be explored. Lectures will combine concepts from physics, systems neuroscience, cell and molecular biology, and behaviour. The aim is to present an overview of the major sensory mechanisms underlying animal behaviour.

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.

The course has been reviewed, approved, and added to the appropriate list:
<http://www.lib.sfu.ca/collections/course-assessments>

Library report status

RATIONALE FOR INTRODUCTION OF THIS COURSE

During our last External Review, our Department documented in our Self Study Report that "students indicated that the [CMP] stream would benefit from ... additional upper division lecture courses." Sensory Biology will contribute an additional upper division elective in the CMP stream, and complements other physiology courses (Environmental Physiology, Proposed new Cell Physiology course). Sensory Biology has been offered 3 times as a special topics course, and Biological Sciences Undergraduate Curriculum Committee supports regularizing it.

SCHEDULING AND ENROLLMENT INFORMATION

Indicate effective **term and year** course would first be offered and planned **frequency** of offering thereafter:

First offering Fall 2016, to be offered every other year, dependent on enrollment.

Will this be a required or elective course in the curriculum?

☐

Required

☒

Elective

What is the probable enrollment when offered? Estimate:

25-40



CREDITS

Indicate number of credits (units): 3

Indicate number of hours for:	Lecture	Seminar	Tutorial	Lab	Other
	3	0	0	0	0

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

Drs Inigo Novales Flamarique, Tony Williams, Gordon Rintoul

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**.

BISC 305, or BPK 305, or BPK 306 with a grade of C- or better. Students who have taken special topics courses BISC 471 or 473 with the title "Sensory Biology" may not take this course for further credit.

COREQUISITE

STUDENT LEARNING OUTCOMES

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

This course aims to provide students with basic concepts in cellular anatomy, neurophysiology and behaviour underlying main sensory systems including vision, touch, hearing, olfaction, and gustation. Specialized sensory systems like polarization vision and electrosensory perception are also investigated. Detailed Learning Objectives available from the Departmental UCC by request.

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.

BPK - approved.

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 _____



MEMO

Jeffrey McGuirk
Associate Professor
Undergraduate Chair
Dept. of Physics

TEL: 778.782.3158
physics.sfu.ca

ATTENTION: Carl Lowenberger, Associate Dean of Science

RE: Temporary withdrawal of PHYS 131

DATE: May 20, 2015

The Physics Department requests temporary withdrawal of PHYS 131 – Physics Laboratory I, for Fall 2015 through Summer 2016.

SCUS recently approved the replacement of the PHYS 131 laboratory course with the newly created PHYS 132 & 133 laboratory courses. PHYS 131 will no longer be offered after Summer 2015.

We will seek approval for permanent withdrawal of the course through the usual channels, but wish to minimize confusion for students in the meantime.

Thanks you,

Jeff McGuirk