## Academic Programs Committee of Council

## University Course Challenge

## Scheduled posting: March 16, 2011

## Contents:

Arts \& Science
Page 2
Division of Humanities \& Fine Arts: course changes in Interdisciplinary Studies; Double
Honours in Classical, Medieval \& Renaissance Studies and other minor program and course changes; new courses in History; new course in Languages \& Linguistics; course changes in Music; course changes in Philosophy
Division of Science: Program changes in Biochemistry; program and course changes in Mathematics \& Statistics; program changes in Microbiology \& Immunology
Division of Social Sciences: Program change in International Studies; program changes and new course in Native Studies; new courses in Political Studies; program and course change in Psychology.

## Education

## Page 22

New courses in Educational Foundations

## Graduate Studies \& Research

## Page 23

New courses and course changes in Johnson-Shoyama Graduate School of Public Policy; Biomedical Engineering; Veterinary Pathology

## Approval:

Date of circulation: March 16, 2011
Date of effective approval if no Challenge received: March 31, 2011

## Next scheduled posting:

University Course Challenge is now being posted once a month, on a regular schedule.
The next scheduled Challenge document posting will be in February, 2011.

| College Submission Deadline | UCC Posting Date | Date of effective approval if no <br> challenge received: |
| :--- | :--- | :--- |
| April 11 (please include any <br> new classes for 2011-12) | April 15 | April 29 |

Urgent items can still be posted on request.

## College of Arts \& Science

The curricular revisions listed below were approved through the November 2010, and January and February 2011 Arts \& Science College Course and Program Challenges and are now submitted to the University Course Challenge for approval or information.

## Division of Humanities and Fine Arts

## Minor Course Revisions

INTS 101.12 Examining the western Humanities and Fine Arts in a Global Context
Change to Note:
Old Note: Students with credit for INTS 101 may not take any 100-level HIST course(s) for credit. New Note: Students with credit for INTS 101 may not take any 100-level CMRS or HIST course(s) for credit.
Rationale: Students will be able to take 100 -level CMRS, 100 -level HIST courses, or INTS 101, for credit. There is too much overlap if they are allowed to take more than one of these.

## Classical, Medieval \& Renaissance Studies

## Adding a Lower Level of Concentration <br> Classical, Medieval \& Renaissance Studies - B.A. Double Honours

Double Honours Programs may be taken in combinations of two subjects. In this program at least 36 credit units will normally be taken in each subject. The two departments together may specify up to 84 credit units. For further details, please see the Degree Requirements in the Arts and Science section of the Calendar.

Classical, Medieval and Renaissance Studies (CMRS) may be combined in a Double Honours program with another subject. Students pursuing a Double Honours in CMRS must complete the following to meet the CMRS program requirements but are asked to do so only in consultation with an academic advisor. Note that the same course may not be used to fulfill requirements in both CMRS and the cognate program.

## Requirements:

- CMRS 110.3 and 111.3; or INTS 101.12*
- CMRS 401.3
- CMRS 402.3
- HIST 494.0
*Only 6 credit units of INTS 101.12 will be used toward this requirement. The remaining 6 credit units may be used to meet distribution or electives requirements, as appropriate.
Choose 6 Credit Units from one of the following:
- 100-Level, 200-Level, 300-Level or 400 -Level GRK Courses
- 100 -Level, 200 -Level, $300-$ Level or 400 -Level HEB Courses
- $100-$ Level, 200 -Level, 300 -Level or 400 -Level LATN Courses

Choose 6 Credit Units from one of the following:

- 100 -Level, 200 -Level, 300 -Level or 400 -Level GRK Courses
- 100 -Level, 200 -Level, 300 -Level or 400 -Level HEB Courses
- 100 -Level, 200 -Level, 300 -Level or $400-$ Level LATN Courses
- ENG 301.3, ENG 306.3, ENG 310.3
- FREN 122.3, FREN 125.3, FREN 128.3, FREN 212.3, FREN 218.3, FREN 220.3
- GERM 202.3, GERM 204.3, GERM 214.3, GERM 217.3

```
    - SPAN 202.3, SPAN 204.3, SPAN 214.3, SPAN 217.3
Areas of concentration (12 credit units)
    Courses must be selected from one of the following 3 areas:
History and Archaeology
ARCH 116.3, 243.3, 244.3, 252.3, 257.3, 258.3, 356.3, 362.6, 403.3, 466.3
CMRS 333.3, 403.3
CLAS 220.3, 225.3, 234.3, 240.3, 242.3, 247.3, 248.3, 252.3, 356.3, 357.3
GEOG 340.3
GRK 400.3 }\mp@subsup{}{}{\dagger
HIST 200.6, 201.6, 202.3, 204.3, 205.3, 207.3, 213.6, 215.6, 225.6, 300.3, 302.3, 306.3, 307.3`, 309.3,
312.3, 313.3, 330.3, 331.3, 402.3, 403.3, 414.3, 421.3, 424.3
LATN 400.3'
Literature, Fine Arts, and Language
ARTH 120.3, 260.3, 305.6, 308.3, 309.3, 406.6
CLAS 227.3, 228.3, 240.3, 242.3, 259.3, 343.3
CMRS 333.3, 403.3
DRAM 203.3, 303.3, 401.3
ENG 217.3, 221.6, 277.3, 284.3, 286.3, 290.6, 301.3, 310.3, 311.3, 313.3, 314.3, 316.3, 318.3, 319.3,
322.3, 323.3, 324.3, 393.3, 402.3, 404.3, 406.3, 420.3
FREN 220.3, 317.3
GEOG 340.3
GRK 112.3, 113.3, 202.3, 203.3, 400.3 }\mp@subsup{}{}{\dagger
HEB 111.6, 201.6
HIST 207.3
LATN 112.3, 113.3, 202.3, 203.3, 400.3 }\mp@subsup{}{}{\dagger
MUS 150.3, 303.3, 361.3, 362.3, 363.3, 450.3, 464.3
RLST 219.3, 253.3, 254.3, 326.3, 365.3
Classical Thought and History of Ideas:
CLAS 233.3, 234.3, 252.3, 259.3, 341.3
CSTS 200.3
GRK 400.3 }\mp@subsup{}{}{\dagger
HIST 309.3, 330.3, 331.3, 414.3, 421.3, 424.3
LATN 400.3 }\mp@subsup{}{}{\dagger
PHIL 208.3, 209.3, 210.3, 211.3, 212.3, 240.3, 412.3, 413.3
POLS 236.3
RLST 253.3, 254.3, 283.3, 303.3, 315.3, 316.3, 359.3, 361.3, 363.3
Note: 298, 299, 398, 399, 498, 499 courses may be used towards period requirements depending on
course content
` A shell course that may be taken more than once.
```

Rationale: This request is in the first instance driven by a number of student requests. Students wishing to pursue graduate study in areas such as Music, Languages and Linguistics, or Philosophy would be well served to have clear undergraduate credentials in those areas. Those additionally wishing to pursue graduate study in the pre-modern areas of these fields would be well advised to assemble the crucial and highly specialized skills involved in working in this period (e.g. Ancient languages, pre-modern history and culture, etc.) For example, a student wishing to study Old or Middle French Literature would be best served with a Double Honours in French and CMRS.

