THE UNIVERSITY OF BRITISH COLUMBIA

Vancouver Senate Curriculum Committee
c/o
Enrolment Services | Senate & Curriculum Services
Brock Hall 2016 – 1874 East Mall | Vancouver BC | V6T 1Z1
lindsey.kovacevic@ubc.ca | PH 604.822.9134 | FX 604.822.5945

03 April 2012

To: Vancouver Senate

From: Senate Curriculum Committee

RE: March 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, and program changes brought forward by the Faculties of Education, Forestry, Graduate Studies (Arts, College for Interdisciplinary Studies, and Land and Food Systems), Law, and Science be approved.*

Respectfully submitted,

Dr. Peter Marshall, Chair
Senate Curriculum Committee

THE UNIVERSITY OF BRITISH COLUMBIA

Vancouver Senate Curriculum Committee
c/o
Enrolment Services | Senate & Curriculum Services
Brock Hall 2016 – 1874 East Mall | Vancouver BC | V6T 1Z1
lindsey.kovacevic@ubc.ca | PH 604.822.9134 | FX 604.822.5945

03 April 2012

To: Vancouver Senate

From: Senate Curriculum Committee

RE: **CURRICULUM PROPOSALS FROM THE FACULTY OF EDUCATION**

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

School of Kinesiology
New courses:
KIN 343 (3)
KIN 475 (3)

UBC Curriculum Proposal Form
Change to Course or Program

Category: (1)

Faculty: Education **Department: School of Kinesiology** **Faculty Approval Date:** **November 24, 2011** **Effective Session 1 Term W** **Year 2012 for Change**	**Date: 15 March 2012** **Contact Person: David Sanderson** **Phone: 2-4361** **Email: david.sanderson@ubc.ca**
Proposed Calendar Entry: KIN 343 (3) Biology of Human Athletic Performance Basics of exercise physiology and related issues pertaining to sports and athletic performance for non-Kinesiology students. Not for credit in the B.Kin. Program. [3-0] *Pre-requisite*: Second-year standing.	**URL:** KIN **Present Calendar Entry:** N/A **Type of Action:** New course **Rationale for Proposed Change:** The proposed course was designed in response to on-going student requests for a course covering the basics of exercise physiology and related issues pertaining to sports and athletic performance in the context of current research advances and popular news topics. There are no prerequisites and the course is anticipated to attract students in basic sciences and the health disciplines, as well as students interested in the history, sociology, and culture of sports. In addition, we anticipate the course will appeal to students who have a personal involvement in sports and fitness and are interested in the topic as it pertains to their own training and performance development. ☐ **Not available for Cr/D/F grading.** ☐ **Pass/Fail or** ☐**Honours/Pass/Fail grading**

Faculty: Education **Department: School of Kinesiology** **Faculty Approval Date:** **November 24, 2011** **Effective Session 1 Term W** **Year 2012 for Change**	**Date: March 15, 2012** **Contact Person: David Sanderson** **Phone: 2-4361** **Email: david.sanderson@ubc.ca**
Proposed Calendar Entry: KIN 475 (3) Pulmonary Physiology of Exercise Operation of the lungs, chest wall, and ventilatory control mechanisms during dynamic whole-body exercise. [3-0] *Prerequisite:* Third-year standing.	**URL:** KIN **Present Calendar Entry:** N/A **Type of Action:** New course **Rationale for Proposed Change:** This course provides an advanced treatment of pulmonary physiology as applied to conditions of dynamic exercise. Importantly, it increases the number of upper-level elective course offerings available to undergraduate students in the School. ☐ **Not available for Cr/D/F grading.** ☐ **Pass/Fail or** ☐**Honours/Pass/Fail grading**

THE UNIVERSITY OF BRITISH COLUMBIA

Vancouver Senate Curriculum Committee
c/o
Enrolment Services | Senate & Curriculum Services
Brock Hall 2016 – 1874 East Mall | Vancouver BC | V6T 1Z1
lindsey.kovacevic@ubc.ca | PH 604.822.9134 | FX 604.822.5945

03 April 2012

To: Vancouver Senate

From: Senate Curriculum Committee

RE: **CURRICULUM PROPOSAL FROM THE FACULTY OF FORESTRY**

The Senate Curriculum Committee has reviewed the attached Category 1 proposal from the Faculty of Forestry and is pleased to submit it for your consideration.

New course:
CONS 102 (1)

FACULTY OF FORESTRY
CATEGORY 1 CURRICULUM CHANGE PROPOSALS

UBC Curriculum Proposal Form
Change to Courses

Category 1

Faculty: Forestry **Department:** Dean's Office **Faculty Approval Date:** May 12, 2011 **Effective Session for Change:** 2012W	**Date:** May 6, 2011 **Contact Person:** Peter Marshall **Phone:** (604) 822-4454 **Email:** peter.marshall@ubc.ca
Proposed Calendar Entry: **CONS 102 (1) UBC: Achieving a sustainable campus** Exploration of how the campus works to achieve sustainability with respect to its daily operations, including planning, governance, transportation, water and energy systems, as well as related sustainability research.	**URL:** CONS **Present Calendar Entry:** None **Type of Action:** New course. **Rationale:** This course is designed to provide an opportunity to interested students, early on in their degree at UBC to better understand and discuss what UBC is doing with respect to sustainability related initiatives such as the UBC as a living lab. It takes advantage of an existing 3 and 4th level course (APSC 364) by sharing the lecture component which is based on sustainability themes of governance, transportation, water and energy. Each lecture will comprise two perspectives. The first perspective is provided by campus operations staff (20 minutes), and the second by an active UBC researcher working in the same field (20 minutes). This will be followed by 45 minutes group discussion with the presenters. Students will form discussion groups, write a short research essay through a sustainability lens as well as undertake peer to peer assessment to better understand a range of multi-disciplinary perspectives. The proposed course has no pre-requisites and is intended primarily for students, in the early years of their program, who wish to improve their understanding of sustainability issues within the context of UBC's campus operations. It is open to all students with a general interest in sustainability. Students cannot enroll in CONS102 and APSC 364 in the same year.

THE UNIVERSITY OF BRITISH COLUMBIA

Vancouver Senate Curriculum Committee
c/o
Enrolment Services | Senate & Curriculum Services
Brock Hall 2016 – 1874 East Mall | Vancouver BC | V6T 1Z1
lindsey.kovacevic@ubc.ca | PH 604.822.9134 | FX 604.822.5945

03 April 2012

To: Vancouver Senate

From: 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.

