a place of mind
THE UNIVERSITY OF BRITISH COLUMBIA

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26 November 2012

To: Vancouver Senate

From: Senate Curriculum Committee

RE: December Curriculum Proposals (approval)

The Senate Curriculum Committee has reviewed the material forwarded to it by the Faculties, and encloses those proposals it deems as ready for approval.

As such, the following is recommended to Senate:

Motion: *"That the new courses, changed courses, new course code, and program changes brought forward by the Faculties of Graduate Studies and Science be approved."*

Respectfully submitted,

Dr. Peter Marshall, Chair

Senate Curriculum Committee

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26 November 2012

To: Vancouver Senate

From: Vancouver Senate Curriculum Committee

Re: **CURRICULUM PROPOSALS FROM THE FACULTY OF GRADUATE STUDIES**

The Senate Curriculum Committee has reviewed the attached Category 1 proposals from the Faculty of Graduate Studies and is pleased to submit them for your consideration.

Land and Food Systems
New course
FOOD 511 (3)

Changed course
FOOD 531 (6)

Medicine
Changed course
PHTH 544 (5)

New course
PHTH 545 (6)

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UBC Curriculum Proposal Form
Change to Course or Program

Category: (1)

Faculty: Land & Food Systems **Department: Food Science** **Faculty Approval Date: March 23, 2012** **Effective Session: Winter 2012 Term 2**	**Date: March 8, 2012** **Contact Person: Jerzy Zawistowski** **Phone: 2-9449** **Email: jzawisto@mail.ubc.ca**
Proposed Calendar Entry: **FOOD 511 (3) Master of Food Science Workshops** **This course is not eligible for Credit/D/Fail grading.**	**Present Calendar Entry:** None (new course) **Type of Action:** Create New Course **Rationale:** Master of Food Science (MFS) Workshops are designed to prepare students for the mandatory food practicum project (FOOD 531) that is conducted in the summer session. The majority of students enrolling the MFS program have very little experience with the food industry and conducting industrial projects. The first three FOOD 531 course offerings indicated a need for the students to develop their project workplans and the literature search before starting the actual project in May to allow for enough time for the experimentation, data analysis and report writing. In addition the students need to gain required skills as to how to research, write proposals and reports, and present findings for an industry, or government institutions. They also have to learn about corporate culture and policies before commencing summer projects. To meet these needs, thirty six hours of workshops are required to enable the students to gain pre-requisite background knowledge before they will apply this into their practicum projects. The MFS Workshops (FOOD 511) will take place in terms 1 and 2 of the winter session, between September and March, inclusive. The course will cover writing proposals, reports, standard operating procedures, literature review, and the experimental workplan as well as customized workshops offered by campus services on library resources, databases, and citation, resume and interview skills and also seminars

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	by industry sponsors on expectations and corporate cultures. The course grading scheme is proposed to be a "pass/fail/pass with honours" system. Students are required to gain the minimum of 68% in all course components in order to pass (P) the course. Fail (F) is considered to be lower than 68%. Students who gain the minimum of 85% will be granted pass with honours (H). The prototype of this course was offered in in 2010 and 2011. The course syllabus is included in this submission. ☑ **Not available for Cr/D/F grading.** (Check the box if the course is NOT eligible for Cr/D/F grading. Note: Not applicable to graduate-level courses.) ☑ **Honours/Pass/Fail grading** (Check one of the above boxes if the course will be graded on a P/F or H/P/F basis. Default grading is percentage.)

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UBC Curriculum Proposal Form
Change to Course or Program

Category: (1)

Faculty: Land & Food Systems **Department: Food Science** **Faculty Approval Date: March 23, 2012** **Effective Session summer Term Year 2013 for Change**	**Date: March 8, 2012** **Contact Person: Jerzy Zawistowski** **Phone: 2-9449** **Email: jzawisto@mail.ubc.ca**
Proposed Calendar Entry: FOOD 531 (6) **Master of Food Science Food Practicum** Project *This course is not eligible for Credit/D/Fail grading.* **Prerequisite: FOOD 511**	**Present Calendar Entry:** **URL:** http://www.calendar.ubc.ca/vancouver/courses.cfm?page=name&code=FOOD FOOD 531 (6) Project *This course is not eligible for Credit/D/Fail grading.* **Type of Action:** (1) Change course name to more accurately describe the course (2) Add the Prerequisite for this course which is the FOOD 511 (Master of Food Science Workshops) (3) Change grading system from percentage to Pass/Fail/Honours system **Rationale:** The name "Project" is changed to "Master of Food Science Food Practicum Project" to reflect the nature of this course. This course is restricted to students enrolled in the Master of Food Science (MFS) program. All students are assigned to hands on projects that are initiated by food industry. These projects provide industrial experience for students as well as practical benefits for food companies. All students must have satisfactorily completed the required course work for the MFS program (minimum of 24 credits) including FOOD 511 prior to starting the MFS food practicum project. The course grading scheme is also proposed to be changed to a "pass/fail/pass with honours"