## Minor Program Revision

Classical, Medieval \& Renaissance Studies - B.A. Honours, 4-year, Minor
Add INTS 101.12 as an option to CMRS 110.3 and 111.3 in program requirements

## Four-Year and Honours programs

A1 Basic Humanities Requirements (minimum 12 credit units)

- CMRS 110.3 and CMRS 111.3; or INTS 101.12

Remainder of requirement is unchanged.
Minor
Program Requirements

- CMRS 110.3 and CMRS 111.3; or INTS 101.12

Remainder of program requirements are unchanged.
Rationale: INTS 101.12 covers comparable material as CMRS 110 and 111, and therefore is being incorporated into the Classical, Medieval \& Renaissance Studies programs. INTS 101.12 is regarded as another possible point of entry into Classical, Medieval \& Renaissance Studies.

## Minor Course Revisions

## CMRS 110.3 The Graeco Roman Tradition Evolution and Reception

Change to Note:
Old Note: Students with credit for CMRS 201.6 will not receive credit for this course.
New Note: Students with credit for CMRS 201.6 or INTS 101.12 may not take this course for credit.
Rationale: Students will be able to take CMRS 110 and 111, or INTS 101, for credit. There is too much overlap if they are allowed to take both.

## CMRS 111.3 Medieval and Renaissance Civilization

Change to Note:
Old Note: Students with credit for CMRS 201.6 will not receive credit for this course.
New Note: Students with credit for CMRS 201.6 or INTS 101.12 may not take this course for credit. Rationale: Students will be able to take CMRS 110 and 111, or INTS 101, for credit. There is too much overlap if they are allowed to take both.

## History

## New Courses

## HIST 214.3 History in Film

1 or 2 History in Film is a survey of various film portrayals of historical individuals and culture. Popular ideas about the past are largely a creation of fiction writers' and film directors' depictions of the past. This course focuses on historical figures and their representation in primary sources, literature, and film. In this context, students consider several broad themes, including historicity and authenticity, contemporary appropriations of past ideals or ideologies. Through the study of primary source texts and related films, the student will explore the many interpretations of past culture and the ways in which historical ideas, figures and events have been used as commentaries on modern issues. May be taken more than once for credit if the subjects differ sufficiently. Consult with department for details.
Prerequisite(s): 3 credit units 100 -Level HIST
Rationale: Improves department's offerings in the field, reflects the research interests of the instructor and responds to student demands. This course has been taught for two years as a special topics class and has been full with 50 students both years. While several do drop when they discover there are rather demanding writing requirements, the class has retained a high number of students in both years and clearly meets the need for courses that are both interesting and intellectually engaging. It provides an interdisciplinary course option for students of History as well as Classical Medieval and Renaissance Studies.

## HIST 303.3 Sex Gender and Sexuality in Africa

1 or 2 Recent scholarship on sex, gender and sexuality in Africa has focused on the relationship between a constructed African sexual deviance and the rising rates of HIV/AIDS on the continent. This course seeks to understand how the stereotypes of African sexuality, same-sex relationships and gender oppression were formed. Through a wide range of scholarly literature, primary sources, biographies and visual texts we will then move beyond this narrow focus and use historical studies to destabilize dominant assumptions about gender and sexuality in Africa. To do this we will use predominantly African texts and develop analytical tools appropriate to African contexts. In this way the course will provide rich accounts of African' lives and how they shape and are shaped by issues of gender and sexuality.
Prerequisite(s): 60 credit units of university studies or permission of the department.
Rationale: Improves department's offerings in the field, reflects the research interests of the instructor and responds to student demands. Recent scholarship on sex, gender and sexuality in Africa has focused on the relationship between a constructed African sexual deviance and the rising rates of HIV/AIDS on the continent. This course seeks to understand how the stereotypes of African sexuality, same-sex relationships and gender oppression were formed. Through a wide range of scholarly literature, primary sources, biographies and visual texts we will then move beyond this narrow focus and use historical studies to destabilize dominant assumptions about gender and sexuality in Africa. To do this we will use predominantly African texts and develop analytical tools appropriate to African contexts. In this way the course will provide rich accounts of African' lives and how they shape and are shaped by issues of gender and sexuality.
The course will strengthen the department's existing offerings in areas of gender and sexuality as well as offer students an addition class on the non-western world.

## HIST 472.3 The United States and the Middle East

1 or 2 This seminar course examines American foreign policies in the Middle East during and after the Cold War. More specifically, it focusses on U.S. relations with nations such as Saudi Arabia, Egypt, Israel, the Palestinian National Authority, Iraq, Iran and Afghanistan. While the emphasis is on the political, diplomatic, strategic and economic aspects of these relations, the course also studies the cultural dimensions of U.S. policies.
Prerequisite(s): Permission of the department.
Rationale: Improves department's offerings in the field and responds to student demands. In the post 9/11 world, there has been an increasing student demand for courses that focus on U.S. policies in the Middle East. This course builds on other classes taught by Prof. Smith-Norris (e.g. HIST 375.3, "U.S. Foreign Relations, 1890s to the Present") and dovetails with her research interests in American Cold War policies.

## HIST 492.6 Ethnohistory Fieldschool Community-Based Experiential Learning

1 or 2 This unique community-based experiential fieldschool learning opportunity involves students and faculty spending four weeks living in an Aboriginal community. Initially students attend seminars led by faculty on ethnohistory theory and method, including critical responses to the field as it has been practiced. These include readings that focus on the regional ethnohistory as well as the broader thematic, theoretical, and historiographic literature. Finally, the students, under the guidance of faculty and Aboriginal mentors, engage in independent concentrated research projects that have been identified as important by the Aboriginal community.
Prerequisite(s): Permission of the instructor.
Rationale: Improves department's offerings in the field, reflects the research interests of the instructor and responds to student demands.This course seeks to expose senior undergraduate students to an experiential learning environment where they conduct research with archival documents and oral history. It shows students how a humanities-based class can be socially relevant in that the research is on topics identified by the Aboriginal community and aimed at addressing pressing social issues. It helps build long term
partnerships with an Aboriginal community by linking faculty research programmes with undergraduate teaching pedagogy and curriculum.

