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MEMORANDUM

ATTENTION	Senate	**DATE**	November 8, 2013
FROM	Gordon Myers, Chair Senate Committee on Undergraduate Studies	**PAGES**	1/1
RE:	Faculty of Science (SCUS 13-49)		

For information:

Acting under delegated authority at its meeting of November 7, SCUS approved the following curriculum revisions effective Summer 2014.

1. Department of Biomedical Physiology and Kinesiology (SCUS 13-49a)
   (i) Requirement changes to the Kinesiology Major and Honours Programs

2. Department of Earth Sciences (SCUS 13-49b)
   (i) Course deletion of EASC 315
   (ii) Title change for EASC 405
   (iii) Description and prerequisite change for EASC 408

3. Department of Molecular Biology and Biochemistry (SCUS 13-49c)
   (i) Upper Division Requirement changes to the Joint Major and Honours in Computing Science and Molecular Biology Programs

4. Department of Physics (SCUS 13-49d)
   (i) Upper and Lower Division Requirement changes for the Chemical Physics Major and Honours Programs
   (ii) Prerequisite change for PHYS 102

5. Temporarily Withdrawn Courses (SCUS 13-49e)
   (i) BISC 310
   CHEM 193
   PHYS 380, 430, 484

SIMON FRASER UNIVERSITY

Office of the Dean

MEMORANDUM

To: Jo Hinchliffe
Senate Committee on
Undergraduate Studies

From: George Agnes, Associate Dean, Academic
Faculty of Science
UG Curriculum Committee

Subject: Faculty of Science Agenda Item for SCUS

Date: October 28, 2013

The Undergraduate Curriculum Committee in the Faculty of Science approved

1. **BPK – Two motions, each encompassing several minor changes to the Kinesiology (1a) Major and (1b) Honours Programs**
2. **Earth Sciences – Motions for changes as documented to the following courses, (2a) EASC 315 (Deletion), (2b) 405 (Title), and (2c) 408 (Description & Prerequisite),**
   and
   memos & motions for (2d) suspension of admission & (2e) termination of the EASC Forestry Geoscience Certificate
3. **MBB – Program changes to Joint Major Cmpt Sci and MBB (3a) Major and (3b) Honours**
4. **Physics – Program changes to Physics (4a) Major and (4b) Honours, and (4c) course change Physics 102 (prerequisite)**

Would you please place these items on the agenda of the next meeting of the Senate Committee on Undergraduate Studies?

Thank you.

George Agnes

SFU
Department of
Biomedical Physiology and Kinesiology
Faculty of Science

October 16, 2013

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

To: George Agnes Associate Dean, Faculty of Science;

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

1. BPK Motion: Make the following changes to the Kinesiology Major so that the Kinesiology General program will align with CCUPEKA (= Canadian Counsel of University Physical Education and Kinesiology Administrators) accreditation requirements.

a. Add BPK 143 as required Core in KIN Major and remove BPK 143 as an additional requirement in Active Health Concentration of KIN Major
b. Add BPK 310 as required Core in KIN major and remove BPK 310 as an additional requirement in Active Health Concentration of KIN Major (now Core to KIN Major)
c. Add
one of BPK 110, 140, 180W or 241
to the lower division requirements of the KIN general Major
d. Modify upper division unit requirements in KIN General and Active Health and Rehabilitation Concentration to reflect these changes.

Rationale:

These changes will bring our KIN General Major program to CCUPEKA accreditation standards for exercise physiology, laboratory hours, and within department course content minimums. These changes significantly improve the Kin General Program and the employability of its graduates. Our Active Health and Rehabilitation Concentration is already accredited by CCUPEKA.

2. UPC Motion: Make the following changes to the Kinesiology Honors Program so that the Kinesiology General Honors program will align with CCUPEKA accreditation requirements.

SFU
Department of
Biomedical Physiology and Kinesiology
Faculty of Science

a. Add BPK 143 as required Core in KIN Honors Programs and remove BPK 143 as an additional requirement in Active Health and Rehabilitation Concentration of KIN Honors Programs
b. Add BPK 310 as required Core in KIN Honors Programs remove BPK 310 as an additional requirement in Active Health and Rehabilitation Concentration of the KIN Honors Programs.
c. Add
one of BPK 110, 140, 180W or 241
to the lower division requirements of the KIN General Honors Programs
d. Modify upper division unit requirements in KIN General and Active Health and Rehabilitation Concentration Honors Programs to reflect these changes.

Rationale:

These changes will bring our KIN General Honors program to CCUPEKA accreditation standards for exercise physiology, laboratory hours, and within department course content minimums. These changes significantly improve the Kin General Program and the employability of its graduates. Our Active Health and Rehabilitation Concentration is already accredited by CCUPEKA.

Sincerely,

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

BPK Motions for FSUCC October 2013 – Ryan Dill

1. BPK Motion: Approve the following changes to the Kinesiology Major, which are being to align the Kinesiology General program with CCUPEKA (= Canadian Counsel of University Physical Education and Kinesiology Administrators) accreditation requirements.

a. Add BPK 143 as required Core Course in KIN Major, and remove BPK 143 as an additional requirement in Active Health Concentration of KIN Major
b. Add BPK 310 as required Core Course in the KIN major, and remove BPK 310 as an additional requirement in Active Health Concentration of KIN Major (now Core to KIN Major)
c. Add one of BPK 110, 140, 180W or 241 to the lower division requirements of the KIN general Major
d. Modify upper division unit requirements in KIN General and Active Health and Rehabilitation Concentration to reflect these changes.

Rationale:
These changes will bring our KIN General Major program to CCUPEKA accreditation standards for exercise physiology, laboratory hours, and within department course content minimums. These changes significantly improve the Kin General Program and the employability of its graduates. Our Active Health and Rehabilitation Concentration is already accredited by CCUPEKA.