Arts
Discontinued program:
Comparative Literature

Program changes:
Library, Archival, and Information Studies > Master of Archival Studies > Degree Requirements
Graduate Studies > Degree Programs > Archival Studies
Library, Archival, and Information Studies > Master of Archival Studies/Master of Library and Information Studies > Program Requirements
Graduate Studies > Degree Programs > Archival Studies and Library Information Studies

New courses:
GEOG 535 (3)
MUSC 533 (3/6)d

College for Interdisciplinary Studies
Program change:
European Studies

Land and Food Systems
Program changes:
Graduate Studies > Degree Programs > Integrated Studies in Land and Food Systems > Master of Science Program Requirements
Graduate Studies > Degree Programs > Integrated Studies in Land and Food Systems > Doctor of Philosophy Program Requirements

THE UNIVERSITY OF BRITISH COLUMBIA

UBC Curriculum Proposal Form
Change to Course or Program

Category: (1)

Faculty: Arts **Department:** Comparative Literature Prg. **Faculty Approval Date:** February 14, 2012 **Effective Session:** Winter 2012	**Date:** January 17, 2012 **Contact Person:** Steven Taubeneck **Phone:** **Email:** taubenst@mail.ubc.ca
Proposed Calendar Entry: n/a	**URL:**http://www.calendar.ubc.ca/vancouver/index.cfm?tree=12,204,828,1138 **Present Calendar Entry:** ~~Comparative Literature~~ ~~Degrees Offered: Ph.D., M.A.~~ ~~Members~~ ~~Professors~~ ~~J. X. Cooper, M. S. Duke, M. Fee, D. J. Gregory, S. E. Grace, E.-M. Kröller, J. O'Brian, G. J. Pratt, V. A. Raoul, R. Sarkonak, M. L. Weir.~~ ~~Associate Professors~~ ~~V. D. Arbel, D. Boccassini, P. C. Burns, R. A. Cavell, R. F. De Grandis, N. S. N. Godfrey, N. Frelick, C. M. S. Hellwig, A. Lamontagne, T. M. Kemple, B. S. McIlroy, J. S. Mostow, D. Neufeld, P. Petro, T. Salumets, A. Smith, S. Taubeneck, C. Testa, M. Vessey, G. H. Winthrop-Young.~~ ~~Assistant Professors~~ ~~G. Onyeoziri-Miller, W. G. Winder.~~ ~~Program Overview~~ ~~While retaining a primary focus in the study of literary texts, the Program in Comparative Literature attempts to bridge the gaps which have arisen as a result of the institutional compartmentalization of knowledge, and thus to arrive at a more productive understanding of literature in global contexts. Through courses in the history of literary theory and in current developments in this rapidly expanding field, the program seeks to provide a~~

	~~foundation for the study of interrelationships among discourse systems in the humanities and social sciences. Students select from a range of courses in Comparative Literature, in the national literatures studied in their original languages, and in other related disciplines in order to develop a coherent program of individual study which will have its own logic and lead to interdisciplinary work of a high order.~~ ~~Comparative Literature studies at UBC may be grouped under four major headings. (Note: in each case texts in at least two different languages must be involved.)~~ ~~— Comparisons across linguistic and cultural groups~~ ~~— Comparisons among the Arts~~ ~~— Comparisons across discourse systems~~ ~~— Comparisons involving Western poetics and literary theory~~ ~~Please email for detailed information about the program and its requirements.~~ ~~Doctor of Philosophy~~ ~~Admission Requirements~~ ~~The Ph.D. represents the culmination of education in the discipline of Comparative Literature. Applicants must have fluency in three different languages including English and knowledge of literary texts studied in the three original languages. Normally an M.A. degree with First class standing is the prerequisite for admission. Applicants from certain countries outside North America, Great Britain, and Europe may be required to enrol in the M.A. program even if they already possess an M.A. degree. Students with a high A standing and fluency in three languages who have passed the Qualifying Examination have the option of transferring into the Ph.D. program after one year of~~

	~~master's study. The languages studied must be available (taught) at the graduate level at UBC.~~ ~~Please email for detailed information about the program and its requirements.~~ ~~Program Requirements~~ ~~Ph.D. studies consist of at least 18 credits of coursework. Additional coursework may be selected in consultation with the student's supervisory committee. All doctoral students are required to complete a candidacy examination successfully. The candidacy examination consists of four written papers and an oral examination. The major requirement for the Ph.D. is completion of a research dissertation meeting the Faculty of Graduate Studies requirements.~~ ~~Master of Arts~~ ~~Admission Requirements~~ ~~Applicants to the M.A. in Comparative Literature at UBC must have academic education in the literature of three languages (English may be chosen) and have studied in the original three languages during their final two years as undergraduates. Language competence will be established by obtaining at least a high second-class grade in a fourth-year course (6 credits) in that language. Senior courses with a literary or theoretical focus will be accepted for entrance into Comparative Literature, but senior level courses in areas such as composition, reading knowledge, the translation of technical documents, will not be accepted. The languages studied must be available at the graduate level at UBC.~~ ~~Please email for detailed information about the program and its requirements.~~

THE UNIVERSITY OF BRITISH COLUMBIA

	~~Program Requirements~~ ~~M.A. studies consist of 30 credits (the equivalent of five one-year courses), occasionally more for students who have been admitted before fulfilling all undergraduate preparation. While students who enter the Program with a comprehensive bachelor's degree including literary education in three different languages, one of which may be English, can complete the degree within twelve months, most students take two years. Those who continue past the second year will normally not be eligible for financial assistance from the Department.~~ ~~M.A. candidates in the Comparative Literature Program who have their advisor's permission and are accepted by the instructor of the course in translation may include a translation in partial satisfaction of their thesis requirements.)~~ ~~Contact Information~~ ~~Program in Comparative Literature~~ ~~222 Buchanan Tower, 1873 East Mall~~ ~~Vancouver, BC, Canada V6T 1Z1~~ ~~Tel: 604.827.3550~~ ~~Fax: 604.822.9344~~ ~~Email: cenes@interchange.ubc.ca~~ ~~Colleen O'Connor, Graduate Secretary~~ **Type of Action:** Delete program **Rationale:** Over the last ten years, support for the program from the Dean's Office and the faculty in Arts has diminished drastically. There has been a long term phasing out of the program, which began years ago with the requirement from the Dean's office to stop taking new applications. Our last student in the program just finished her dissertation defense in the fall and will graduate in May.

THE UNIVERSITY OF BRITISH COLUMBIA

UBC Curriculum Proposal Form
Change to Course or Program

Category: 1

Faculty: Arts **Department:** SLAIS **Faculty Approval Date:** February 14, 2012 **Effective Session:** Winter 2012	**Date:** November 28, 2011 **Contact Person:** Edie Rasmussen **Phone:** 7-5486 **Email:** edie.rasmussen@ubc.ca
Proposed Calendar Entry: The M.A.S. is awarded on the completion of 48 credits of work. In the first year of the program, beginning in Term One of a Winter Session, the student must take **four** required courses comprising **12** credits (**ARST 510, 515, 516, and 520**). The remainder of the program consists of **36** credits of elective courses.	**URL:** **http://www.calendar.ubc.ca/vancouver/index.cfm?tree=12,208,367,338** **Present Calendar Entry:** The M.A.S. is awarded on the completion of 48 credits of work. In the first year of the program, beginning in Term One of a Winter Session, the student must take ~~eight~~ required courses comprising ~~24~~ credits (ARST ~~500,~~ 510, 515, 516, 520, ~~540, 573, and 587~~). The remainder of the program consists of ~~24~~ credits of elective courses. **Type of Action:** Change the number of required courses for the M.A.S. degree from 8 to 4 (i.e. from 24 to 12 credits). **Rationale for Proposed Change:** This change will bring the number of core courses for the Master of Archival Studies program in alignment with the number of core courses for the Master of Library and Information Studies program. It will allow the M.A.S. students greater flexibility in planning their program in a field which is becoming increasingly diverse. The total number of credits required for the degree is unchanged.
Proposed Calendar Entry: The M.A.S is awarded on completion of 48 credits of work approved by the School, including an optional thesis and an optional internship. The required courses are **ARST**	**URL:** **http://www.calendar.ubc.ca/vancouver/index.cfm?tree=12,204,828,1118**) **Present Calendar Entry:** The M.A.S is awarded on completion of 48 credits of work approved by the School,