## Languages \& Linguistics

## New Course

## LING 348.3 Principles of Materials Design in Second Language Acquisition

1 or 2 This course introduces students to key applied linguistic principles and criteria used in assessing and selecting materials in second/foreign language teaching. The course addresses the main types of materials available to ESL teachers and develops skills in adapting and developing materials for second/foreign language acquisition.
Prerequisite(s): LING 111.3, LING 112.3 and 6 credit units 200, 300 or 400-Level LING
Rationale: Improves department's offerings in the field, reflects the research interests of the instructor and responds to student demands.

## Music

## Course Deletion

## MUS 241.3 Introduction to Music Bibliography

This course is being deleted, and B.Mus. students are expected (though not required) to take the 400-level equivalent, MUS 472: Seminar in Music Bibliography. It was decided that having two bibliography courses for undergraduate students was redundant, and that the material taught in MUS 241 was better suited to a 400-level course.

## Minor Course Revisions

## MUS 101.3 Fundamentals of Music

## Change to Note:

Old Note: Sometimes offered as a web-based class. In this case, online materials are used and there are no scheduled lectures.
New Note: Sometimes offered as a web-based class. In this case, online materials are used and there are no scheduled lectures. Students majoring in music cannot take this course for credit. Students intending to major in music may take this course as a prerequisite for first year music courses if they do not pass the Theory Placement Exam.
Rationale: This change is intended to provide clarity for Music majors, to ensure that they do not register in the course thinking that it will count toward their degree requirements. It is, in essence, a "pre-Music" course.

## MUS 117.1 Keyboard Skills I

Prerequisite/Co-requisite Change:
Old prerequisite/co-requisite: None
New prerequisite/co-requisite: Students are expected to take MUS 117, MUS 120 and MUS 133 concurrently. These courses may not be taken individually without Departmental Approval.
Restriction Change:
Old restriction: None
New restriction: Restricted to Music majors.
Rationale: To provide clarity for students intending to take introductory music courses.

## MUS 120.2 Musicianship I

Prerequisite/Co-requisite Change:
Old prerequisite/co-requisite: Co-requisite: MUS 133

New prerequisite/co-requisite: Prerequisite: MUS 101 or passing grade (65\%) Music Theory Entrance Examination. Co-requisite: MUS 133
Rationale: To ensure that they have the proper preparation to be successful in the course.

## Philosophy

## Minor Course Revisions

## PHIL 362.3 Topics in Political Philosophy

Prerequisite Change:
Old prerequisite: 12 credit units in Philosophy or PHIL 262 or POLS 235
New prerequisite: 12 credit units in Philosophy or PHIL 262 or POLS 237
Rationale: POLS 235 was deleted from Political Studies course offerings a few years ago and so can no longer serve as a possible prerequisite. In its place, POLS 237 (Modern Political Theory) serves as an appropriate alternate prerequisite for the course.

## Division of Science

## Biochemistry

## Minor Program Revisions

Biochemistry B.Sc. Honours, Four-year and Three-year

1. Add BINF 200.3 (Introduction to Bioinformatics) or 210.3 (Introduction to Bioinformatics applications) to C 6 of all programs.
2. Add BIOC 300.3 (Information Transfer) to C6 of all programs.
3. Add BIOC 412.3 (Protein Structure and Engineering) and 436.3 (Advanced Molecular Biology) to C6 of all programs.
4. Add BIOC 430.3 (Cell Biochemistry) or BIOC 435.3 (Intermediary Metabolism) to C6of all programs.
5. Add BIOC 489.6 (Extended Research Approaches) to the C6 of Honours program.
6. Increase the number of total credit units in C 6 of all biochemistry programs.

|  | Current | Proposed |
| :--- | :---: | :---: |
| 3-year | 27 | 36 |
| 4-year | 39 | 54 |
| Honours | 51 | 60 |

7. Revise the list of BIOC electives (Group B, courses from other disciplines)
a. Include ACB 404.3 and PHPY 301.3, 302.3 and 303.3.
b. Delete CHE 461.
8. Change the C 7 requirements to open electives.

## Biochemistry

The Biochemistry program provides education and training in the molecular approach to the study of the life sciences. Individual student programs in Biochemistry can emphasize biotechnology, cell biochemistry, chemical approaches, metabolism, molecular biology, plant biochemistry, protein structure and function, or signal transduction. Programs in Biochemistry include essential prerequisite courses for life science professional schools and graduate studies in many areas of the life sciences. Graduates at all levels find employment in industry involved in many areas of biotechnology and other life science research enterprises.

The Department of Biochemistry offers 3-year, 4-year and Honours programs leading to B.Sc. degrees. Biotechnology options for 4-year and Honours programs are also offered. Also note that the Department of Biochemistry offers interdisciplinary programs in Bioinformaties and-Biomolecular Structure Studies. See the index for more information on these programs. Double Honours programs can also be arranged with careful planning. Students considering a double Honours program must consult an academic advisor within specific department of interest.

Program Requirements Effective September 2008
New degree requirements common to the undergraduate Basic Sciences programs in the Biomedical Science Division of the College of Medicine came into effect September 2008 (distribution requirements 1-5) for type C programs. Biochemistry students currently in the second, third or fourth year must complete the old degree requirements as outlined in the year in which they entered the program. Students commencing a Type C Biochemistry program in 2008 onward must follow the new Degree Requirements as listed below. The common core courses for years $1 \& 2$ have been incorporated into the $\mathrm{C} 1-\mathrm{C} 7$ requirements.

Bachelor of Science Four-year (B.Sc. Four-year) -Biochemistry
C6 Major Requirement (39 54 credit units)
BMSC 200.3 BIOC 311.3 or MCIM 391.3

BMSC 210.3 BIOC 412.3
BMSC 220.3 BIOC 430.3 or BIOC 435.3
BMSC 224.3 or BIOL 224.3
BIOC 436.3
BMSC 230.3 BIOC 490.0 (attendance is required in both term
BMSC 240.3 1 and 2)
BIOC 300.3 BINF 200.3 or 210.3
BIOC 310.3 CHEM 250.3

Choose 96 to 12 Credit Units from the following BIOC electives:
BIOC 412.3 BIOC 488.3

BIOC $420.3 \quad$ BIOC 489.6
BIOC $430.3 \quad$ BMST 305.3
BIOC $435.3 \quad$ BMST 406.3
BIOC 436.3 BMST 408.3
BIOC $437.3 \quad$ BINF 300.3

Choose 0 to 36 Credit Units from the following BIOC electives:
ACB 325.3 CHE 461.3
ACB $404.3 \quad \underline{\text { MCIM } 321.3}$
BINF 300.3 MCIM 390.3
BIOL 316.3 MCIM 417.3
BIOL $331.3 \quad$ PHPY 301.3
BIOL $420.3 \quad$ PHPY 302.3
CHEM 456.3 PHPY 303.3
C7 Electives Requirement (42 27 credit units)

## Required Cognate Courses

Choose 33 to- $\mathbf{4 2}$ Credit Units from the following:
except BIOL 105.3, BIOL 107.6, BIOL 108.6, BIOL 228.3(formerly BIOL 253), HSC 120.3
(DELETE LIST)

Open Electives (0-40-9 credit units)

Arts and Science courses, or those from other Colleges that have been approved for Arts and Science credit, to complete the requirements for 120 credit unit Four-year program, of which at least 66 must be at the 200 or higher level.