FROM:

Program Requirements
Students complete 120 units, as specified below. Students complete either the general program requirements or instead of that they can choose to complete the requirements for the Active Health and Rehabilitation concentrations (see below). Suggested course selections for majors are available from the general office.
Lower Division Requirements
The program's lower division requirements are structured as a common core set, an additional set of courses for the optional Active Health and Rehabilitation concentration, and general elective courses that include the University's breadth requirements.
Students complete all of the following.
Core Courses
BISC 101 General Biology (4)
CHEM 121 General Chemistry and Laboratory I (4)
CHEM 122 General Chemistry II (2)
CHEM 281 Organic Chemistry I (4)
BPK 142 Introduction to Kinesiology (3)

BPK 201 Biomechanics (3)
BPK 205 Introduction to Human Physiology (3)
BPK 207 Human Motor Systems (3)
STAT 201 Statistics for the Life Sciences (3)
and one of
MBB 201 Biochemistry of the Cell (3)
MBB 231 Cellular Biology and Biochemistry (3)
and one of
MATH 150 Calculus I with Review (4)
MATH 151 Calculus I (3)
MATH 154 Calculus I for the Biological Sciences (3)
and one of
- MATH 152 Calculus II (3)
- MATH 155 Calculus II 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 125 Mechanics and Special Relativity (3)
- PHYS 140 Studio Physics - Mechanics and Modern Physics (4)

and one of
- PHYS 102 Physics for the Life Sciences II (3)
- PHYS 121 Optics, Electricity and Magnetism (3)
- PHYS 126 Electricity, Magnetism and Light (3)
- PHYS 141 Studio Physics - Optics, Electricity and Magnetism (4)

Active Health and Rehabilitation Concentration
Students who choose this concentration will complete all of
- BPK 110 Human Nutrition: Current Issues (3)
- BPK 140 Contemporary Health Issues (3)
- BPK 143 Exercise: Health and Performance (3)
- BPK 241 Sports Injuries - Prevention and Rehabilitation (3)

Breadth and Writing Requirements
For students admitted prior to September 2006, a minimum of six units must be selected from the Faculty of Arts and Social Sciences.
For students admitted September 2006 or later, a minimum of six units of designated humanities breadth (B-Hum)courses, and a minimum of six units of designated social sciences breadth (B-Soc) courses must be completed. At least three units of lower division course work should also be identified as writing-intensive (W) courses.
The quantitative (Q), science breadth (B-Sci) and undesignated breadth (UB) requirements are satisfied through completion of the kinesiology lower division core course set and hence do not require additional work. For more information, see www.sfu.ca/ugcr.

Upper Division Requirements
All of the following courses must be completed with a grade of C- or higher.

Upper Division Core
All students complete the following 19 units, including all of
- BPK 304W Inquiry and Measurement in Kinesiology + (3)
- BPK 305 Human Physiology I (3)
- BPK 306 Human Physiology II (Principles of Physiological Regulation) (3)
- BPK 326 Functional Anatomy (4)
- BPK 340 Active Health: Behavior and Promotion (3)

and one of++
- BPK 301 Biomechanics Laboratory (3)
- BPK 407 Human Physiology Laboratory (3)

+ BPK 304W satisfies the University's breadth requirements of three upper division units in writing.❑++Students can complete both KIN 301 and 407, and count one as an elective.

Concentration or General Program Upper Division Requirements
Students complete either the general program requirements as listed immediately below, or instead of that, they can choose to complete the requirements for the Active Health and Rehabilitation concentration. (see below).

General Program

This program option requires a total of 45 upper division units, which is composed of the 19 upper division core courses (see above) and the following additional requirements.
Students who choose this option will complete an additional 21 biomedical physiology and kinesiology units chosen from upper division BPK courses, excluding BPK 325, 342, 497, 499. MBB 321 may be used to satisfy three units of this requirement.
As well, an additional five upper division units, chosen from any discipline within the University, is required.
Students admitted in September 2006 or later are also required to complete the University's writing, quantitative and breadth (WQB) requirements, which includes the requirement of completing three units of writing-intensive credit at the upper division. The W component may be included within the upper division unit total for this program.

Active Health and Rehabilitation Concentration
This program option requires a total of 45 upper division units, which is composed of the 19 upper division core courses (see above) and the following additional requirements.
Students who choose this concentration will complete an additional 26 units as specified below, including all of

- BPK 303 Kinanthropometry (3)
- BPK 310 Exercise/Work Physiology (3)
- BPK 343 Active Health: Assessment and Programming (3)

and four of

- BPK 308 Experiments and Models in Systems Physiology (3)
- BPK 311 Applied Human Nutrition (3)
- BPK 312 Nutrition for Fitness and Sport (3)
- BPK 375 Human Growth and Development (3)
- BPK 381 Psychology of Work (3)
- BPK 382 Workplace Health and Safety (3)
- BPK 402 Mechanical Behavior of Biological Tissues (3)
- BPK 412 Molecular and Cellular Cardiology (3)
- BPK 415 Neural Control of Movement (3)
- BPK 417W Obesity, Adipocyte Function and Weight Management (3)
- BPK 420 Selected Topics I* (3)
- BPK 421 Selected Topics II* (3)
- BPK 422 Selected Topics III* (3)
- BPK 423 Selected Topics IV* (3)
- BPK 426 Neuromuscular Anatomy (3)
- BPK 431 Integrative Cancer Biology (3)
- BPK 444 Cardiac Disease: Pathophysiology and Assessment (3)
- BPK 445 Advanced Cardiac Rehabilitation (3)
- BPK 446 Neurological Disorders (3)
- BPK 448 Rehabilitation of Movement Control (3)
- BPK 461 Physiological Aspects of Aging (3)
- BPK 481 Musculoskeletal Disorders (3)
- BPK 496 Directed Study I*(3)
- BPK 498 Directed Study II*(3)

and one additional upper division biomedical physiology and kinesiology course, excluding BPK 325, 342, 497, 499 □and an additional two units of upper division units chosen from any discipline within the University

*can be counted toward area of concentration if relevant to active health or rehabilitation kinesiology. Please see the head of the area of concentration for permission to count any of these courses toward the area of concentration requirement.

Students admitted in September 2006 or later are also required to complete the University's writing, quantitative and breadth (WQB) requirements, which includes the requirement of completing three units of writing-intensive credit at the upper division. The W component may be included within the upper division unit total for this program.

TO:

Program Requirements

Students complete 120 units, as specified below. Students complete either the

general program requirements or instead of that they can choose to complete the requirements for the Active Health and Rehabilitation concentrations (see below). Suggested course selections for majors are available from the general office.

Lower Division Requirements

The program's lower division requirements are structured as a common core set, an additional set of courses for the ***Kinesiology General Program and the*** optional Active Health and Rehabilitation concentration, and general elective courses that include the University's breadth requirements.

Students complete all of the following.