510, 515, 516 and 520.	including an optional thesis and an optional internship. The required courses are ARST ~~500~~, 510, 515, 516, 520, ~~540, 573, and 587~~. **Type of Action:** Change the number of required courses for the M.A.S. degree from 8 to 4 (i.e. from 24 to 12 credits). . **Rationale for Proposed Change:** This change will bring the number of core courses for the Master of Archival Studies program in alignment with the number of core courses for the Master of Library and Information Studies program. It will allow the M.A.S. students greater flexibility in planning their program in a field which is becoming increasingly diverse. The total number of credits required for the degree is unchanged

THE UNIVERSITY OF BRITISH COLUMBIA

UBC Curriculum Proposal Form
Change to Course or Program

Category: 1

Faculty: Arts **Department:** SLAIS **Faculty Approval Date:** February 14, 2012 **Effective Session:** Winter 2012	**Date:** November 28, 2011 **Contact Person:** Edie Rasmussen **Phone:** 7-5486 **Email:** edie.rasmussen@ubc.ca
Proposed Calendar Entry: The two master's degrees, M.A.S. and M.L.I.S., are awarded on the completion of a total of 81 credits of work approved by the School. Students must complete the following: • A total of 81 credits. Of these, at least 36 must be ARST and 36 must be LIBR. The remaining nine credits can be a combination of **ARST**, LIBR, or other approved courses. Within the total of 81 credits, each student must take: • **ARST 510, ARST 515, ARST 516, and ARST 520** (3 credits each for a total of **12** credits) • LIBR 501, LIBR 502, LIBR 503 (3 credits each for a total of 9 credits) • Either ARST 500 or LIBR 500 (3 credits; students cannot take both) • either ARST 591 or LIBR 505 (3 credits; students cannot take both) • either ARST 570 or LIBR 504 (3 credits; students cannot take both)	**URL:** http://www.calendar.ubc.ca/vancouver/index.cfm?tree=12,208,368,0 **Present Calendar Entry:** The two master's degrees, M.A.S. and M.L.I.S., are awarded on the completion of a total of 81 credits of work approved by the School. Students must complete the following: • A total of 81 credits. Of these, at least 36 must be ARST and 36 must be LIBR. The remaining nine credits can be a combination of ~~ARTS~~, LIBR, or other approved courses. Within the total of 81 credits, each student must take: • ARST 510, ARST 515, ARST 516, ARST 520, ~~ARST 540, and ARST 573~~ (3 credits each for a total of ~~18~~ credits) • LIBR 501, LIBR 502, LIBR 503 (3 credits each for a total of 9 credits) • Either ARST 500 or LIBR 500 (3 credits; students cannot take both) • either ARST 591 or LIBR 505 (3 credits; students cannot take both) • either ARST 570 or LIBR 504 (3 credits; students cannot take both) • ~~either ARST 587 or LIBR 587 (3 credits; students cannot take both)~~

THE UNIVERSITY OF BRITISH COLUMBIA

	Type of Action: In keeping with the proposed change in the number of required courses for the M.A.S. degree, change the number of required M.A.S. courses for the dual M.A.S./M.L.I.S degree from 8 to 4 (i.e. 12 credits rather than 24). Note also change of typo "ARTS" in calendar entry to "ARST". **Rationale for Proposed Change:** This change will make the requirements for the M.A.S. degree within the dual degree program consistent with the changes proposed for the M.A.S. degree. The total number of credits required for the dual degrees is unchanged.
Proposed Calendar Entry: The two master's degrees, M.A.S. and M.L.I.S., are awarded on the completion of 81 credits of work approved by the School. Students must complete the following: • A total of 81 credits. Of these, at least 36 must be ARST and 36 must be LIBR. The remaining nine credits can be a combination of **ARST**, LIBR, or other approved courses. Within the total of 81 credits, each student must take: • **ARST 510, ARST 515, ARST 516, and ARST 520** (3 credits each for a total of **12** credits) • LIBR 501, LIBR 502, LIBR 503 (3 credits each for a total of 9 credits) • Either ARST 500 or LIBR 500 (3 credits; students cannot take both)	**URL:** **http://www.calendar.ubc.ca/vancouver/index.cfm?tree=12,204,828,1119** **Present Calendar Entry:** The two master's degrees, M.A.S. and M.L.I.S., are awarded on the completion of 81 credits of work approved by the School. Students must complete the following: • A total of 81 credits. Of these, at least 36 must be ARST and 36 must be LIBR. The remaining nine credits can be a combination of ~~ARTS~~, LIBR, or other approved courses. Within the total of 81 credits, each student must take: • ARST 510, ARST 515, ARST 516, ARST 520, ~~ARST 540, and ARST 573~~ (3 credits each for a total of ~~18~~ credits) • LIBR 501, LIBR 502, LIBR 503 (3 credits each for a total of 9 credits) • Either ARST 500 or LIBR 500 (3

• either ARST 591 or LIBR 505 (3 credits; students cannot take both) • either ARST 570 or LIBR 504 (3 credits; students cannot take both)	credits; students cannot take both) • either ARST 591 or LIBR 505 (3 credits; students cannot take both) • either ARST 570 or LIBR 504 (3 credits; students cannot take both) • ~~either ARST 587 or LIBR 587 (3 credits; students cannot take both~~) **Type of Action:** In keeping with the proposed change in the number of required courses for the M.A.S. degree, change the number of required M.A.S. courses for the dual M.A.S./M.L.I.S degree from 8 to 4 (i.e. 12 credits rather than 24). **Rationale for Proposed Change:** This change will make the requirements for the M.A.S. degree within the dual degree program consistent with the changes proposed for the M.A.S. degree. The total number of credits required for the dual degrees is unchanged.

THE UNIVERSITY OF BRITISH COLUMBIA

UBC Curriculum Proposal Form
Change to Course or Program

Category: (1)

Faculty: Arts **Department:** Geography **Faculty Approval Date:** February 14, 2012 **Effective Session:** Winter 2012	**Date:** 4 October, 2011 **Contact Person:** Daniel Hiebert **Phone:** 604 822 4500 **Email:** Daniel.Hiebert@ubc.ca
Proposed Calendar Entry: GEOG 535 (3) International Migration and Settlement	**URL:** GEOG **Present Calendar Entry:** n/a **Type of Action:** Create new course **Rationale:** Migration has become one of the key elements of globalization and is having fundamental impacts on the nature of society. This course has been taught for several years as a special seminar and has become an integral component of the Geography graduate program. Typically, there around ten graduate students focusing on international migration in the Geography program at any given time, and many more in other departments at UBC. The course introduces students to the large scholarly literature on international migration and the integration of newcomers in destination societies. The key learning outcomes of the course are to facilitate students' knowledge of: the ways that migration policies are framed and regulated; the dynamics of migration (conceptually and empirically); and the contested nature of migration and integration policies. The course is open to graduate students who are interested in migration, from all departments.