## Suggested Sequence of Courses

Year 1
BIOL 120.3 CHEM 112.3 CHEM 115.3 MATH 125.3 (or equivalent) PHYS 115.3 PHYS 117.3 or PHYS 125.3 BMSC 200.3 (T2) other program electives

Year 2
Students entering second year must consult with a faculty advisor in the Biochemistry Department.
BMSC 210.3
BMSC 220.3
BMSC 224.3 or BIOL 224.3
BMSC 230.3
BMSC 240.3
CHEM 250.3
BINF 200.3 or BINF 210.3
other program electives
Year 3
Students entering second year must consult with a faculty advisor in the Biochemistry Department.
BIOC 300.3
BIOC 310.3
BIOC 311.3 or MCIM 391.3
3-6 cu from BIOC 412.3, 430.3, 435.3
0-3 cu BIOC electives
other program electives
Some upper-year biochemistry courses (BIOC 420.3, BIOC 430.3, BIOC 435.3, BIOC 437.3) are offered only in alternate years as are some of the other senior life science courses.
Year 4
Students entering fourth year must consult with a faculty advisor in the Biochemistry Department.
Students should complete the biochemistry and chemistry course requirements as well as any outstanding Program Type C Requirements. Enrolment in BIOC 490.0 is required
$0-3$ cu from BIOC 412.3, 430.3, 435.3
BIOC 436.3
BIOC 490.0
9-12 cu BIOC electives
Bachelor of Science Three-year (B.Sc. Three-year) -Biochemistry
C6 Major Requirement ( 2736 credit units)
BMSC 200.3 BMSC 240.3
BMSC 210.3 BIOC 300.3
BMSC 220.3 BIOC 310.3 or BIOC 311.3 or MCIM 391.3
BMSC 224.3 or BIOL 224.3 BINF 200.3 or 210.3
BMSC 230.3
CHEM 250.3
Biochemistry Electives
Choose 36 Credit Units from the following:
BIOC 310.3
BIOC 412.3
BIOC 311.3

BIOC 435.3
BMST 406.3
BIOC 436.3
BMST 408.3
BIOC 437.3
BINF 300.3
BMST 305.3

C7 Electives Requirement (27 18 credit units)
Required Cognate Courses
Choose 18to 27 Credit Units from the following:
except BIOL 105.3, BIOL 107.6, BIOL 108.6, BIOL 228.3 formerly (BIOL 253), HSC 120.3-
(DELETE LIST)
Open Electives ( $0-9$ credit units)
Arts and Science courses, or those from other Colleges that have been approved for Arts and Science credit, to complete the requirements for the 90 credit unit Three-year program, of which at least 42 must be at the 200 or higher level.

Suggested Sequence of Courses
Year 1
BIOL 120.3
CHEM 112.3
CHEM 115.3
MATH 125.3 (or equivalent)
PHYS 115.3
PHYS 117.3 or PHYS 125.3
BMSC 200.3 (T2)
other program electives
Year 2
Students entering second year must consult with a faculty advisor in the Biochemistry Department.
BMSC 210.3
BMSC 220.3
BMSC 224.3 or BIOL 224.3
BMSC 230.3
BMSC 240.3
BINF 200.3 or BINF 210.3
CHEM 250.3
other program electives
Year 3
Students entering third year must consult with a faculty advisor in the Biochemistry Department.
BIOC 300.3
BIOC 310.3 or BIOC 311.3 or MCIM 391.3
36 credit units in biochemistry as an electives
any outstanding Program Type C requirements
Bachelor of Science Honours (B.Sc. Honours) -Biochemistry
C6 Major Requirement ( 5160 credit units)
BMSC 200.3 BIOC 300.3
$\underline{\text { BMSC } 210.3 \quad \text { BIOC } 310.3}$
BMSC $220.3 \quad$ BIOC 311.3 or MCIM 391.3
BMSC 224.3 or BIOL 224.3
BIOC 412.3
BMSC 230.3
BIOC 430.3 or BIOC 435.3
BMSC 240.3
BIOC 436.3

BIOC 489.6
BINF 200.3 or BINF 210.3
BIOC 490.0 (attendance in BIOC 490.0 is
CHEM 250.3
required in both term 1 and 2)
Choose 6 Credit Units from the following:
200-Level, 300-Level or 400-Level CHEM Courses
CHEM 255.3 is recommended
Biochemistry Electives ( $\mathbf{1 8} \mathbf{6}$ credit units)
Choose 12 to 183 to $\mathbf{6}$ Credit Units from the following:

| BIOC 412.3 | BIOC 488.3 |
| :--- | :--- |
| BIOC 420.3 | BIOC 489.6 |
| BIOC 430.3 | BMST 305.3 |
| BIOC 435.3 | BMST 406.3 |
| BIOC 436.3 | BMST 408.3 |
| BIOC 437.3 | BINF 300.3 |

Choose $\mathbf{0}$ to $\mathbf{6} \mathbf{3}$ Credit Units from the following:
ACB 325.3
ACB 404.3
BINF 300.3
BIOL 316.3
BIOL 331.3
BIOL 420.3 PHPY 302.3
CHEM 456.3 PHPY 303.3

## C7 Electives Requirement ( $\mathbf{3 0} 21$ credit units)

## Required Cognate Courses

Choose 21 to 30 Credit Units from the following:
except BIOL 105.3, BIOL 107.6, BIOL 108.6, BIOL 228.3 (formerly BIOL 253), HSC 120.3
(DELETE LIST)
Open Electives ( 0 to -9 credit units)
Arts and Science Courses, or those from other Colleges, that have been approved for Arts and Science credit, complete the requirements for 120 credit unit Honours program, of which at least 66 must be at the 200 or higher level.

```
Suggested Sequence of Courses
Year 1
BIOL 120.3
CHEM 112.3
CHEM 115.3
MATH 125.3 (or equivalent)
PHYS 115.3
PHYS 117.3 or PHYS 125.3
BMSC 200.3(T2)
other program electives
    Year 2
Students entering second year must consult with a faculty advisor in the Biochemistry Department.
BMSC 210.3
BMSC 220.3
BMSC 224.3 or BIOL 224.3
BMSC 230.3
BMSC 240.3
CHEM 250.3
```