Core Courses

BISC 101 General Biology (4)
CHEM 121 General Chemistry and Laboratory I (4)
CHEM 122 General Chemistry II (2)
CHEM 281 Organic Chemistry I (4)
BPK 143 Exercise: Health and Performance (3)
BPK 142 Introduction to Kinesiology (3)
BPK 201 Biomechanics (3)
BPK 205 Introduction to Human Physiology (3)
BPK 207 Human Motor Systems (3)
STAT 201 Statistics for the Life Sciences (3)

and one of

MBB 201 Biochemistry of the Cell (3)
MBB 231 Cellular Biology and Biochemistry (3)

and one of

MATH 150 Calculus I with Review (4)
MATH 151 Calculus I (3)
MATH 154 Calculus I for the Biological Sciences (3)

and one of

- MATH 152 Calculus II (3)
- MATH 155 Calculus II 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 125 Mechanics and Special Relativity (3)
- PHYS 140 Studio Physics - Mechanics and Modern Physics (4)

and one of

- PHYS 102 Physics for the Life Sciences II (3)
- PHYS 121 Optics, Electricity and Magnetism (3)
- PHYS 126 Electricity, Magnetism and Light (3)
- PHYS 141 Studio Physics - Optics, Electricity and Magnetism (4)

Kinesiology General Program

Students who choose the Kinesiology General Program will complete One of

- ***BPK 110 Human Nutrition: Current Issues (3)***

- ***BPK 140 Contemporary Health Issues (3)***
- ***BPK 180W Introduction to Ergonomics (3)***
- ***BPK 241 Sports Injuries - Prevention and Rehabilitation (3)***

Active Health and Rehabilitation Concentration
Students who choose this concentration will complete all of
- BPK 110 Human Nutrition: Current Issues (3)
- BPK 140 Contemporary Health Issues (3)
- ~~BPK 143 Exercise: Health and Performance (3)~~
- BPK 241 Sports Injuries - Prevention and Rehabilitation (3)

Breadth and Writing Requirements
For students admitted prior to September 2006, a minimum of six units must be selected from the Faculty of Arts and Social Sciences.
For students admitted September 2006 or later, a minimum of six units of designated humanities breadth (B-Hum)courses, and a minimum of six units of designated social sciences breadth (B-Soc) courses must be completed. At least three units of lower division course work should also be identified as writing-intensive (W) courses.
The quantitative (Q), science breadth (B-Sci) and undesignated breadth (UB) requirements are satisfied through completion of the kinesiology lower division core course set and hence do not require additional work. For more information, see www.sfu.ca/ugcr.

Upper Division Requirements
All of the following courses must be completed with a grade of C- or higher.

Upper Division Core
All students complete the following ***22*** units, including all of
- BPK 304W Inquiry and Measurement in Kinesiology + (3)
- BPK 305 Human Physiology I (3)
- BPK 306 Human Physiology II (Principles of Physiological Regulation) (3)
- ***BPK 310 Exercise/Work Physiology (3)***
- BPK 326 Functional Anatomy (4)
- BPK 340 Active Health: Behavior and Promotion (3)

and one of++
- BPK 301 Biomechanics Laboratory (3)
- BPK 407 Human Physiology Laboratory (3)

+ BPK 304W satisfies the University's breadth requirements of three upper division units in writing.□++Students can complete both KIN 301 and 407, and count one as an elective.

Concentration or General Program Upper Division Requirements
Students complete either the general program requirements as listed immediately below, or instead of that, they can choose to complete the

requirements for the Active Health and Rehabilitation concentration. (see below).

General Program

This program option requires a total of 45 upper division units, which is composed of the ***22 units of*** upper division core courses (see above) and the following additional requirements.
Students who choose this option will complete an additional 21 biomedical physiology and kinesiology units chosen from upper division BPK courses, excluding BPK 325, 342, 497, 499. MBB 321 may be used to satisfy three units of this requirement.
As well, an additional ***two*** upper division units, chosen from any discipline within the University, is required.
Students admitted in September 2006 or later are also required to complete the University's writing, quantitative and breadth (WQB) requirements, which includes the requirement of completing three units of writing-intensive credit at the upper division. The W component may be included within the upper division unit total for this program.

Active Health and Rehabilitation Concentration
This program option requires a total of 45 upper division units, which is composed of the ***22 units of*** upper division core courses (see above) and the following additional requirements.
Students who choose this concentration will complete an additional ***23*** units as specified below, including all of

- BPK 303 Kinanthropometry (3)
- ~~BPK 310 Exercise/Work Physiology (3)~~
- BPK 343 Active Health: Assessment and Programming (3)

and four of

- BPK 308 Experiments and Models in Systems Physiology (3)
- BPK 311 Applied Human Nutrition (3)
- BPK 312 Nutrition for Fitness and Sport (3)
- BPK 375 Human Growth and Development (3)
- BPK 381 Psychology of Work (3)
- BPK 382 Workplace Health and Safety (3)
- BPK 402 Mechanical Behavior of Biological Tissues (3)
- BPK 412 Molecular and Cellular Cardiology (3)
- BPK 415 Neural Control of Movement (3)
- BPK 417W Obesity, Adipocyte Function and Weight Management (3)
- BPK 420 Selected Topics I* (3)
- BPK 421 Selected Topics II* (3)
- BPK 422 Selected Topics III* (3)
- BPK 423 Selected Topics IV* (3)
- BPK 426 Neuromuscular Anatomy (3)
- BPK 431 Integrative Cancer Biology (3)
- BPK 444 Cardiac Disease: Pathophysiology and Assessment (3)

- BPK 445 Advanced Cardiac Rehabilitation (3)
- BPK 446 Neurological Disorders (3)
- BPK 448 Rehabilitation of Movement Control (3)
- BPK 461 Physiological Aspects of Aging (3)
- BPK 481 Musculoskeletal Disorders (3)
- BPK 496 Directed Study I*(3)
- BPK 498 Directed Study II*(3)

and one additional upper division biomedical physiology and kinesiology course, excluding BPK 325, 342, 497, 499 □and an additional two units of upper division units chosen from any discipline within the University

*can be counted toward area of concentration if relevant to active health or rehabilitation kinesiology. Please see the head of the area of concentration for permission to count any of these courses toward the area of concentration requirement.

Students admitted in September 2006 or later are also required to complete the University's writing, quantitative and breadth (WQB) requirements, which includes the requirement of completing three units of writing-intensive credit at the upper division. The W component may be included within the upper division unit total for this program.