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	system. The current percentage grades are subjective and varied between academic and industrial evaluators. The percentage system will still be used internally to evaluate the students on each component of the practicum and for categorizing the evaluation into pass and pass with honours. Students are required to gain the minimum of 68% in all course components in order to pass (P) the course. Fail (F) is considered to be lower than 68%. Students who gain the minimum of 85% will be granted pass with honours (H). The details of the course grading system will communicated to students in the course syllabus. ☑ **Not available for Cr/D/F grading.** (Check the box if the course is NOT eligible for Cr/D/F grading. Note: Not applicable to graduate-level courses.) ☑ **Honours/Pass/Fail grading** (Check one of the above boxes if the course will be graded on a P/F or H/P/F basis. Default grading is percentage.)

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UBC Curriculum Proposal Form
Change to Course or Program

Category: 1

Faculty: Medicine **Department: Physical Therapy** **Faculty Approval Date: July 10, 2012** **Effective Session: Winter 2013**	**Date: July 31, 2012** **Contact Person: Carissa Dyck** **Phone: 604-822-2272** **Email: carissa.dyck@ubc.ca**
Proposed Calendar Entry: PHTH 544 **(5)** Clinical Practice IV**a**	**URL:** http://www.calendar.ubc.ca/vancouver/courses.cfm?page=name&code=PHTH **Present Calendar Entry :** PHTH 544 (~~11~~) Clinical Practice IV **Type of Action:** Decrease credit value; split content of existing course in two **Rationale:** This course is being split in two: PHTH 544 (5) and PHTH 545 (6). As it currently stands, PHTH 544 is a complex and large course with two distinct components: musculoskeletal / electrotherapy/cardiac rehab content and neurological content (adult/pediatric). The size of course, coupled with its two themes, presents challenges with respect to content delivery, scheduling and evaluation. The new courses, PHTH 544 and PHTH 545, will contain all of the content of the original PHTH 544. The separation of the course will allow for the course content to become more streamlined as each course will represent one of the aforementioned themes. It will also have the additional benefit of allowing for easier scheduling and evaluation of each individual course. We propose to assign a value of 5 credits to PHTH 544 and a value of 6 credits to PHTH 545. The rationale for this is that the original PHTH 544 was worth 11 credits,

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	and this content is being divided according to the content requirements of PHTH 544 and the new PHTH 545.
Proposed Calendar Entry: **PHTH 545 (6) Clinical Practice IVb**	**URL:** N/A **Present Calendar Entry:** N/A **Type of Action** Create new course **Rationale:** As it currently stands, PHTH 544 (11) is a complex and large course with two distinct components: musculoskeletal/ electrotherapy/cardiac rehab content and neurological content (adult/pediatric). The size of course, coupled with its two themes, presents challenges with respect to content delivery, scheduling and evaluation. The new course, PHTH 545, will contain all of the musculoskeletal / electrotherapy/cardiac rehab content of the original PHTH 544. The separation of the course will allow for the course content to become more streamlined as each course will represent one of the aforementioned themes. It will also have the additional benefit of allowing for easier scheduling and evaluation of each individual course. We propose to assign a value of 5 credits to PHTH 544 and a value of 6 credits to PHTH 545. The rationale for this is that the original PHTH 544 was worth 11 credits, and this content is being assigned to PHTH 544 and the new PHTH 545. ☐ **Not available for Cr/D/F grading.** (Check the box if the course is NOT eligible for Cr/D/F grading. Note: Not applicable to graduate-level courses.) ☐ **Pass/Fail or** ☐ **Honours/Pass/Fail grading**

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26 November 2012

To: Vancouver Senate

From: Vancouver Senate Curriculum Committee

Re: **CURRICULUM PROPOSALS FROM THE FACULTY OF SCIENCE**

The Senate Curriculum Committee has reviewed the attached Category 1 proposals from the Faculty of Science and is pleased to submit them for your consideration.