BINF 200.3 or BINF 210.3
other program electives
Year 3
Students entering second year must consult with a faculty advisor in the Biochemistry Department.
BIOC 300.3
BIOC 310.3
BIOC 311.3 or MCIM 391.3
$3-6$ cu from BIOC 412.3, 430.3, 435.3
0-3 cu BIOC electives
3 cu CHEM elective (CHEM 255.3 recommended)
other program electives
Some upper-year biochemistry courses (BIOC 420.3, BIOC 430.3, BIOC 435.3, BIOC 437.3) are offered only in alternate years as are some of the other senior life science courses.
Year 4
Students entering fourth year must consult with a faculty advisor in the Biochemistry Department. Students should complete the biochemistry and chemistry course requirements as well as any outstanding Program Type C Requirements. Enrolment in BIOC 490.0 is required

BIOC 436.3
BIOC 489.6
BIOC 490.0
0-3 cu from BIOC 412.3, 430.3, 435.3
3-6 cu from BIOC electives
3 cu CHEM electives (CHEM 255.3 recommended)
other program electives

Rationale:

1. Knowledge of Bioinformatics, which involves the application of computational approaches to access information from biological databases and analyze complex biological problems, is valuable to all life sciences students.
The students have the option to take BINF 200.3 or 210.3 . CMPT 111.3 is a prerequisite for BINF 200, which focuses on the theoretical basis for the algorithm and programing of bioinformatics tools, and applications of these computational techniques. On the other hand, BINF 210.3 does not require CMPT 111 as it deals mainly on the applications of bioinformatics tools. Many of the life sciences students are unable to take CMPT 111 in their $1^{\text {st }}$ and $2^{\text {nd }}$ year due to conflict with other program requirements.
2. BIOC 300.3 , formerly BIOC 230.3 , was a requirement in the Biochemistry programs until the implementation of the BMSC (Biomedical Sciences) platform. Some topics taught in BIOC 230 were combined with those of ACB 200.3 to develop BMSC 220.3. BIOC 230 was not offered since 2009-10 academic year. However, the benefit for more advanced knowledge in Information Transfer was recognized. Thus, a more advanced BIOC 230 was developed and labeled as BIOC 300.
3. Knowledge of the topics covered by these courses is valuable to biochemistry students. Previously, they were listed as Biochemistry electives because they were offered on alternating years. Since 2009-10, these 2 courses are offered every year and permit the proposal to require these courses in the Biochemistry programs.
4. Knowledge of the topics covered by these courses is also valuable to biochemistry students. But since they are offered on alternate years, the students have the option to take BIOC 430 or 435 .
5. Biochemistry students would greatly benefit from the experience of carrying out research projects in the laboratories of researchers who will serve as their supervisors. Due to lack of resources, this course is required only in the Honours program.
6. To enrich the students' knowledge in biochemistry and other sciences.
7. To increase flexibility and provide diversity, the students have the option of taking courses from other disciplines that are viewed as relevant to the biochemistry program.
a. Include ACB 404.3 and PHPY 301.3, 302.3 and 303.3. Previously this list included PHSI courses, which are no longer offered and replaced with PHPY courses.
b. Delete CHE 461. The prerequisites for this course, GE 125.3, MATH 223.3 and CHE 210.3, would not allow biochemistry students to access this course.
8. To provide diversity and flexibility in the programs of study of the students, allowing them to pursue other areas of interests.

## Biochemistry \& Biotechnology B.Sc. Honours and Four-year

1. Add BINF 200.3 (Introduction to Bioinformatics) or 210.3 (Introduction to Bioinformatics applications) to C 6 of all programs.
2. Add BIOC 300.3 (Information Transfer) to C6 of all programs.
3. Add BIOC 412.3 (Protein Structure and Engineering) and 436.3 (Advanced Molecular Biology) to C6 of all programs.
4. Add BIOC 489.6 (Extended Research Approaches) to the C6 of Honours program.
5. Increase the number of total credit units in C 6 of all programs.

|  | Current | Proposed |
| :--- | :---: | :---: |
| 4 year | 51 | 60 |
| Honours | 57 | 66 |

6. Revise the list of BIOC electives (Group B, courses from other disciplines)
a. Include ACB 404.3 and PHPY 301.3, 302.3 and 303.3.
b. Delete CHE 461.
7. Change the C 7 requirements to open electives.

Bachelor of Science Four-year (B.Sc. Four-year) -Biochemistry \& Biotechnology
C6 Major Requirement (51 $\mathbf{6 0}$ credit units)
BMSC 200.3
BIOC 412.3
BMSC 210.3
BIOC 436.3 or BIOC 412.3
BMSC 220.3
BIOC 490.0
BMSC 224.3 or BIOL 224.3
BINF 200.3 or BINF 210.3
BMSC 230.3
BIOL 226.3
BMSC 240.3
CHEM 250.3
BIOC 300.3
PHIL 236.3 (may be used in distribution requirement C 5 )
BIOC 310.3
BIOC 311.3 or MCIM 391.3
Choose 6-3-6 Credit Units from the following BIOC electives:
BIOC $300.3 \quad$ BIOC 437.3
BIOC $412.3 \quad$ BIOC 488.3
BIOC 420.3 BIOC 489.6
BIOC 430.3 BMST 305.3
BIOC 435.3 BMST 406.3
BIOC 436.3 BMST 408.3
Choose 0-3 Credit Units from the following BIOC electives:

| ACB 325.3 | BIOL 316.3 |
| :--- | :--- |
| ACB 404.3 | BIOL 331.3 |
| BINF 300.3 | BIOL 420.3 |


| $\frac{\text { CHEM 456.3 }}{\text { MCIM 417.3 }}$ | $\underline{\text { PHPY 301.3 }}$ |
| :--- | :--- |
| MCIM 321.3 | $\underline{\text { PHPY 302.3 }}$ |

MCIM 390.3
Choose 9 Credit Units from the following:
BPBE 230.3
ENT 210.3
ENT 220.3
ENT 230.3
C7 Electives Requirement ( $\mathbf{3 0 - 3 6} \mathbf{2 1}$ credit units)
Interdisciplinary courses can be found below C7
Science Electives
Choose 30 to 36 Credit Units from the following:
excluding HSC 120.3
(DELETE LIST)
Open Electives ( 0 to 6-redit units)
Arts and Science courses, or those from other Colleges that have been approved for Arts and Science credit, to complete the 120 credit unit Four-year program, of which at least 66 credit units must be at the 200 or higher level.
Suggested Sequence of Courses
Year 1
BIOL 120.3
CHEM 112.3
CHEM 115.3
MATH 125.3 (or equivalent)
PHYS 115.3
PHYS 117.3 or PHYS 125.3
BMSC 200.3 (T2)
other program electives
Year 2
Students entering second year must consult with a faculty advisor in the Biochemistry Department.
BMSC 210.3
BMSC 220.3
BMSC 224.3 or BIOL 224.3
BMSC 230.3
BMSC 240.3
CHEM 250.3
BINF 200.3 or BINF 210.3
PHIL 236.3
other program electives
Year 3
Students entering second year must consult with a faculty advisor in the Biochemistry Department.
BIOC 300.3
BIOC 310.3
BIOC 311.3 or MCIM 391.3
BIOC 412.3
BIOL 226.3
3-6 cu interdisciplinary electives
Some upper-year biochemistry courses (BIOC 420.3, BIOC 430.3, BIOC 435.3, BIOC 437.3) are offered only in alternate years as are some of the other senior life science courses.
Year 4