2. UPC Motion: Make the following changes to the Kinesiology Honors Program so that the Kinesiology General Honors program will align with CCUPEKA accreditation requirements.

a. Add BPK 143 as required Core in KIN Honors Programs and remove BPK 143 as an additional requirement in Active Health and Rehabilitation Concentration of KIN Honors Programs
b. Add BPK 310 as required Core in KIN Honors Programs remove BPK 310 as an additional requirement in Active Health and Rehabilitation Concentration of the KIN Honors Programs.
c. Add one of BPK 110, 140, 180W or 241 to the lower division requirements of the KIN General Honors Programs
d. Modify upper division unit requirements in KIN General and Active Health and Rehabilitation Concentration Honors Programs to reflect these changes.

Rationale:

These changes will bring our KIN General Honors program to CCUPEKA accreditation standards for exercise physiology, laboratory hours, and within department course content minimums. These changes significantly improve the Kin General Program and the employability of its graduates. Our Active Health and Rehabilitation Concentration is already accredited by CCUPEKA.

FROM:

Program Requirements
Lower Division Requirements
The program's lower division requirements are structured as a common core set, an additional set of courses for the optional Active Health and Rehabilitation Concentration, and general elective courses that include the University's breadth requirements.
Students complete all of the following.
Core Courses
BISC 101 General Biology (4)
CHEM 121 General Chemistry and Laboratory I (4)
CHEM 122 General Chemistry II (2)
CHEM 281 Organic Chemistry I (4)
BPK 142 Introduction to Kinesiology (3)
BPK 201 Biomechanics (3)
BPK 205 Introduction to Human Physiology (3)
BPK 207 Human Motor Systems (3)
STAT 201 Statistics for the Life Sciences (3)
and one of
MBB 201 Biochemistry of the Cell (3)
MBB 231 Cellular Biology and Biochemistry (3)

and one of
MATH 150 Calculus I with Review (4)
MATH 151 Calculus I (3)
MATH 154 Calculus I for the Biological Sciences (3)
and one of
- MATH 152 Calculus II (3)
- MATH 155 Calculus II 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 125 Mechanics and Special Relativity (3)
- PHYS 140 Studio Physics - Mechanics and Modern Physics (4)

and one of
- PHYS 102 Physics for the Life Sciences II (3)
- PHYS 121 Optics, Electricity and Magnetism (3)
- PHYS 126 Electricity, Magnetism and Light (3)
- PHYS 141 Studio Physics - Optics, Electricity and Magnetism (4)

Active Health and Rehabilitation Concentration
Students who choose this concentration will complete all of
- BPK 110 Human Nutrition: Current Issues (3)
- BPK 140 Contemporary Health Issues (3)
- BPK 143 Exercise: Health and Performance (3)
- BPK 241 Sports Injuries - Prevention and Rehabilitation (3)

Breadth and Writing Requirements
For students admitted prior to September 2006, a minimum of six units must be selected from the Faculty of Arts and Social Sciences.
For students admitted September 2006 or later, a minimum of six units of designated humanities breadth (B-Hum)courses, and a minimum of six units of designated social sciences breadth (B-Soc) courses must be completed. At least three units of lower division course work should also be identified as writing-intensive (W) courses.
The quantitative (Q), science breadth (B-Sci) and undesignated breadth (UB) requirements are satisfied through completion of the kinesiology lower division core course set and hence do not require additional work. For more information, see www.sfu.ca/ugcr.

Upper Division Requirements
All of the following courses must be completed with a grade of C- or higher.

Upper Division Core
All students complete the following ***37*** units, including all of
- BPK 304W Inquiry and Measurement in Kinesiology [+] (3)
- BPK 305 Human Physiology I (3)
- BPK 306 Human Physiology II (Principles of Physiological Regulation) (3)

- BPK 326 Functional Anatomy (4)
- BPK 340 Active Health: Behavior and Promotion (3)
- BPK 497 Undergraduate Honors Thesis Proposal (3)
- BPK 499 Undergraduate Honors Thesis (12)

and one of++

- BPK 301 Biomechanics Laboratory (3)
- BPK 407 Human Physiology Laboratory (3)

+ BPK 304W satisfies the University's breadth requirements of three upper division units in writing.❑

++Students can complete both BPK 301 and 407, and count one as an elective.

Concentration or General Program Upper Division Requirements

Students complete either the general program requirements as listed immediately below, or instead of that, they can choose to complete the requirements for the Active Health and Rehabilitation Concentration. (see below).

General Program

This program option requires a total of 60 upper division units, which is composed of the 34 upper division core courses (see above) and the following additional requirements.

Students who choose this option will complete an additional 21 biomedical physiology and kinesiology units chosen from upper division BPK (or KIN) courses, excluding BPK or (KIN) 325, 342, 497, 499. MBB 321 may be used to satisfy three units of this requirement.

As well, an additional five upper division units, chosen from any discipline within the University, is required.

Students admitted in September 2006 or later are also required to complete the University's writing, quantitative and breadth (WQB) requirements, which includes the requirement of completing three units of writing-intensive credit at the upper division. The W component may be included within the 45 upper division unit total for this general program.

Active Health and Rehabilitation Concentration

This program option requires a total of 60 upper division units, which is composed of the 34 upper division core courses (see above) and the following additional requirements.

Students who choose this concentration will complete an additional ***23*** units as specified below, including all of

- BPK 303 Kinanthropometry (3)
- BPK 310 Exercise/Work Physiology (3)
- BPK 343 Active Health: Assessment and Programming (3)

and four of

- BPK 308 Experiments and Models in Systems Physiology (3)
- BPK 311 Applied Human Nutrition (3)

- BPK 312 Nutrition for Fitness and Sport (3)
- BPK 375 Human Growth and Development (3)
- BPK 381 Psychology of Work (3)
- BPK 382 Workplace Health and Safety (3)
- BPK 402 Mechanical Behavior of Biological Tissues (3)
- BPK 412 Molecular and Cellular Cardiology (3)
- BPK 415 Neural Control of Movement (3)
- BPK 417W Obesity, Adipocyte Function and Weight Management (3)
- BPK 420 Selected Topics I* (3)
- BPK 421 Selected Topics II* (3)
- BPK 422 Selected Topics III* (3)
- BPK 423 Selected Topics IV* (3)
- BPK 426 Neuromuscular Anatomy (3)
- BPK 431 Integrative Cancer Biology (3)
- BPK 444 Cardiac Disease: Pathophysiology and Assessment (3)
- BPK 445 Advanced Cardiac Rehabilitation (3)
- BPK 446 Neurological Disorders (3)
- BPK 448 Rehabilitation of Movement Control (3)
- BPK 461 Physiological Aspects of Aging (3)
- BPK 481 Musculoskeletal Disorders (3)
- BPK 496 Directed Study I*(3)
- BPK 498 Directed Study II*(3)

and one additional upper division biomedical physiology and kinesiology course, excluding BPK 325, 342, 497, 499 □and an additional two units of upper division units chosen from any discipline within the University

*can be counted toward area of concentration if relevant to active health or rehabilitation kinesiology. Please see the head of the area of concentration for permission to count any of these courses toward the area of concentration requirement.