THE UNIVERSITY OF BRITISH COLUMBIA

UBC Curriculum Proposal Form
Change to Course or Program

Category: 1

Faculty: Arts **Department:** Music **Faculty Approval Date:** February 14, 2012 **Effective Session** _Winter_ **Term** _1_ **Year**_2012-13_ **for Change**	**Date:** October 7, 2011 **Contact Person:** Richard Kurth **Phone:** 2-5436 **Email:** richard.kurth@ubc.ca
Proposed Calendar Entry: MUSC 533 (3/6)d Advanced Studies in Music Theory Advanced seminar in music theory. May be repeated for credit if different topics are covered.	**URL:** http://www.calendar.ubc.ca/vancouver/courses.cfm?code=MUSC **Present Calendar Entry:** (none) **Type of Action:** Add new course. **Rationale:** Graduate seminars on advanced topics in music theory have often been offered under the rubric of MUSC 532. With a dynamic research faculty and graduate student cohort, these seminars are now offered on a regular basis and require a separate course number.

THE UNIVERSITY OF BRITISH COLUMBIA

UBC Curriculum Proposal Form
Change to Course or Program

Category: (1)

Faculty: College for Interdisciplinary Studies **Department:** European Studies **Faculty Approval Date:** 13 February 2012 **Effective Session** 2012W	**Date:** 9 February 2012 **Contact Person:** Fran Hannabuss **Phone:** 2-6578 **Email:** fran.hannabuss@ubc.ca
Proposed Calendar Entry: European Studies … Note: The Program is not currently accepting applications for admission. Program Overview …	**URL:**http://www.calendar.ubc.ca/vancouver/index.cfm?tree=12,204,828,1158 **Present Calendar Entry:** European Studies … Note: The Program is not accepting applications for admission ~~to the 2009/10 academic year.~~ ~~Applications for admission are expected to be considered for the 2010/11 academic year.~~ Program Overview … **Type of Action:** Update admission statement **Rationale for Proposed Change:** External funding was provided by the German Academic Exchange Service, DAAD, to support the MA in European Studies. This funding has now ceased and no new students have been accepted into the program since 2008. A motion to transfer the Institute for European Studies (IES) from CFIS to the Faculty of Arts will be discussed at Senate in February 2012. The Director of the IES, the Department of Political Science and the Faculty of Arts will study the issues involved in the graduate program and determine whether to attempt to revitalize or to seek a sunset of the graduate program.

THE UNIVERSITY OF BRITISH COLUMBIA

UBC Curriculum Proposal Form

Change to Course or Program

Category: 1

Faculty: Land and Food Systems **Department: Integrated Studies in Land and Food Systems** **Faculty Approval Date: October 21, 2011** **Effective Session: 2012W**	**Date: 2011/08/03** **Contact Person: Brent Skura** **Phone:** 604-822-5685 **Email:** brenton.skura@ubc.ca
Proposed Calendar Entry: … Master of Science … Program Requirements **The M.Sc. degree requires successful completion of LFS 500, a thesis (LFS 549) and a minimum of 15 additional credits of coursework. A maximum of 6 of the required 15 course credits may be taken at the 300- and 400-level.** …	**URL:** http://www.calendar.ubc.ca/vancouver/index.cfm?tree=12,204,828,1301 **Present Calendar Entry:** … Master of Science … Program Requirements ~~For the master's degree, all candidates must complete AGSC 501 or 504, and LFS 500 and 501. An additional 9 credits of coursework are required along with a 12-credit research thesis (LFS 549).~~ … **Type of Action:** revise Program Requirements **Rationale:** Currently the ISLFS program requires either AGSC 501 or 504, and LFS 500 and 501. Initially when the program was being planned, it was clear as explained in the curriculum proposal, that such a graduate program was unique. At the time we felt that certain courses needed to be developed to best prepare our graduate students for the highly integrative focus of the program. The program has been very successful, attracting a large number of academically top students. Experience to date, however, has shown that our ISLFS students require greater flexibility in their course selection

	alternatives. The student and her/his advisory committee needs to be able to select from a wider range of courses from across campus, to round out their education and best prepare them for their research. The current required courses, while still offered, would become recommended electives rather than being required. This will better serve our students in this highly integrative program.
Proposed Calendar Entry: … Doctor of Philosophy … Program Requirements **All Ph.D. students are required to complete LFS 500 (Graduate Seminar).** Additional coursework may be selected in consultation with the student's supervisory committee. All doctoral students are required to successfully complete a comprehensive examination. The major requirement for the Ph.D. is completion of a research dissertation **(LFS 649)** meeting the Faculty of Graduate Studies requirements. …	**URL:** **http://www.calendar.ubc.ca/vancouver/index.cfm?tree=12,204,828,1301** **Present Calendar Entry:** … Doctor of Philosophy … Program Requirements ~~For the Ph.D., all students must complete LFS 500, 501, and 649.~~ Additional coursework may be selected in consultation with the student's supervisory committee. All doctoral students are required to successfully complete a comprehensive examination. The major requirement for the Ph.D. is completion of a research dissertation meeting the Faculty of Graduate Studies requirements. … **Type of Action:** revise Program Requirements **Rationale:** Currently the ISLFS program requires either AGSC 501 or 504, and LFS 500 and 501. Initially when the program was being planned, it was clear as explained in the curriculum proposal, that such a graduate program was unique. At the time we felt that certain courses needed to be developed to best prepare our graduate students for the highly integrative focus of the program. The program has been very successful,

	attracting a large number of academically top students. Experience to date, however, has shown that our ISLFS students require greater flexibility in their course selection alternatives. The student and her/his advisory committee needs to be able to select from a wider range of courses from across campus, to round out their education and best prepare them for their research. The current required courses, while still offered, would become recommended electives rather than being required. This will better serve our students in this highly integrative program.

THE UNIVERSITY OF BRITISH COLUMBIA

Vancouver Senate Curriculum Committee
c/o
Enrolment Services | Senate & Curriculum Services
Brock Hall 2016 – 1874 East Mall | Vancouver BC | V6T 1Z1
lindsey.kovacevic@ubc.ca | PH 604.822.9134 | FX 604.822.5945

03 April 2012

To: Vancouver Senate

From: Senate Curriculum Committee

RE: **CURRICULUM PROPOSALS FROM THE FACULTY OF LAW**

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

Program change:
Juris Doctor > Degree Requirements

New courses:
LAW 180 (2)
LAW 290 (3)
LAW 402 (3-4)d

THE UNIVERSITY OF BRITISH COLUMBIA

UBC Curriculum Proposal Form
Change to Course or Program

Category: (1)