Students entering fourth year must consult with a faculty advisor in the Biochemistry Department.
Students should complete the biochemistry and chemistry course requirements as well as any outstanding Program Type C Requirements. Enrolment in BIOC 490.0 is required
BIOC 436.3
BIOC 490.0
6 cu BIOC electives
3-6 cu interdisciplinary electives
Bachelor of Science Honours (B.Sc. Honours) -Biochemistry \& Biotechnology
C6 Major Requirement ( 5766 credit units)
BMSC 200.3
BMSC 210.3
BMSC 220.3
BMSC 224.3 or BIOL 224.3
BMSC 230.3
BMSC 240.3
BIOC 300.3
BIOC 310.3
BIOC 311.3 or MCIM 391.3
Choose at least 63 Credit Units from the following:
BIOC 300.3
BIOC 412.3
BIOC 420.3
BIOC 430.3
BIOC 435.3
BIOC 436.3
BIOC 437.3
BIOC 488.3
BIOC 489.6
BMST 305.3
BMST 406.3
BMST 408.3
ACB 325.3
Choose 3 Credit Units from the following:
ACB 325.3
BIOL 316.3
BIOL 331.3
BIOL 420.3
CHEM 456.3
Choose 3 Credit Units from the following:
200-Level, 300-Level or 400-Level CHEM Courses
CHEM 255.3 is recommended
Choose 9 Credit Units from the following:

BPBE 230.3
ENT 210.3
ENT 220.3
ENT 230.3
ENT 300.3
ENT 310.3
POLS 362.3 (may be used in distribution requirement C3 or C5)
C7 Electives Requirement (24-30 15 credit units)
Students should consult a program advisor to confirm their electives requirements.
Science Electives
Choose 24 to 30 Credit Units from the following:
(DELETE LIST)
Open Electives ( 0 to 6-redit units)
Arts and Science courses, or those from other Colleges that have been approved for Arts and Science credit, to complete the 120 credit unit Honours program, of which at least 66 credit units must be at the 200 or higher level.

## Suggested Sequence of Courses

Year 1
BIOL 120.3
CHEM 112.3
CHEM 115.3
MATH 125.3 (or equivalent)
PHYS 115.3
PHYS 117.3 or PHYS 125.3
BMSC 200.3 (T2)
other program electives
Year 2
Students entering second year must consult with a faculty advisor in the Biochemistry Department.
BMSC 210.3
BMSC 220.3
BMSC 224.3 or BIOL 224.3
BMSC 230.3
BMSC 240.3
CHEM 250.3
BINF 200.3 or BINF 210.3
PHIL 236.3
other program electives
Year 3
Students entering second year must consult with a faculty advisor in the Biochemistry Department.
BIOC 300.3
BIOC 310.3
BIOC 311.3 or MCIM 391.3
BIOC 412.3
BIOL 226.3
3 cu senior CHEM
3-6 cu interdisciplinary electives
Some upper-year biochemistry courses (BIOC 420.3, BIOC 430.3, BIOC 435.3, BIOC 437.3) are offered only in alternate years as are some of the other senior life science courses.
Year 4
Students entering fourth year must consult with a faculty advisor in the Biochemistry Department.

Students should complete the biochemistry and chemistry course requirements as well as any outstanding Program Type C Requirements. Enrolment in BIOC 490.0 is required
BIOC 436.3
BIOC 489.6
BIOC 490.0
3 cu BIOC electives
3-6 cu interdisciplinary electives
Rationale:

1. Knowledge of Bioinformatics, which involves the application of computational approaches to access information from biological databases and analyze complex biological problems, is valuable to all life sciences students.
The students have the option to take BINF 200.3 or 210.3. CMPT 111.3 is a prerequisite for BINF 200, which focuses on the theoretical basis for the algorithm and programing of bioinformatics tools, and applications of these computational techniques. On the other hand, BINF 210.3 does not require CMPT 111 as it deals mainly on the applications of bioinformatics tools. Many of the life sciences students are unable to take CMPT 111 in their $1^{\text {st }}$ and $2^{\text {nd }}$ year due to conflict with other program requirements.
2. BIOC 300.3 , formerly BIOC 230.3 , was a requirement in the Biochemistry programs until the implementation of the BMSC (Biomedical Sciences) platform. Some topics taught in BIOC 230 were combined with those of ACB 200.3 to develop BMSC 220.3. BIOC 230 was not offered since 2009-10 academic year. However, the benefit for more advanced knowledge in Information Transfer was recognized. Thus, a more advanced BIOC 230 was developed and labeled as BIOC 300.
3. Knowledge of the topics covered by these courses is valuable to biochemistry students. Previously, they were listed as Biochemistry electives because they were offered on alternating years. Since 2009-10, these 2 courses are offered every year and permit the proposal to require these courses in the Biochemistry programs.
4. Biochemistry students would greatly benefit from the experience of carrying out research projects in the laboratories of researchers who will serve as their supervisors. Due to lack of resources, this course is required only in the Honours program.
5. To enrich the students' knowledge in biochemistry and other sciences.
6. To increase flexibility and provide diversity, the students have the option of taking courses from other disciplines that are viewed as relevant to the biochemistry program.
a. Include ACB 404.3 and PHPY 301.3, 302.3 and 303.3. Previously this list included PHSI courses, which are no longer offered and replaced with PHPY courses.
b. Delete CHE 461. The prerequisites for this course, GE 125.3, MATH 223.3 and CHE 210.3, would not allow biochemistry students to access this course.
7. To provide diversity and flexibility in the programs of study of the students, allowing them to pursue other areas of interests.

## Mathematics \& Statistics

## Minor Program Revisions

## Mathematics B.Sc. Honours

Add MATH 301.0 to list of required courses in Requirement C6.
Rationale: MATH 401.0 formerly was taken by Honours Mathematics or Statistics students twice, once in "third year" and again in "fourth year". In the new registration system this causes confusion and administrative work for the Department staff. Such students will now take MATH 301.0 first and follow it with MATH 401.0.

## Statistics B.Sc. Honours

Add MATH 301.0 to list of required courses in Requirement C6, and remove second listing of MATH 401.0.