Students admitted in September 2006 or later are also required to complete the University's writing, quantitative and breadth (WQB) requirements, which includes the requirement of completing three units of writing-intensive credit at the upper division. The W component may be included within the upper division unit total for this program.

TO :

Program Requirements

Lower Division Requirements

The program's lower division requirements are structured as a common core set, an additional set of courses for the ***Kinesiology General Program and the*** optional Active Health and Rehabilitation Concentration, and general elective courses that include the University's breadth requirements.

Students complete all of the following.

Core Courses

BISC 101 General Biology (4)
CHEM 121 General Chemistry and Laboratory I (4)
CHEM 122 General Chemistry II (2)
CHEM 281 Organic Chemistry I (4)
BPK 143 Exercise: Health and Performance (3)
BPK 142 Introduction to Kinesiology (3)
BPK 201 Biomechanics (3)
BPK 205 Introduction to Human Physiology (3)
BPK 207 Human Motor Systems (3)
STAT 201 Statistics for the Life Sciences (3)
and one of
MBB 201 Biochemistry of the Cell (3)
MBB 231 Cellular Biology and Biochemistry (3)
and one of
MATH 150 Calculus I with Review (4)
MATH 151 Calculus I (3)
MATH 154 Calculus I for the Biological Sciences (3)
and one of
- MATH 152 Calculus II (3)
- MATH 155 Calculus II 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 125 Mechanics and Special Relativity (3)
- PHYS 140 Studio Physics - Mechanics and Modern Physics (4)

and one of
- PHYS 102 Physics for the Life Sciences II (3)
- PHYS 121 Optics, Electricity and Magnetism (3)
- PHYS 126 Electricity, Magnetism and Light (3)
- PHYS 141 Studio Physics - Optics, Electricity and Magnetism (4)

Kinesiology General Program

Students who choose the Kinesiology General Program will complete One of

- ***BPK 110 Human Nutrition: Current Issues (3)***
- ***BPK 140 Contemporary Health Issues (3)***
- ***BPK 180W Introduction to Ergonomics (3)***
- ***BPK 241 Sports Injuries - Prevention and Rehabilitation (3)***

Active Health and Rehabilitation Concentration
Students who choose this concentration will complete all of
- BPK 110 Human Nutrition: Current Issues (3)
- BPK 140 Contemporary Health Issues (3)
- ~~BPK 143 Exercise: Health and Performance (3)~~
- BPK 241 Sports Injuries - Prevention and Rehabilitation (3)

Breadth and Writing Requirements
For students admitted prior to September 2006, a minimum of six units must be selected from the Faculty of Arts and Social Sciences.
For students admitted September 2006 or later, a minimum of six units of designated humanities breadth (B-Hum)courses, and a minimum of six units of designated social sciences breadth (B-Soc) courses must be completed. At least three units of lower division course work should also be identified as writing-intensive (W) courses.
The quantitative (Q), science breadth (B-Sci) and undesignated breadth (UB) requirements are satisfied through completion of the kinesiology lower division core course set and hence do not require additional work. For more information, see www.sfu.ca/ugcr.

Upper Division Requirements
All of the following courses must be completed with a grade of C- or higher.

Upper Division Core
All students complete the following ***37*** units, including all of
- BPK 304W Inquiry and Measurement in Kinesiology + (3)
- BPK 305 Human Physiology I (3)
- BPK 306 Human Physiology II (Principles of Physiological Regulation) (3)
- ***BPK 310 Exercise/Work Physiology (3)***
- BPK 326 Functional Anatomy (4)
- BPK 340 Active Health: Behavior and Promotion (3)
- BPK 497 Undergraduate Honors Thesis Proposal (3)
- BPK 499 Undergraduate Honors Thesis (12)

and one of++
- BPK 301 Biomechanics Laboratory (3)
- BPK 407 Human Physiology Laboratory (3)

+ BPK 304W satisfies the University's breadth requirements of three upper division units in writing.□
++Students can complete both BPK 301 and 407, and count one as an elective.

Concentration or General Program Upper Division Requirements
Students complete either the general program requirements as listed immediately below, or instead of that, they can choose to complete the requirements for the Active Health and Rehabilitation Concentration. (see below).
General Program
This program option requires a total of 60 upper division units, which is composed of the ***37*** upper division core courses (see above) and the following additional requirements.

Students who choose this option will complete an additional 21 biomedical physiology and kinesiology units chosen from upper division BPK (or KIN)

courses, excluding BPK or (KIN) 325, 342, 497, 499. MBB 321 may be used to satisfy three units of this requirement.

As well, an additional five upper division units, chosen from any discipline within the University, is required.

Students admitted in September 2006 or later are also required to complete the University's writing, quantitative and breadth (WQB) requirements, which includes the requirement of completing three units of writing-intensive credit at the upper division. The W component may be included within the 45 upper division unit total for this general program.

Active Health and Rehabilitation Concentration

This program option requires a total of 60 upper division units, which is composed of the 34 upper division core courses (see above) and the following additional requirements.

Students who choose this concentration will complete an additional ***23*** units as specified below, including all of

- BPK 303 Kinanthropometry (3)
- ~~BPK 310 Exercise/Work Physiology (3)~~
- BPK 343 Active Health: Assessment and Programming (3)

and four of

- BPK 308 Experiments and Models in Systems Physiology (3)
- BPK 311 Applied Human Nutrition (3)
- BPK 312 Nutrition for Fitness and Sport (3)
- BPK 375 Human Growth and Development (3)
- BPK 381 Psychology of Work (3)
- BPK 382 Workplace Health and Safety (3)
- BPK 402 Mechanical Behavior of Biological Tissues (3)
- BPK 412 Molecular and Cellular Cardiology (3)
- BPK 415 Neural Control of Movement (3)
- BPK 417W Obesity, Adipocyte Function and Weight Management (3)
- BPK 420 Selected Topics I* (3)
- BPK 421 Selected Topics II* (3)
- BPK 422 Selected Topics III* (3)
- BPK 423 Selected Topics IV* (3)
- BPK 426 Neuromuscular Anatomy (3)
- BPK 431 Integrative Cancer Biology (3)
- BPK 444 Cardiac Disease: Pathophysiology and Assessment (3)
- BPK 445 Advanced Cardiac Rehabilitation (3)
- BPK 446 Neurological Disorders (3)
- BPK 448 Rehabilitation of Movement Control (3)
- BPK 461 Physiological Aspects of Aging (3)
- BPK 481 Musculoskeletal Disorders (3)
- BPK 496 Directed Study I*(3)
- BPK 498 Directed Study II*(3)

and one additional upper division biomedical physiology and kinesiology course,

excluding BPK 325, 342, 497, 499 □and an additional two units of upper division units chosen from any discipline within the University

*can be counted toward area of concentration if relevant to active health or rehabilitation kinesiology. Please see the head of the area of concentration for permission to count any of these courses toward the area of concentration requirement.