Faculty: Law **Department: N/A** **Faculty Approval Date: 2011-12-15** **Effective Session _W_ Term _1_** **Year_2012_ for Change**	**Date: 2012-03-06** **Contact Person: Ben Goold** **Phone: 604.822.4669** **Email: goold@law.ubc.ca**
Proposed Calendar Entry: Regular Program The Juris Doctor program requires a student to acquire a minimum of 92 credits in three Winter Sessions in the Faculty of Law. First year consists of compulsory courses totaling 32 credits. The second and third years (or upper years) consist of two Winter Sessions in each of which a minimum of 28 and a maximum of 34 credits shall be taken. Each session consists of two consecutive terms in each of which a minimum of 12 and a maximum of 18 credits shall be taken. **Juris Doctor - program entry September 2012 or later** **In the upper years, students must take four compulsory courses.** **1. LAW 210 (Administrative Law)** **2. LAW 230 (Corporations I).** **3. LAW 290 (Jurisprudence and Critical Perspectives)** **4. LAW 468 (Professional Responsibility)** **Juris Doctor - program entry September 2011 or earlier** In the upper years, students must take five compulsory courses, one from each of the following lists: 1. Public Regulation: LAW 200	**URL:** **http://www.calendar.ubc.ca/vancouver/index.cfm?tree=12,207,358,329** **Present Calendar Entry:** Regular Program The Juris Doctor program requires a student to acquire a minimum of 92 credits in three Winter Sessions in the Faculty of Law. First year consists of compulsory courses totaling 32 credits. The second and third years (or upper years) consist of two Winter Sessions in each of which a minimum of 28 and a maximum of 34 credits shall be taken. Each session consists of two consecutive terms in each of which a minimum of 12 and a maximum of 18 credits shall be taken. In the upper years, students must take five compulsory courses, one from each of the following lists: 1. Public Regulation: LAW 200

Aboriginal Peoples and Canadian Law, LAW 210 Administrative Law, LAW 220 Taxation I. 2. Private Regulation: LAW 230 Corporations 1, LAW 240 Family Law, LAW 250 Trusts. 3. Procedure: LAW 260 Advanced Criminal Procedure, LAW 270 Civil Procedure, LAW 280 Evidence. 4. Law and Society Studies: The contents of this list are determined based on available course offerings in a given year. 5. Legal Research and Writing: LAW 379 Externship and LAW 380 Externship Reflection, LAW 430 Advanced Legal Research, LAW 472 Advanced Trial Advocacy, LAW 473 Appellate Advocacy, LAW 474 Trial Advocacy, LAW 483 Competitive Moots and Advocacy A, LAW 484 Competitive Moots Advocacy and Client Counseling B, LAW 486 Law Review, LAW 488/489 First Nations Legal Clinic, LAW 490 Clinical Criminal Law, LAW 491 Law Students Legal Advice Program.	Aboriginal Peoples and Canadian Law, LAW 210 Administrative Law, LAW 220 Taxation I. 2. Private Regulation: LAW 230 Corporations 1, LAW 240 Family Law, LAW 250 Trusts. 3. Procedure: LAW 260 Advanced Criminal Procedure, LAW 270 Civil Procedure, LAW 280 Evidence. 4. Law and Society Studies: The contents of this list are determined based on available course offerings in a given year. 5. Legal Research and Writing: LAW 379 Externship and LAW 380 Externship Reflection, LAW 430 Advanced Legal Research, LAW 472 Advanced Trial Advocacy, LAW 473 Appellate Advocacy, LAW 474 Trial Advocacy, LAW 483 Competitive Moots and Advocacy A, LAW 484 Competitive Moots Advocacy and Client Counseling B, LAW 486 Law Review, LAW 488/489 First Nations Legal Clinic, LAW 490 Clinical Criminal Law, LAW 491 Law Students Legal Advice Program. **Type of Action:** Institute mandatory upper year courses and remove “course baskets” (one course from 5 lists) for students entering the J.D. program as of 2012W and thereafter. **Rationale for Proposed Change:** In its final report in October 2009, the Federation of Law Societies of Canada Task Force on the Canadian Common Law Degree (“Task Force Report”) recommended that law societies in common law jurisdictions in Canada adopt a uniform national requirement for entry into their bar admission programs. According to the Report, an “Approved Canadian Law Degree” will satisfy this requirement if, in addition to other requirements concerning admissions criteria and learning resources, its academic program consists of three academic years or its

	equivalent in course credits and leads to competencies in the following three areas: • skills competencies (problem solving, legal research, and oral and written communication), • ethics and professionalism (through instruction in a dedicated course on these subjects), and • substantive legal knowledge in the foundations of law (principles of common law and equity, the process of statutory construction and analysis, and the administration of law in Canada), the public law of Canada (constitutional law including federalism, the Charter, human rights principles and the rights of Aboriginal peoples of Canada, Canadian criminal law, and the principles of Canadian administrative law) and private law principles (contracts, torts and property law, and legal and fiduciary concepts in commercial relationships). The Faculty of Law is of the view that the current JD program at UBC Law already satisfies the majority of these requirements. To ensure full observation, however, certain courses need to be made mandatory, credit hours have to be re-allocated, additional courses need to be added, and a commitment to cover specific material must be made in existing course titles and descriptions. • LAW 100 (Constitutional Law) be increased to 6 credits and the calendar description updated; *Change made through Category 2 process.* • LAW 130 (Property Law) have its calendar description updated; *Change made through Category 2 process.* • LAW 150 (Transnational Law) be reduced from 2.5 to 2 credits; *Change made through Category 2 process.* • LAW 160 (The Regulatory State) be renamed Public Law, have its calendar description updated; and be reduced from 2.5 to 2 credits;

	Change made through Category 2 process. • LAW 170 (Law in Context) to be removed from the 1st year curriculum and a new course added to upper years to cover that curriculum (see LAW 290 below); *Change to LAW 170 made through Category 2 process.* • LAW 180 (Legal Research and Writing), a new 2 credit course, be added to 1st year curriculum. • LAW 210 (Administrative Law) be made a mandatory upper year course; • LAW 230 (Corporations I) be made a mandatory upper year course and renamed Business Organizations; consequent upon this change, the calendar description updated. *Calendar description change made through Category 2 process.* • LAW 290 (Jurisprudence and Critical Perspectives), a new mandatory 3 credit course, be created to cover the material previous covered by LAW 170 (Law in Context) (see above); • LAW 460 (Corporations II) be renamed Advanced Corporate Law; *Change made through Category 2 process.* • LAW 468 (Professional Responsibility) be made a mandatory upper year course and renamed Ethics and Professionalism; consequent upon this change, the calendar description be updated; *Calendar description change made through Category 2 process.*
Proposed Calendar Entry: **LAW 180 (2) Legal Research and Writing** **Introduction to legal research and writing skills and the use of legal databases.**	**URL:** **http://www.calendar.ubc.ca/vancouver/courses.cfm?code=LAW** **Present Calendar Entry:** None. **Type of Action:** New Course

	Rationale for Proposed Change: To provide entrance students in Law with a course that offers basic instruction in legal research and writing, which has been highlighted as a need by the Federation of Law Societies.
Proposed Calendar Entry: **LAW 290 (3) Jurisprudence and Critical Perspectives** **Introduction to the basic principles of legal theory and critical perspectives on law.**	**URL:** **http://www.calendar.ubc.ca/vancouver/courses.cfm?code=LAW** **Present Calendar Entry:** None. **Type of Action:** New Course **Rationale for Proposed Change:** This material was previously covered in Law 170 Law in Context. It has been moved to Upper year to make room for Legal Research and Writing in 1st year. This course will become mandatory for all students entering the JD program as of 2012.