Rationale: MATH 401.0 formerly was taken by Honours Mathematics or Statistics students twice, once in "third year" and again in "fourth year". In the new registration system this causes confusion and administrative work for the Department staff. Such students will now take MATH 301.0 first and follow it with MATH 401.0.

## New Course

## MATH 301.0 Honours Seminar I

$1 \& 2$ Students taking an Honours program in Mathematics or Statistics, or a Double Honours program in Mathematics or Statistics and a second subject, are required to participate in this seminar, normally during the third year of their program.
Instructor(s): Any faculty members
Rationale: Currently MATH 401.0 - Seminar is required to be taken in both third and fourth years of honours or double honours programs in mathematics or statistics. The online registration process will not allow students to take a course a second time without additional administrative work. By introducing a third-year seminar course and modifying the current seminar course to be for fourth-year students, the registration process will be simplified.

## Minor Course Revisions

## MATH 401.0 Seminar

Title change: Honours Seminar II
New Course Description: Students taking an Honours program in Mathematics or Statistics, or a Double Honours program in Mathematics or Statistics and a second subject, are required to participate in this seminar, normally during the fourth year of their program.
Prerequisite Change:
Old Prerequisite: None
New Prerequisite: MATH 301.0
Note Change:
Old Note: Students in honours mathematics or statistics, or in double honours programs in mathematics or statistics and a second subject, are required to participate in this seminar during the third and fourth years. New Note: Students in honours mathematics or statistics, or in double honours programs in mathematics or statistics and a second subject, are required to participate in this seminar during the fourth year.
Rationale: The online registration system does not allow students to register for a course for a second time without an override. Introduction of MATH 301.0 - Honours Seminar I and this modification to MATH 401.0 - Honours Seminar II will allow students to register each year without additional assistance. The change will also clearly identify for the Department the status of each student in the seminar.

## Course Split - Item for information only MATH 360.6 Algebra I

Course is split into MATH 361.3 and 362.3
Rationale: Splitting MATH 360.6 into two 3 credit units courses will give students greater flexibility and choice.
MATH 361.3 Group Theory
1 or 2 Introduction to group theory, including: cyclic groups, symmetric groups, subgroups and normal subgroups, Lagrange's theorem, quotient groups and homomorphisms, isomorphism theorems, group actions, Sylow's theorem, simple groups, direct and semidirect products, fundamental theorem on finitely generated Abelian groups.
Note: Students may receive credit for only one of MATH 360.6, MATH 361.3, or MATH 363.3.
Prerequisite(s): MATH 266.3
Instructor(s): Murray Bremner, F-V Kuhlmann
AND

## MATH 362.3 Rings and Fields

1 or 2 Introduction to ring and field theory, including: polynomial rings, matrix rings, ideals and homomorphisms, quotient rings, Chinese remainder theorem, Euclidean domains, principal ideal domains, unique factorization domains, introduction to module theory, basic theory of field extensions, splitting fields and algebraic closures, finite fields, introduction to Galois theory.
Note: Students may receive credit for only one of MATH 360.6, MATH 362.3, or MATH 363.3
Prerequisite(s): MATH 266.3
Instructor(s): Murray Bremner, F-V Kuhlmann

## Microbiology \& Immunology

## Minor Program Revisions

## Microbiology \& Immunology B.Sc. 3-year

Add MCIM 326.3 to the list of required courses in Requirement C6, and remove it from the list of optional courses. Adjust the number of credit units of optional courses from 9 to 6 .

## C6 Major Requirement ( 33 credit units)

- BMSC 200.3
- BMSC 210.3
- BMSC 220.3
- BMSC 224.3 or BIOL 224.3
- BMSC 230.3
- BMSC 240.3
- MCIM 326.3
- MCIM 390.3
- MCIM 391.3 or BIOC 311.3

Choose 69 Credit Units from the following:

- FABS 425.3
- FABS 430.3
- FABS 434.3
- FABS 450.3
- MCIM 308.3
- MCIM 309.3
- MCIM 321.3
- MCIM 326.3
- MCIM 387.3
- MCIM 416.3
- MCIM 417.3
- MCIM 423.3
- MCIM 425.3

Rationale: MCIM 326 is a prerequisite for MCIM 390 and 391. This change makes it clear that students must complete the course to complete the degree requirements.

## Division of Social Sciences

## International Studies

## Minor Program Revisions

International Studies B.A. Honours, 4-year
Replace WGST 410.3 with WGST 411.3 in Requirement B6 for the Development and International Cooperation \& Conflict Streams.

Rationale: WGST is more relevant to the field and represents an area of study important to majors in the field. The WGST 410 course was initially developed to serve both Women's and Gender Studies and the International Studies programs, but it was revised last year at the time of the changes to the Women's and Gender Studies programs. WGST 411 is now the correct course for students majoring in International Studies.

## Native Studies

## Minor Program Revisions

Native Studies B.A. 4-year, 3-year - for information
B1 Basic Social Science Requirements (minimum 12 credit units)
*(NS 105.3 and NS 106.3) or NS 107.3

* 3 credit units 100-level NS

Choose 6-9 Credit Units from the following:
No change to list.
Rationale: This change was made to the B.A. Honours program in the December 2010 University Course Challenge, but the 4 -year and 3 -year programs were missed from the submission. The update has been made in the 2011-12 Calendar given their logical consistency with the approved changes.

## New Course(s)

## NS 255.3 Cultural Survival of Aboriginal Family

1 or 2 This course studies the adaptations and persistence of family as the fundamental unit of social and political organization of Aboriginal society from mid $19^{\text {th }}$ century to the present. Topics to be considered are kinship, marriage, birth culture, child rearing, rites of passage, education, and interface with Canadian institutions and mainstream cultural expectations. Format is lectures, readings, seminars, guest speakers, film and research.
Prerequisite(s): 3 credit units of 100-Level NS
Rationale: Improves department's offerings in the field, reflects the research interests of the instructor and responds to student demands. This course was twice offered as a special topics course with strong enrollment. Students have recognized the relevance of this course to the Native Studies curriculum. This course will enhance current course offering and will be a cornerstone for other courses on Aboriginal gender the department plans to create.

## Political Studies

## New Course(s) <br> POLS 303.3 Public Law and the Courts in Canada

1 or 2 This course will introduce students to Canada's constitution, with special emphasis on the judicial system. It will also examine Canada's constitutional debates, with specific emphasis on the judicial role in shaping federal/provincial division of powers since Confederation. Prerequisite(s): 6 credit units 100 -level POLS.
Rationale: Rationale: Improves department's offerings in the field and reflects the research interests of the instructor.