Students admitted in September 2006 or later are also required to complete the University's writing, quantitative and breadth (WQB) requirements, which includes the requirement of completing three units of writing-intensive credit at the upper division. The W component may be included within the upper division unit total for this program.

SCUS 13-49b

SFU

SENATE COMMITTEE ON UNDERGRADUATE STUDIES

COURSE CHANGE/DELETION

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
Course Subject/Number EASC 315

TO
Course Subject/Number _____

Credits _____

Credits_____

TITLE

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

FROM:

Geochemistry of Natural Waters

TO:

(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:

PREREQUISITE

TO:

LEARNING OUTCOMES

RATIONALE

EASC 315W currently exists and the department intends to maintain only the W-designated version of the course.

Effective term and year Fall 2014

SFU

SENATE COMMITTEE ON UNDERGRADUATE STUDIES

COURSE CHANGE/DELETION

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 2 Seminar _____ Tutorial _____ Lab 2

FROM	**TO**
Course Subject/Number EASC 405	Course Subject/Number
Credits 3	Credits

TITLE

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

FROM:	**TO:**
Water Cycles and Resources: Environmental and Climate Change Impacts	Water, Environment, and Climate Change

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

FROM:	**TO:**

DESCRIPTION

FROM:	**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:**

LEARNING OUTCOMES

RATIONALE

This course currently consists of 2 hours lecture and 1 hour seminar each week. The one hour of seminar was insufficient to undertake exercises. Change from 1 hour seminar to 2 hour lab. Also, the existing title is too long and cumbersome. The proposed title is similar to the short title, which appears on student transcripts.

Effective term and year Fall 2014

SFU

SENATE COMMITTEE ON UNDERGRADUATE STUDIES

COURSE CHANGE/DELETION

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
Course Subject/Number EASC 408

TO
Course Subject/Number _____

Credits _____

Credits _____

TITLE

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

FROM:

Regional Geology of Western Canada

TO:

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

FROM:

TO:

DESCRIPTION
FROM:

The stratigraphy, structure and historical geology of western Canada. Terrane analysis. Important mineral and fossil sites will be discussed.

DESCRIPTION
TO:

The stratigraphy, structure and historical geology of western Canada. Terrane analysis. Important mineral and fossil sites will be discussed. Students are required to attend one 4 day field trip during this course.

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: EASC 309

PREREQUISITE

TO: Prerequisite/Corequisite: EASC 309

LEARNING OUTCOMES

RATIONALE

1) EASC 408 is only offered once every other year. Many 3rd year students ask to take the course even though they have not completed current prerequisite, EASC 309, because they know EASC 408 will not be offered the next year in their 4th year. Although a good grounding in the principles of global tectonics (i.e., EASC 309) is ideal, it is not critical. If students are taking EASC 309 as a corequisite, they should be well prepared to take EASC 408.
2) A substantial field trip has long been associated with this course and thus the description has been modified to reflect this.

Effective term and year Fall 2014

SCUS 13-49c

MEMO

Department of
Molecular Biology &
Biochemistry

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ATTENTION **George Agnes** | TEL

FROM **Ingrid Northwood; Chair, MBB undergraduate curriculum committee**

RE **Upper Division Program Changes to CMPT-MBB JMA and CMPT Honours JMA**

DATE October 28, 2013

1) **Motion 1: UD Program changes to CMPT-MBB JMA**

a) Add MBB342: Introduction to Genomics and Bioinformatics as a required course. MBB342 is a new course that is now a pre-requisite for MBB441, a more advanced Bioinformatics course

b) Change MBB441 from a required course to an elective course

c) Remove two MBB courses (MBB435 and MBB423) from the list of elective courses that are no longer relevant to the program

d) Add two new courses to the list of elective courses to take the place of MBB435 and MBB423

MBB461: comparative genomics
MBB462: human genomics

2) **Motion 2: UD Program changes to CMPT-MBB honours JMA**

a) Add MBB342: Introduction to Genomics and Bioinformatics as a required course. MBB342 is a new course that is now a pre-requisite for MBB441, a more advanced Bioinformatics course

b) Change MBB441 from a required course to an elective course

c) Remove two MBB courses (MBB435 and MBB423) from the list of elective courses that are no longer relevant to the program

d) Add two new courses to the list of elective courses to take the place of MBB435 and MBB423

MBB461: comparative genomics
MBB462: human genomics

Program Change Form
Joint Major in Computing Science and Molecular Biology and Biochemistry

FROM

Program Requirements

Upper Division Requirements

Students complete 44-46 units, including all of

CMPT 307 - Data Structures and Algorithms (3)
CMPT 320 - Social Implications - Computerized Society (3)
CMPT 354 - Database Systems I (3)
CMPT 441 - Computational Biology (3)
MBB 308 - Molecular Biology Laboratory (3)
MBB 331 - Molecular Biology (3)
MBB 441 - Bioinformatics (3)
STAT 302 - Analysis of Experimental and Observational Data (3)

and one of

CMPT 376W - Technical Writing and Group Dynamics (3)
MBB 309W - Biochemistry Laboratory (4)

and at least two of

CMPT 305 - Computer Simulation and Modelling (3)
CMPT 310 - Artificial Intelligence Survey (3)
CMPT 340 - Biomedical Computing (3)
CMPT 361 - Introduction to Computer Graphics (3)
MACM 316 - Numerical Analysis I (3)
MBB 321 - Intermediary Metabolism (3)

and at least three of

CMPT 405 - Design and Analysis of Computing Algorithms (3)
CMPT 413 - Computational Linguistics (3)
CMPT 419 - Special Topics in Artificial Intelligence (3)
CMPT 454 - Database Systems II (3)
MBB 423 - Protein Structure and Function (3)
MBB 435 - Genome Biology (3)
MBB 438 - Human Molecular Genetics (3)
MBB 442 - Proteomics (3)

Students may be required to take an additional elective course to bring their upper division total to 45 units.