Anesthesia, Pharmacology and Therapeutics
New course
PCTH 201 (3)

Astronomy
New courses
ASTR 200 (3)
ASTR 205 (3)
ASTR 300 (3)
ASTR 333 (3)
ASTR 406 (3)
ASTR 407 (3)

Biology
New course
BIOL 459 (3)

Cellular and Physiological Sciences
New course code
CAPS

Program change
Bachelor of Science > Cellular and Physiological Sciences > Honours Specialization > Honours: Physiology

Contact: Dr. Bill Ramey **Phone: 822-3300**	**Faculty Approval Date: October 30, 2012** **Email: wramey@mail.ubc.ca**
Anesthesia, Pharmacology and Therapeutics	
Effective Date for Change: 13S **Proposed Calendar Entry:** **PCTH 201 (3) Drugs and Society.** **Introductory principles of drug action. Historical and present day medical and non-medical use of drugs. [3-0]** **Prerequisite: One of Biology 12, BIOL 111, BIOL 112, BIOL 153, BIOL 155 or SCIE 001. Second year standing is required.**	**Present Calendar Entry:** **Action:** Create new course **Rationale:** With the rapidly increasing prevalence of drugs in our society, both in health and social use, we feel that there is a demand for an introductory level course that increases pharmacological awareness. This course will be of interest to students wishing to move forward into the life sciences, potentially acting as a springboard to generate more interest in our intensive pharmacology undergraduate specialization or our more advanced PCTH 325 course, while at the same time appealing to the much broader audience of students in other non-life sciences disciplines wanting a basic knowledge of how drugs work and their societal relevance. **Supporting Documents: SCI-12-1-PCTH 201**

ASTRONOMY	
Effective Date for Change: 13S **Proposed Calendar Entry:** **ASTR 200 (3) Frontiers of Astrophysics** **Stellar masses and evolution. White dwarfs, neutron stars and black holes. Extrasolar planet formation and detection. Dark matter in the Milky Way and other galaxies. Cosmological observations and principles. Weather permitting, observations will be conducted. [3-0-0]** **Prerequisite: Either (a) one of PHYS 101, PHYS 107, PHYS 153 and one of MATH 101, MATH 103, MATH 105, MATH 121; or (b) SCIE 001.**	**Present Calendar Entry:** **Action:** Create new course. **Rationale:** This is part of a reorganization of the material in the 2nd and 3rd years of the undergraduate Astronomy curriculum. We are creating ASTR 200, 205 and 300 to replace the existing ASTR 201, 202 and 303. The aim of this course is to expose students to current topics of great interest in astronomy at an early stage of the undergraduate program. We intend for this to be a "magnet" course drawing students into the Astronomy undergraduate specializations. **Supporting Documents: SCI-12-1-ASTR 200**
Effective Date for Change: 13S **Proposed Calendar Entry:** **ASTR 205 (3) Stars and Stellar Populations** **Measurement of positions, motions and distances in astronomy. Temperature, masses and spectra of stars. Hertzsprung-Russell diagram. Quantitative stellar structure and evolution. Chemical composition of stars in different Galactic populations. Globular and open star clusters. [3-0-0]** **Prerequisite: ASTR 200 and one of PHYS 210, EOSC 211, CPSC 302, CPSC 303.**	**Present Calendar Entry:** **Action:** Create new course. **Rationale:** This is part of a reorganization of the material in the 2nd and 3rd years of the undergraduate Astronomy curriculum. We are creating ASTR 200, 205 and 300 to replace the existing ASTR 201, 202 and 303. This course will cover measurement in astronomy, the quantitative aspects of stellar structure and evolution and populations of stars in our Galaxy. **Supporting Documents: SCI-12-1-ASTR 205**

Effective Date for Change: 13S **Proposed Calendar Entry:** **ASTR 300 (3) Galaxies** **Structure and kinematics of our galaxy. Spiral arms and dynamics of stars in spiral and elliptical galaxies. Galactic formation, evolution, dynamics and groups. Active galaxies and quasars. [3-0-0]** **Prerequisite: One of ASTR 202, ASTR 205 and one of PHYS 210, EOSC 211, CPSC 302, CPSC 303.** **Corequisite: One of MATH 217, MATH 227, MATH 317.**	**Present Calendar Entry:** **Action:** Create new course. **Rationale:** This is part of a reorganization of the material in the 2nd and 3rd years of the undergraduate Astronomy curriculum. We are creating ASTR 200, 205 and 300 to replace the existing ASTR 201, 202 and 303. This course will cover the structure and dynamics of spiral and elliptical galaxies, the formation and evolution of galaxies and groups and active galaxies. **Supporting Documents: SCI-12-1-ASTR 300**
Effective Date for Change: 13S **Proposed Calendar Entry:** **ASTR 333 (3) Exoplanets and Astrobiology.** **Observations and basic characteristics of extrasolar planets, including their formation, evolution and potential for supporting life. Not to be used to satisfy any Physics and Astronomy major, minor or honours specialization requirement, but may be used as an upper-level science elective. [3-0-0]** **Prerequisites: One of PHYS 101, PHYS 102, PHYS 107, PHYS 108, and one of MATH 200, STAT 200, STAT 203, STAT 241, BIOL 300.**	**Present Calendar Entry:** **Action:** Create new course. **Rationale:** The discovery and characterization of planets around other stars has become a major activity in astronomy and a revolution in many aspects of planetary science. ASTR 333 will be a course on planets beyond the Solar System and prospects for life elsewhere in the Universe, aimed at the Combined Major in Science. This would be the first such course to be introduced for science majors at UBC. Such courses have been recently introduced and are popular with students in other universities. **Supporting Documents: SCI-12-1-ASTR 333**