Category: (1)

Faculty: Law **Department: N/A** **Faculty Approval Date: 2012-03-07** **Effective Session __Winter ___ Year_2012-2013__ for Change**	**Date: January 17, 2012** **Contact Person: Ben Goold** **Phone: 604.822.3752** **Email: goold@law.ubc.ca**
Proposed Calendar Entry: **LAW 402 (3-4) d The Law of Sexual Offences** **Criminal law relating to sexual offences, including non-consent, evidentiary and procedural rules, and sentencing. History**	**URL:** **http://www.calendar.ubc.ca/vancouver/courses.cfm?code=LAW** **Present Calendar Entry:** **Type of Action:** New Course **Rationale for Proposed Change:** Course has been offered for several years as

of sexual offence laws and law reform movements.	"Topics in Criminal Law: Sexual Assault". Now that the course is established as part of regular criminal law offerings it should be moved to its own course heading. Sexual offences make up a large percentage of the case load of the criminal courts. The unique provisions and rules relating to these offences are important for students interested in the practice of criminal law. Sexual assault is a highly gendered crime and law reform efforts have been significantly influenced by the women's movement, making this an important subject for students interested in women and the law as well. The course is now fully subscribed when offered and typically has a waiting list.

THE UNIVERSITY OF BRITISH COLUMBIA

Vancouver Senate Curriculum Committee
c/o
Enrolment Services | Senate & Curriculum Services
Brock Hall 2016 – 1874 East Mall | Vancouver BC | V6T 1Z1
lindsey.kovacevic@ubc.ca | PH 604.822.9134 | FX 604.822.5945

03 April 2012

To: Vancouver Senate

From: 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.

Computer Science
New and changed courses:
CPSC 260 (3)
CPSC 261 (4)
CPSC 418 (3)

Mathematics
New and changed courses:
MATH 101 (3)
MATH 102 (3)
MATH 103 (3)
MATH 105 (3)
MATH 322 (3)
MATH 323 (3)
MATH 342 (3)
MATH 400 (3)
MATH 422 (3)

Physics
Changed courses:
PHYS 101 (3)
PHYS 306 (3)

THE UNIVERSITY OF BRITISH COLUMBIA

Category: (1)

Contact: Dr. Bill Ramey **Phone: 822-3300**	**Faculty Approval Date: March 6, 2012** **Email: wramey@interchange.ubc.ca**

COMPUTER SCIENCE

Effective Date for Change: 12S **Proposed Calendar Entry:** CPSC 260 (**3**) **Data Structures and Algorithms for Computer Engineers** Design and analysis of object-oriented programs, emphasizing data structures. Topics include: classes, interfaces, fundamental data structures, algorithmic complexity, basic debugging and testing techniques. [3-**1**-0] Prerequisite: APSC 160.	**Present Calendar Entry:** CPSC 260 (~~4~~) ~~Object-Oriented Program Design~~ Design and analysis of object-oriented programs, emphasizing data structures. Topics include: classes, interfaces, fundamental data structures, algorithmic complexity, basic debugging and testing techniques. [3-~~2~~-0] Prerequisite: APSC 160. **Action:** Reduce credits from 4 to 3. Update the course title. Change the lab hours per week from 2 to 1. **Rationale:** This course provides the Computer Science background for computer engineers. It extends the material from APSC160. The course is intended only for Computer Engineering students as the focus will be on concepts and languages that they are expected to encounter in the curriculum in 3rd and 4th years. Electrical Engineering students (who are not studying Computer Engineering) take the alternative course CPSC 259 which was introduced in 2010/11. This course will be coupled with a new, 4 credit course, CPSC 261, that contains additional Computer Science concepts that are important for Computer Engineering students. The topics that are removed from CPSC 260 with this change will be included in the new CPSC 261 and the new EECE 309 (Principles of Software Design), both of which are required of Computer Engineering students. With the introduction of CPSC 261 and EECE 309, the focus of this course has changed somewhat away from object-oriented program design (which is now more completely covered in EECE 309) and towards data structures and

THE UNIVERSITY OF BRITISH COLUMBIA

	algorithms. This warrants a change in the title of the course as well as the nature of the lab work, which has prompted the reduction from 2 hours per week to 1 hour per week. **Supporting Documents: SCI-11-2-CPSC 260**
Effective Date for Change: 12S **Proposed Calendar Entry:** **CPSC 261 (4) Basics of Computer Systems** **Software architecture, operating systems, and I/O architectures. Relationships between application software, operating systems, and computing hardware; critical sections, deadlock avoidance, and performance; principles and operation of disks and networks. [3-2-1]** **Prerequisite: CPSC 260.**	**Present Calendar Entry:** **Action:** Create new course **Rationale:** Computer engineering students require advanced knowledge of programming concepts as well as how these concepts translate to the design of computer systems. This course is coupled to CPSC 260, which provides additional programming experience beyond APSC 160 while this course emphasizes how the computer integrates these programmatic structures. The students will be expected to use at least two different languages for these goals including an objected oriented language and a procedural language to give them experience with programming. This course is part of a larger change to better prepare computer engineers for upper-level CPSC and EECE courses. This course contains computer science concepts that are important for Computer Engineering students. This course, in conjunction with the revised CPSC 260 and the new EECE 309 (Principles of Software Design) form the required core of computer science for Computer Engineering students.

THE UNIVERSITY OF BRITISH COLUMBIA

	Supporting Documents: SCI-11-2-CPSC 261
Effective Date for Change: 12S **Proposed Calendar Entry:** CPSC 418 (3) **Parallel Computation** **Algorithms, architectures, and programming paradigms for parallel computation. Shared memory, message passing, and data parallel architectures and programming models. Parallel algorithms including reduce, scan, and sorting networks. Reasoning about the correctness of parallel programs. Performance analysis and measurement for parallel programs.** [3-0-**0**] Prerequisite: **All of** CPSC 313**, CPSC 320**.	**Present Calendar Entry:** CPSC 418 (3) ~~Advanced Computer Architectures~~ ~~Introduction to advanced processor architectures and taxonomical views; performance considerations. Introduction to parallel machine designs. Examination of pipeline organizations; pipelined ALU and control units; representative architectures. Exploratory non-Von Neumann architectural models including: object-oriented, tagged, capability, dataflow and RISC designs.~~ [3-0-~~1~~] Prerequisite: ~~Either (a)~~ CPSC 313 ~~or (b) all of CPSC 315, CPSC 318.~~ **Action:** Change the course title, description, and vector. Update the prerequisites. **Rationale:** The existing CPSC 418 course has not been offered for several years. The change reflects the growing importance of parallel computation in the Computer Science discipline. This is essentially a new course proposal, except that we are going to reuse the CPSC 418 course number. The alternative prerequisite courses (CPSC 315 and CPSC 318) have been discontinued, so no longer need to be mentioned. The course analyzes the performance of parallel programs, so it is appropriate to add CPSC 320, which discusses analyzing the performance of sequential programs. **Supporting Documents: SCI-11-2-CPSC 418**