TO

Upper Division Requirements

Students complete 44-46 units, including all of

CMPT 307 - Data Structures and Algorithms (3)
CMPT 320 - Social Implications - Computerized Society (3)
CMPT 354 - Database Systems I (3)
CMPT 441 - Computational Biology (3)
MBB 308 - Molecular Biology Laboratory (3)
MBB 331 - Molecular Biology (3)
MBB 342 – Introduction to Genomics and Bioinformatics
~~MBB 441 - Bioinformatics (3)~~
STAT 302 - Analysis of Experimental and Observational Data (3)

and one of

CMPT 376W - Technical Writing and Group Dynamics (3)
MBB 309W - Biochemistry Laboratory (4)

and at least two of

CMPT 305 - Computer Simulation and Modelling (3)
CMPT 310 - Artificial Intelligence Survey (3)
CMPT 340 - Biomedical Computing (3)
CMPT 361 - Introduction to Computer Graphics (3)
MACM 316 - Numerical Analysis I (3)
MBB 321 - Intermediary Metabolism (3)

and at least three of

CMPT 405 - Design and Analysis of Computing Algorithms (3)
CMPT 413 - Computational Linguistics (3)
CMPT 419 - Special Topics in Artificial Intelligence (3)
CMPT 454 - Database Systems II (3)
~~MBB 423 - Protein Structure and Function (3)~~
~~MBB 435 - Genome Biology (3)~~
MBB 438 - Human Molecular Genetics (3)
MBB 441 – Bioinformatics (3)
MBB 442 - Proteomics (3)
MBB 461 – Comparative Genomics (3)
MBB 462 – Human Genomics (3)

Students may be required to take an additional elective course to bring their upper division total to 45 units.

Program Change Form
Joint Honours in Computing Science and Molecular Biology and Biochemistry

FROM

Program Requirements

Upper Division Requirements

Students complete 44-46 units, including all of

CMPT 307 - Data Structures and Algorithms (3)
CMPT 320 - Social Implications - Computerized Society (3)
CMPT 354 - Database Systems I (3)
CMPT 441 - Computational Biology (3)
MBB 308 - Molecular Biology Laboratory (3)
MBB 331 - Molecular Biology (3)
MBB 441 - Bioinformatics (3)
STAT 302 - Analysis of Experimental and Observational Data (3)

and one of

CMPT 376W - Technical Writing and Group Dynamics (3)
MBB 309W - Biochemistry Laboratory (4)

and at least two of

CMPT 305 - Computer Simulation and Modelling (3)
CMPT 310 - Artificial Intelligence Survey (3)
CMPT 340 - Biomedical Computing (3)
CMPT 361 - Introduction to Computer Graphics (3)
MACM 316 - Numerical Analysis I (3)
MBB 321 - Intermediary Metabolism (3)

and at least three of

CMPT 405 - Design and Analysis of Computing Algorithms (3)
CMPT 413 - Computational Linguistics (3)
CMPT 419 - Special Topics in Artificial Intelligence (3)
CMPT 454 - Database Systems II (3)
MBB 423 - Protein Structure and Function (3)
MBB 435 - Genome Biology (3)
MBB 438 - Human Molecular Genetics (3)
MBB 442 - Proteomics (3)

and six additional 400 division computing science units

and six research related MBB units which are fulfilled by completing MBB 496-6

TO

Upper Division Requirements

Students complete 44-46 units, including all of

CMPT 307 - Data Structures and Algorithms (3)
CMPT 320 - Social Implications - Computerized Society (3)
CMPT 354 - Database Systems I (3)
CMPT 441 - Computational Biology (3)
MBB 308 - Molecular Biology Laboratory (3)
MBB 331 - Molecular Biology (3)
MBB 342 – Introduction to Genomics and Bioinformatics
~~MBB 441 - Bioinformatics (3)~~
STAT 302 - Analysis of Experimental and Observational Data (3)

and one of

CMPT 376W - Technical Writing and Group Dynamics (3)
MBB 309W - Biochemistry Laboratory (4)

and at least two of

CMPT 305 - Computer Simulation and Modelling (3)
CMPT 310 - Artificial Intelligence Survey (3)
CMPT 340 - Biomedical Computing (3)
CMPT 361 - Introduction to Computer Graphics (3)
MACM 316 - Numerical Analysis I (3)
MBB 321 - Intermediary Metabolism (3)

and at least three of

CMPT 405 - Design and Analysis of Computing Algorithms (3)
CMPT 413 - Computational Linguistics (3)
CMPT 419 - Special Topics in Artificial Intelligence (3)
CMPT 454 - Database Systems II (3)
~~MBB 423 - Protein Structure and Function (3)~~
~~MBB 435 - Genome Biology (3)~~
MBB 438 - Human Molecular Genetics (3)
MBB 441 – Bioinformatics (3)
MBB 442 - Proteomics (3)
MBB 461 – Comparative Genomics (3)
MBB 462 – Human Genomics (3)

and six additional 400 division computing science units

and six research related MBB units which are fulfilled by completing MBB 496-6

Faculty of Science
Dean's Office
TASC 11 - 9900
8888 – University Drive
Burnaby, BC V5A 1S6

TO: George Agnes, UCC Chair, Science

FROM: Dugan ONeil, Physics
Faculty of Science

RE: Physics Changes to CHEMPHYS Programs Rationale

DATE: **October 24, 2013**

Program change for Chemical Physics Major and Honours, including calendar language

CHEMPHYS traditionally requires students to take CHEM-366W(3). However, the chemistry department has created a new course CHEM-266(2) as a prerequisite to CHEM-366. After discussions with Chemistry, we have decided that majors can take only 266 but that honours students should take both. The attached forms make these two changes.

c:

Program Change Request Form
Chemical Physics Major

FROM:

Students complete a minimum total of **57 units**, including all of
CHEM 121 - General Chemistry and Laboratory I (4)
CHEM 122 - General Chemistry II (2)
CHEM 126 - General Chemistry Laboratory II (2)
CHEM 215 - Introduction to Analytical Chemistry (4)
CHEM 230 - Inorganic Chemistry (3)
CHEM 236W - Inorganic Chemistry Laboratory (3)
CHEM 281 - Organic Chemistry I (4)
MATH 152 - Calculus II (3)
MATH 251 - Calculus III (3)
MATH 252 - Vector Calculus (3)
PHYS 131 - Physics Laboratory I (2) *
PHYS 211 - Intermediate Mechanics (3)
PHYS 231 - Physics Laboratory II (3)
PHYS 255 - Vibrations and Waves (3)