Effective Date for Change: 13S **Proposed Calendar Entry:** **ASTR 406 (3) High-Energy Astrophysics** **Radiative processes. White dwarfs, neutron stars and black holes. Accreting systems. Gamma-ray bursts. [3-0-0]** **Prerequisite: All of PHYS 203 and PHYS 301 and MATH 215, and one of ASTR 300, ASTR 303.**	**Present Calendar Entry:** **Action:** Create new course. **Rationale:** The highly successful X-ray and gamma-ray satellites launched in the last decade or so have led to a host of discoveries and new understandings in the realm of high-energy astrophysics. Knowledge of these concepts, as well as of the radiative processes in effect in many of these environments, is an essential part of a modern astronomy education. The department is thus adding a senior undergraduate course on this topic. This course will replace ASTR 402. **Supporting Documents: SCI-12-1-ASTR 406**
Effective Date for Change: 13S **Proposed Calendar Entry:** **ASTR 407 (3) Planetary Science** **Structure of planetary systems, planetary interiors, planet formation, planetary atmospheres, meteoritics, impact cratering. [3-0-0]** **Prerequisite: One of PHYS 210, EOSC 211, and one** of **MATH 217, MATH 227, MATH 317 and one of MATH 316, PHYS 312 and one of ASTR 200, EOSC 212.** **Corequisite: One of PHYS 206, PHYS 216, PHYS 306, EOSC 352.**	**Present Calendar Entry:** **Action:** Create new course. **Rationale:** Due to highly-successful space missions (like Cassini at Saturn, Messenger at Mercury, and the Curiosity rover on Mars) and because of the discovery of large numbers of extrasolar planetary systems, planetary astronomy is a rapidly-growing area. The department is thus adding a senior undergraduate course on this topic. **Supporting Documents: SCI-12-1-ASTR 407**

BIOLOGY	
Effective Date for Change: 13S **Proposed Calendar Entry:** **BIOL 459 (3) Neurobiology of Sensory and Motor Systems** **Analysis of the mechanisms of sensory processing and motor orchestration using vertebrate and invertebrate model systems. Neural circuit structure, specialization, information coding, integration, and behaviour. [3-0-0]** **Prerequisite: BIOL 455.**	**Present Calendar Entry:** **Action:** Create new course. **Rationale:** Neurobiology courses are in high demand from Biology students. The current offerings fill quickly and the students have expressed the desire for more courses in the area. BIOL 459 will build directly on concepts and topics that are emphasized in BIOL 455, which currently enrolls about 100 students per year. About 25-30 of these students are expected to enroll in BIOL 459. In order to probe experimental systems in depth and critically evaluate scientific literature on the topics, students will require a substantial foundation in neuroscience; far more than is provided in third year courses such as BIOL 361, 362, 364 or PSYC 360. BIOL 455 provides this link, as it covers fundamental concepts, such as current-voltage relationships of ion channels, basic neural circuit mechanisms of sensory information processing, and models of information coding, that are commonplace in scientific research but reach well beyond the basic physiology covered in third year. Without the foundation provided in BIOL 455, the majority of BIOL 459 would need to be devoted to understanding fundamental concepts rather than applying those concepts to building a mechanistic understanding of nervous system function. **Supporting Documents: SCI-12-1-BIOL 459**

CELLULAR AND PHYSIOLOGICAL SCIENCES	
Effective Date for Change: 13S **Proposed Calendar Entry:** Cellular and Physiological Sciences, Faculty of Medicine **CAPS: Cellular, Anatomical and Physiological Sciences** …	**Present Calendar Entry:** **Action:** Create a new course code, CAPS, for the course listings section of the calendar. **Rationale:** The specialization title is changed to Cellular, Anatomical and Physiological Sciences to more accurately reflect the teaching in the undergraduate specialization offered by the Department. The specialization expanded in the past years to include courses in cellular physiology and anatomy. The course code, CAPS, reflects the current range of content within the specialization, cellular, anatomical and physiological sciences. CAPS will provide a common identity to all undergraduate courses offered by the Department of Cellular and Physiological Sciences and help the students recognize that all course offerings are equally significant for studies in this field. This change will have no impact on current library usage or budgets. **Supporting Documents: SCI-12-1-CAPS**