THE UNIVERSITY OF BRITISH COLUMBIA

MATHEMATICS	
Effective Date for Change: 12S **Proposed Calendar Entry:** MATH 101 (3) Integral Calculus with Applications to Physical Sciences and Engineering. The definite integral, integration techniques, applications, modeling, **infinite series**. Please consult **...**	**Present Calendar Entry:** MATH 101 (3) Integral Calculus with Applications to Physical Sciences and Engineering. The definite integral, integration techniques, applications, modeling, ~~linear ODE's~~. Please consult **...** **Action:** Modify course description by replacing "linear ODE's" with "infinite series". **Rationale:** Infinite series is a standard 100-level topic in calculus courses at most North American universities and colleges. The topic of infinite series was removed from the UBC courses in 1999W. As a result, students in follow-up 200- and 300-level MATH courses have been unprepared. Restoring infinite series to this integral calculus course will also free instructors in the follow-up courses from teaching 100-level material. The topic of linear ODEs (ordinary differential equations) is already covered in existing 200-level MATH courses at UBC, as is normally the case at most North American universities and colleges. Proper treatment of the ODE topic requires mathematical concepts (multivariable calculus, linear algebra) that are not taught in MATH 101, so ODE is more appropriately deferred until the second year courses. **Supporting Documents: SCI-11-2-MATH 101**
Effective Date for Change: 12S **Proposed Calendar Entry:** MATH 102 (3) Differential Calculus with **A**pplications to Life Sciences. Functions, derivatives, optimization, growth and decay, **discrete probability**. Please consult ...	**Present Calendar Entry:** MATH 102 (3) Differential Calculus with applications to Life Sciences. Functions, derivatives, optimization, growth and decay, ~~oscillations and series~~. Please consult ... **Action:** Replace lower- case "a" with upper-

	case "A" in title, and modify course description. **Rationale:** Since the topic of discrete probability is more useful to students interested in life sciences if it is seen in MATH 102, a first term course, the content for MATH 102 and MATH 103 is being rearranged. The topic of discrete probability is moved from MATH 103 to MATH 102 at the expense of removing oscillations and series. The inclusion of oscillations and series in the calendar description was a mistake: oscillations and series were never taught in MATH 102. This change makes MATH 102 more comparable to MATH 100, 104, 180 and 184 in this regard. **Supporting Documents: SCI-11-2-MATH 102**
Effective Date for Change: 12S **Proposed Calendar Entry:** MATH 103 (3) Integral Calculus with Applications to Life Sciences. Antiderivatives and definite integrals, **infinite series,** applications to probability and dynamical systems. Please consult ...	**Present Calendar Entry:** MATH 103 (3) Integral Calculus with Applications to Life Sciences. Antiderivatives and definite integrals, applications to probability and dynamical systems. Please consult ... **Action:** Modify course description by inserting "infinite series". **Rationale:** Infinite series is a standard 100-level topic in calculus courses at most North American universities and colleges. The topic of infinite series was removed from the UBC courses in 1999W. As a result, students in follow-up 200- and 300-level MATH courses have been unprepared. Restoring infinite series to this integral calculus course will also free instructors in the follow-up courses from teaching 100-level material. To make room for this topic, discrete probability is moved to MATH 102, which most MATH 103 students take in the previous term. **Supporting Documents: SCI-11-2-MATH 103**

THE UNIVERSITY OF BRITISH COLUMBIA

Effective Date for Change: 12S **Proposed Calendar Entry:** MATH 105 (3) Integral Calculus with Applications to Commerce and Social Sciences. Antiderivatives, the definite integral, techniques of integration, **infinite series,** partial derivatives, maxima and minima with constraints, discrete and continuous random variables. Please consult ...	**Present Calendar Entry:** MATH 105 (3) Integral Calculus with Applications to Commerce and Social Sciences. Antiderivatives, the definite integral, techniques of integration, partial derivatives, maxima and minima with constraints, discrete and continuous random variables. Please consult ... **Action:** Modify course description by inserting "infinite series". **Rationale:** Infinite series is a standard 100-level topic in calculus courses at most North American universities and colleges. The topic of infinite series was removed from the UBC courses in 1999W. As a result, students in follow-up 200- and 300-level MATH courses have been unprepared. Restoring infinite series to this integral calculus course will also free instructors in the follow-up courses from teaching 100-level material. To make room for this topic, some detailed and extensive applications to economics are omitted. These applications were never mentioned in the calendar description, and are better taught in a follow-up ECON course, and the Economics department is in agreement (MATH 105 is a prerequisite for several 300-level ECON courses). **Supporting Documents: SCI-11-2-MATH 105**
Effective Date for Change: 12S **Proposed Calendar Entry:** MATH 322 (3) Introduction to **Group Theory** **Groups, cosets, homomorphisms, group actions, p-groups, Sylow theorems, composition series, finitely generated Abelian groups. [3-0-0]** Prerequisite: **Either (a) a score of 68% or higher in MATH 223, or (b) MATH 221 and a**	**Present Calendar Entry:** MATH 322 (3) Introduction to ~~Algebra~~ ~~Polynomials, rings, ideals, unique factorization, Euclidean rings, fields, groups, cosets, homomorphisms, permutations, matrix groups. [3-0]~~ Prerequisite: ~~One of MATH 220, MATH 226 and either (a) a score of 80% or higher in one of~~

score of 80% or higher in MATH 220.	~~MATH 152, MATH 221 or (b) a score of 68% or higher in MATH 223.~~ **Action:** Replace the course title and description with a new course. **Rationale:** The revised course will allow more time for the students to learn the difficult abstract notions of group theory. In addition, replacing the topics of rings and fields with more advanced group theory topics will streamline the content of this course into an excellent preparatory course for both the newly proposed MATH 323 course and also for MATH 422 and MATH 423. Rings and fields will be covered in the new course MATH 323. This revised MATH 322 course will still provide adequate preparation for MATH 412. We will start offering the new version of MATH 422 that requires the new MATH 322 only in the Fall of 2013, allowing all the students who take the old MATH 322 this year to continue the current MATH 422 next year. **Supporting Documents: SCI-11-1-MATH 322**
Effective Date for Change: 12S **Proposed Calendar Entry:** **MATH 323 (3) Introduction to Rings and Modules** **Rings, ideals, unique factorization, Euclidean rings, fields, polynomial rings, modules; structure theory of modules over a principal ideal domain.** **[3-0-0]** **Prerequisite: MATH 322.**	**Present Calendar Entry:** **Action:** Create course. **Rationale:** Analysis and algebra are equally central in mathematics, and an introduction to both fields requires the student to learn many difficult topics. At present, we offer the honours students a full year of analysis in the third year (MATH 320/321); yet there is only one semester of algebra (MATH 322), which does not provide sufficient time for the students to learn the critical concepts in algebra. We note that virtually all other strong mathematics