(the above section is the only section of the calendar LD choices which should change, please keep all other choices the same)

TO:

Students complete a minimum total of **59 units**, including all of
CHEM 121 - General Chemistry and Laboratory I (4)
CHEM 122 - General Chemistry II (2)
CHEM 126 - General Chemistry Laboratory II (2)
CHEM 215 - Introduction to Analytical Chemistry (4)
CHEM 230 - Inorganic Chemistry (3)
CHEM 236W - Inorganic Chemistry Laboratory (3)
CHEM 266 - Physical Chemistry Laboratory I (2)
CHEM 281 - Organic Chemistry I (4)
MATH 152 - Calculus II (3)
MATH 251 - Calculus III (3)
MATH 252 - Vector Calculus (3)
PHYS 131 - Physics Laboratory I (2) *
PHYS 211 - Intermediate Mechanics (3)
PHYS 231 - Physics Laboratory II (3)
PHYS 255 - Vibrations and Waves (3)

and UD requirements **FROM**:

Students complete a minimum total of 40 units, including all of
CHEM 340 - Materials Chemistry (3)
CHEM 366W - Physical Chemistry Laboratory II (3)
CHEM 462 - Molecular Spectroscopy (3)
MATH 310 - Introduction to Ordinary Differential Equations (3)
PHYS 321 - Intermediate Electricity and Magnetism (3)
PHYS 421 - Electromagnetic Waves (3)

(the above section is the only section of the calendar UD choices which should change, please keep all other choices the same)

TO:
Students complete a minimum total of 40 units, including all of

CHEM 340 - Materials Chemistry (3)
CHEM 462 - Molecular Spectroscopy (3)
MATH 310 - Introduction to Ordinary Differential Equations (3)
PHYS 321 - Intermediate Electricity and Magnetism (3)
PHYS 421 - Electromagnetic Waves (3)

Program Change Request Form
Chemical Physics Honours

LD Requirements **FROM:**
Students complete a minimum total of **57 units,** including all of
CHEM 121 - General Chemistry and Laboratory I (4)
CHEM 122 - General Chemistry II (2)
CHEM 126 - General Chemistry Laboratory II (2)
CHEM 215 - Introduction to Analytical Chemistry (4)
CHEM 230 - Inorganic Chemistry (3)
CHEM 236W - Inorganic Chemistry Laboratory (3)
CHEM 281 - Organic Chemistry I (4)
MATH 152 - Calculus II (3)
MATH 251 - Calculus III (3)
MATH 252 - Vector Calculus (3)
PHYS 131 - Physics Laboratory I (2) *
PHYS 211 - Intermediate Mechanics (3)
PHYS 231 - Physics Laboratory II (3)
PHYS 255 - Vibrations and Waves (3)

(the above section is the only section of the calendar which should change, please keep all other choices the same)

TO:
Students complete a minimum total of **59 units**, including all of
CHEM 121 - General Chemistry and Laboratory I (4)
CHEM 122 - General Chemistry II (2)
CHEM 126 - General Chemistry Laboratory II (2)
CHEM 215 - Introduction to Analytical Chemistry (4)
CHEM 230 - Inorganic Chemistry (3)
CHEM 236W - Inorganic Chemistry Laboratory (3)
CHEM 266 - Physical Chemistry Laboratory I (2)
CHEM 281 - Organic Chemistry I (4)
MATH 152 - Calculus II (3)
MATH 251 - Calculus III (3)
MATH 252 - Vector Calculus (3)
PHYS 131 - Physics Laboratory I (2) *
PHYS 211 - Intermediate Mechanics (3)
PHYS 231 - Physics Laboratory II (3)
PHYS 255 - Vibrations and Waves (3)

UD requirements do not change.

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SENATE COMMITTEE ON UNDERGRADUATE STUDIES

COURSE CHANGE/DELETION

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 3 Seminar _____ Tutorial 1 Lab _____

FROM
Course Subject/Number Phys 102

Credits _____

TO
Course Subject/Number _____

Credits _____

TITLE

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

FROM:
Physics for the Life Sciences II

TO:

(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: Prerequisite: PHYS 101 or 120 or 125 or 140. Recommended corequisite: MATH 152 or 155 or 158. Students are encouraged to take PHYS 130 at the same time as PHYS 102.

PREREQUISITE

TO: Prerequisite: PHYS 101 or 120 or 125 or 140. Recommended corequisites: One of MATH 152, 155, 158 and BISC 100, 101, 102. Students are encouraged to take PHYS 130 at the same time as PHYS 102.

LEARNING OUTCOMES

RATIONALE

The list of co-requisites for physics 101 was amended a couple of years ago to include first year BISC. However, we never updated 102 at that time. As it stands, some students are taking an alternative to 101 in the first term and are missing the BISC requirement. Then they do not have the BISC preparation they need to discuss physics in the Life Sciences context. We consider this change to be the closing of a loophole in the current requirements.

Effective term and year

Memo

To: Jo Hinchliffe, Associate Registrar, Simon Fraser University

From: George Agnes, Associate Dean, Faculty of Science

Re: Temporarily withdrawn courses

October 28, 2013

BISC 110	keep, restructuring of lower division courses will see this offered again soon
BISC 304	keep, restructuring of upper division courses will see this offered again soon
BISC 310	move to temporarily withdrawn category
BISC 367	keep, entire curriculum is being reviewed
BISC 367W	keep, entire curriculum is being reviewed
BISC 404	keep, restructuring of upper division courses will see this offered again soon
BISC 406	keep, new faculty hire has been assigned to teach this course
BISC 440	keep, entire curriculum is being reviewed
Chem 193	move to temporarily withdrawn category
Chem 333	keep, this course will soon be renumbered to a 4th year course
EASC 103	keep, instructor had been on study leave
MACM 202	Mathematics would like this deleted
MASC 410	keep, entire curriculum is being reviewed
MASC 411	keep, entire curriculum is being reviewed
MASC 440	keep, entire curriculum is being reviewed
MASC 445	keep, entire curriculum is being reviewed
MASC 446	keep, entire curriculum is being reviewed
MATH 294	keep, it is an independent studies course
MBB 444	keep, no response yet from department
PHYS 380	move to temporarily withdrawn category
PHYS 430	move to temporarily withdrawn category
PHYS 484	move to temporarily withdrawn category