Contact: Dr. Bill Ramey
Phone: 822-3300

Faculty Approval Date: October 30, 2012

Email: wramey@mail.ubc.ca

CELLULAR & PHYSIOLOGICAL SCIENCES

Effective Date for Change: 13S

Proposed Calendar Entry:

Honours **Specialization**

Honours (0266): Physiology (PHYL)

This specialization has been renamed to Cellular, Anatomical and Physiological Sciences as of Winter session 2013. Students currently in the specialization will have the option to choose between the designation of Honours Physiology or the designation of Honours Cellular, Anatomical and Physiological Sciences for their B.Sc. specialization. Students admitted to the specialization after Winter session of 2012 will graduate with an Honours B.Sc. in Cellular, Anatomical and Physiological Sciences. Students may fulfill requirements with equivalent CAPS courses.

Honours (XXXX): Cellular, Anatomical and Physiological Sciences (CAPS)

First Year

Communication Requirement[1]	6
BIOL 112, 121[2] ,140	8
CHEM 121, 123 (111, 113)	8
MATH 100 or 102 or 104[3]	3
MATH 101 or 103 or 105[4]	3
PHYS[5]	6
Total Credits	34

Second Year

BIOL 200, 201	6
CHEM 205	3
CHEM 211	4
CHEM 233, 235	4
MICB 202	3
Electives	15
Total Credits	35

Third Year

(http://www.calendar.ubc.ca/vancouver/index.cfm?tree=12,215,410,435)

Present Calendar Entry:

Honours ~~Program~~

Honours (0266): Physiology (PHYL*)*

First Year

Communication Requirement[1]	6
BIOL 112, 121[2] ,140	8
CHEM 121, 123 (111, 113)	8
MATH 100 or 102 or 104[3]	3
MATH 101 or 103 or 105[4]	3
PHYS[5]	6
Total Credits	34

Second Year

BIOL 200, 201	6
CHEM 205	3
CHEM 211	4
CHEM 233, 235	4
MICB 202	3
Electives	15
Total Credits	35

Third Year

CAPS 390	3
BIOC 301, 302	6
BIOL 300[6]	3
CAPS 301	6
CAPS 303	3
Electives	12
Total Credits	33

Fourth Year

CAPS 421	3
CAPS 422, 423, 424, 426	12
CAPS 430[7]	6
CAPS 449[7]	6
Electives	3
Total Credits	30
Credits for Degree	132

…

[2] Students lacking Biology **11 or** 12 must take BIOL 111 before taking BIOL 121.

[7] Students will normally be required to take **CAPS** 430 and 449 in the same Winter Session.

…

~~ANAT~~ 390	3
BIOC 301, 302	6
BIOL 300[6]	3
~~PHYL~~ 301	6
~~PHYL~~ 303	3
Electives	12
Total Credits	33

Fourth Year

~~PHYL~~ 421	3
~~PHYL~~ 422, 423, 424, 426	12
~~PHYL~~ 430[7]	6
~~PHYL~~ 449[7]	6
Electives	3
Total Credits	30
Credits for Degree	132

…

[2] Students lacking Biology 12 must take BIOL 111 before taking BIOL 121.

[7] Students will normally be required to take ~~PHYL~~ 430 and 449 in the same Winter Session.

…

Action:

1. Change Honours Program to Honours Specialization.
2. Insert advisory note under the title Honours Physiology.
3. Create specialization number, title and code for the Honours Cellular, Anatomical and Physiological Sciences and insert this below the preceding note and above the First Year course listings.
4. Rename all PHYL and ANAT course codes with CAPS.

Rationale:

1. Specialization number, title and code are revised to capture the recent changes to the teaching in the specialization.
2. An advisory note to the current students in the Honours Physiology specialization is required to specify their options for graduation. Students currently in the specialization will have the option to choose between the designation of Honours

	Physiology or the designation of Honours Cellular, Anatomical and Physiological Sciences for their BSc specialization. Students admitted to the specialization after Winter session of 2012 will graduate with an Honours B.Sc. in Cellular, Anatomical and Physiological Sciences. In addition, the advisory note clarifies that students may fulfill their specialization requirements with CAPS courses. The advisory note will be removed once the current students have graduated from the specialization. 3. The PHYL and ANAT courses are now identified by the revised course code CAPS.