	departments in Canada and USA offer a year-long algebra sequence for 3rd year honours students (to name a few in Canada: University of Toronto, University of Alberta, McGill University). In peer Canadian universities, a sequence of courses similar to our proposed MATH 322/323 is required for the mathematics honours degree. The introduction of MATH 323 as a required course would ensure that our honours students are properly prepared for graduate school. In addition, MATH 323 will help fill the gap that currently exists between MATH 322 and MATH 422 -- even our strong students who do well in MATH 322 are insufficiently prepared to take MATH 422; the introduction of MATH 323 will fill this gap, thus improving our specialization. **Supporting Documents: SCI-11-2-MATH 323**
Effective Date for Change: 12S **Proposed Calendar Entry:** MATH 342 (3) Algebra **and** Coding **T**heory **Error-correcting codes via abstract and linear algebra. Emphasis on proofs and computation. Finite fields, Hamming distance and error-correction, upper and lower bounds on the size of a code, linear codes, groups and cosets, encoding and decoding schemes. [3-0-0]** Prerequisite: One of MATH 152, MATH 221, MATH 223 and one of MATH 220, MATH 226, CPSC 121.	**Present Calendar Entry:** MATH 342 (3) Algebra~~,~~ Coding ~~t~~heory~~, and Cryptography.~~ ~~Cryptography and error-correcting codes via groups, rings, and fields.~~ ~~Emphasis on both computation and simple proofs; congruences, RSA cryptosystems, linear codes. [3-0]."~~ Prerequisite: One of MATH 152, MATH 221, MATH 223 and one of MATH 220, MATH 226, CPSC 121. **Action:** 1. Revise title. 2. Revise description. **Rationale:** In order to discuss the cryptography topics, it was necessary to have a fairly extensive introduction to congruences in this course. That material overlaps with MATH 312, where

THE UNIVERSITY OF BRITISH COLUMBIA

	cryptography is also taught. Thus, the inclusion of cryptography in MATH 342 was creating an unnecessary overlap with MATH 312, not allowing enough time for the coding theory material. Removal of cryptography allows the instructors to spend sufficient time both on the basic introduction to abstract algebra, and on coding theory. Therefore the instructors will be able to give a more in-depth treatment of these topics. **Supporting Documents: SCI-11-2-MATH 342**
Effective Date for Change: 12S **Proposed Calendar Entry:** MATH 400 (3) Applied Partial Differential Equations. **Separation of variables, first order equations, Sturm-Liouville theory, integral transform methods.** [3-0-0] Prerequisite: One of MATH 300, MATH 305 and one of MATH 256, MATH **257**, MATH **316**.	**Present Calendar Entry:** MATH 400 (3) Applied Partial Differential Equations. ~~Laplace, wave, and diffusion equations. Conformal mapping with applications in fluid flow.~~ [3-0-0] Prerequisite: One of MATH 300, MATH 305 and one of MATH 256, MATH ~~316~~, MATH ~~257~~. **Action:** Modify course description and exchange order of courses in prerequisite. **Rationale:** The current description is too restrictive. First order equations and their applications are now more appropriate, and conformal mapping is no longer as relevant. Sturm-Liouville theory and integral transforms are important tools when solving linear partial differential equations. This new outline represents how the course has evolved over the last few years, therefore there will be no effect on the follow-up courses, MATH 401 and MATH 405. The prerequisites are now in numerical order. **Supporting Documents: SCI-11-2-MATH 400**
Effective Date for Change: 13S **Proposed Calendar Entry:**	**Present Calendar Entry:**

THE UNIVERSITY OF BRITISH COLUMBIA

MATH 422 (3) **Fields and Galois Theory** **Field extensions, the Galois correspondence, finite fields, insolvability in radicals, ruler and compass constructions, additional topics chosen by instructor.** [3-0-0] Prerequisite: a score of 68% or higher in MATH **323.**	MATH 422 (3) ~~Groups and Fields~~ ~~Isomorphism Theorems, group actions, Sylow groups, solvable groups, field extensions, automorphisms, Galois theory.~~ [3-0-0] Prerequisite: A score of 68% or higher in MATH ~~322.~~ **Action:** Create new course by: 1. Revising Title 2. Revising description 3. Revising prerequisites **Rationale:** The time available in MATH 422 to cover Galois theory is insufficient. This change would allow the instructor to adequately cover this key topic in algebra with a view towards its many applications in algebra and number theory. The material on groups is moved to MATH 322 so it will still be available to students. **Intended audience:** 4th year honours students in Mathematics. **Supporting Documents: SCI-11-2-MATH 422**

PHYSICS	
Effective Session: 12S **Proposed Calendar Entry:** PHYS 101 (3) Energy and Waves **Fluids, harmonic oscillator, travelling waves, standing waves, sound, and interference of light waves, including diffraction. Please consult the Faculty of Science Credit Exclusion List:www.students.ubc.ca/calendar/index.cfm?tree=12,215,410,414.** [3-3*-1*] Prerequisite: One of PHYS 12, PHYS 100.	**Present Calendar Entry:** PHYS 101 (3) Energy and Waves ~~Conservation laws, rotational motion, simple harmonic motion, sound, fluids, heat, including biological applications.~~ [3-3*-1*] Prerequisite: One of PHYS 12, PHYS 100.

THE UNIVERSITY OF BRITISH COLUMBIA

Corequisite: One of MATH 100, MATH 102, MATH 104, **MATH 110,** MATH 120, MATH 180, MATH 184**.**	Corequisite: One of MATH 100, MATH 102, MATH 104, MATH 120, MATH 180, MATH 184. **Action:** Modify course description and add MATH 110 as one of the possible co-requisites. Add in a reference to the Faculty of Science exclusion list. **Rationale:** The material has not changed but the description has been modified to reflect the most important topics covered in the course. MATH 110 is an adequate co-requisite. The reference to the exclusion list will help prevent students from registering for two courses which are credit excluded. **Supporting Documents: SCI-11-2-PHYS 101**
Effective Session: 12S **Proposed Calendar Entry:** PHYS **306** (3) Mechanics Newtonian mechanics, non-inertial frames, central potentials, Kepler's laws, variational calculus, Lagrangian dynamics, rigid body motion, Hamiltonian mechanics, Poisson brackets, canonical, Hamilton-Jacobi theory, action angle variables. [3-0-1] Prerequisite*:* One of MATH 200, MATH 217, MATH 226 **and one of MATH 221, MATH 223, MATH 152** and either (a) one of PHYS 108, PHYS 153, SCIE 001 or (b) PHYS 102. **(Students with less than 68% in PHYS 102 should take PHYS 216.)** Corequisite: MATH 215.	**Present Calendar Entry:** PHYS ~~206~~ (3) Mechanics Newtonian mechanics, non-inertial frames, central potentials, Kepler's laws, variational calculus, Lagrangian dynamics, rigid body motion, Hamiltonian mechanics, Poisson brackets, canonical, Hamilton-Jacobi theory, action angle variables. [3-0-1] Prerequisite: One of MATH 200, MATH 217, MATH 226 and either (a) one of PHYS 108, PHYS 153, SCIE 001 or (b) PHYS 102. ~~(PHYS 216 if less than 68% in PHYS 102.)~~ Corequisite: MATH 215~~ and one of MATH 221, MATH 223~~. **Action:** Renumber the course to PHYS 306. Change one of the corequisites (MATH 221 or 223) to be a prerequisite. Allow MATH 152 to be a possible prerequisite in linear algebra. Clarify the advice to students with less than 68% in PHYS 102 to take PHYS 216 instead of

	PHYS 206. **Rationale:** Students should not be taking this course in second year. The course requires second year calculus and linear algebra. Most students already taking this course are in 3rd year and have already taken MATH 221, 223. MATH 152 is the linear algebra course equivalent to MATH 221. **Supporting Documents: SCI-11-2-PHYS 306**