## POLS 304.3 Democracy and the Charter of Rights and Freedoms

1 or 2 This course will introduce students to the Canadian Charter of Rights and Freedoms. Special attention is devoted to the intersection between law and politics, including debates surrounding the introduction of the Charter, ongoing debates concerning judicial power and extensive case reviews. Prerequisite(s): 6 credit units 100-level POLS. (Students are encouraged to take POLS 303 before taking POLS 304)
Rationale: Rationale: Improves department's offerings in the field and reflects the research interests of the instructor.

## POLS 403.3 Advanced Topics in Public Law and Public Policy

1 or 2 Students will be introduced to theories of law, politics and justice in modern Canadian society. In addition to examining judicial decision-making, the course will also question how law influences administrative actors with regards to such policy fields as labour, immigration, health, multiculturalism, the environment and aboriginal rights.
Prerequisite(s): 60 credit units at the university level including 6 credit units 100-level POLS.
Rationale: Rationale: Improves department's offerings in the field and reflects the research interests of the instructor.

## POLS 448.3 Development Implementation at the Base: Monitoring and Evaluation

1 or 2 This course is designed to introduce students and practitioners to Monitoring and Evaluation models and techniques that can be applied to governmental programs and projects at the national, provincial/regional and local levels, to donor country development assistance programs, as well as to international and national non-governmental organizations' projects and assistance offered by international institutions such as the United Nations Development Program. The focus is on developing countries in an effort to sensitize students to the challenges of M\&E in different cultural settings. This course will draw on extensive field-based research to offer a more appropriate Monitoring and Evaluation model for development.
Prerequisite(s): IS 200.6 or POLS 246.6 or POLS 247.6
Rationale: Rationale: Improves department's offerings in the field and reflects the research interests of the instructor. The course provides students in International Studies, Political Studies, Public Administration and Aboriginal Public Administration with exposure to a critical dimension of development administration. Very few universities offer such a course within an Arts and Science undergraduate curriculum. Our students will therefore have an added advantage to their undergraduate degrees.

## Psychology

## Minor Program Revisions

## Psychology B.Sc. Honours, 4-year

Add MATH 128.3 and an additional option in Requirement C4.
C4 Mathematics/Statistics Requirement ( 6 credit units)

- MATH 110.3 or MATH 125.3
and choose 3 credit units from the following:
- MATH 112.3
- MATH 116.3
- MATH 128.3
- MATH 264.3

Rationale: Students who take MATH 125 may not take MATH 112 or 116. MATH 128 is the correct "next class" for these students, and they will then have the same MATH preparation as a student who takes MATH 110 and 112/116. Given the introduction of this option (MATH 128), it only makes sense for programs that accept MATH 125 to also accept MATH 128.

## Minor Course Revisions <br> PSY 344.3 Research in Behavioural Neuroscience

Prerequisite Change:
Old prerequisite: 12 credit units of 200-level psychology, including PSY 233 and 235 and one of PSY 242 or 246.
New prerequisite: Permission of the Department and PSY 233, 234, 235, and 343
Rationale: To correct errors in previous prerequisites.

## Education

## Educational Foundations

## New courses

## EFDT 478.3 Urban Education

Calendar entry: This course focuses on the role of urban community-based experiential learning in contributing to decolonization and socio-ecological justice in the personal and pedagogical practices of educators and learners. The course models and addresses how to incorporate community-based education towards socio-ecological justice in educational practice, and in intersection with other learning objectives in K-12 or adult education.
This course has been taught as a special topics course and includes a $\$ 50$ additional fee per student. Rationale: To provide participants with an opportunity to collectively explore and investigate experientially engaging learning experiences related to urban place-based and socio-ecological education. Participants will build knowledge, skills, resources, and community practices to support a more social and ecologically just and anti-oppressive orientation in their own educational planning and teaching. The course includes a focus on educational and cultural decolonization, as well as cultural and place-based reinhabitation.

This framing fits with the mandates and directions of the Department of Educational Foundations, the College of Education, as well as the University institutional imperatives regarding i) local and global environmental sustainability, and ii) consideration of pedagogies and educational aims that are relevant and appropriate for Saskatchewan contexts and Aboriginal and non-Aboriginal learners. The course is intended to build on existing and planned new core courses in the College of Education undergraduate program. The course is also a required course in the proposed Environmental Education Cohort of the EFDT Integrated Masters program.

## EFDT 479.3 Land-based Education

## Pre-requisite: EFDT 478.3

Calendar entry: This course focuses on the role of land-based experiential learning in contributing to decolonization and socio-ecological justice in the personal and pedagogical practices of educators and learners. The course models and addresses how to incorporate land-based education towards socioecological justice in educational practice, and in intersection with other learning objectives in K-12 or adult education.
This course has been taught as a special topics course and includes a $\$ 150$ additional fee per student.
Rationale: To provide participants with an opportunity to collectively explore and investigate experientially engaging learning experiences related to non-urban land-based and socio-ecological education. Participants will build knowledge, skills, resources, and community practices to support a more social and ecologically just and anti-oppressive orientation in their own educational planning and teaching. The course includes a focus on educational and cultural decolonization, as well as cultural and place-based reinhabitation.

This framing fits with the mandates and directions of the Department of Educational Foundations, the College of Education, as well as the University institutional imperatives regarding i) local and global environmental sustainability, and ii) consideration of pedagogies and educational aims that are relevant and appropriate for Saskatchewan contexts and Aboriginal and non-Aboriginal learners. The course is intended to build on existing and planned new core courses in the College of Education undergraduate program. The course is also a required course in the proposed Environmental Education Cohort of the EFDT Integrated Masters program.

## GRADUATE STUDIES \& RESEARCH

## Johnson-Shoyama Graduate School of Public Policy

## New Graduate Courses

The following are existing courses at the School's U of R campus. The JSGS is a provincial school, and students in our programs are eligible to take courses at either campus. Currently, SUGA is the process that allows this to happen. However, it is a cumbersome process. In discussions with the College of Graduate Studies and Research and the Registrar's Office, it was decided that the School would create a single suite of courses under a common subject code that would be in the Course Calendars at both universities. These courses are being added at the U of S for this reason.
Contact Person: amber.mccuaig@usask.ca
Approval: Graduate Programs Committee, January 18, 2011

## JSGS 811 - Nongovernmental Organizations and Alternative Service Delivery Restrictions:

Admission into the Master of Public Administration (M.P.A.) program, Master of Public Policy (M.P.P.) program, Ph.D. program, or by permission of the instructor.

## Calendar Description:

This course examines the increasing role played by the third sector in Canada. Students will examine alternative allocations of responsibility for solving particular social and public problems - voluntary, not-for-profit, for-profit, joint public/private, public encouraged/subsidized, and publicly coerced along with examples, reasons, and theories for particular forms of organization, new methods of accountability and tensions between government and its new partners.

## JSGS 813 - Managing Change

## Restrictions:

Admission into the Master of Public Administration (M.P.A.) program, Master of Public Policy (M.P.P.) program, Ph.D. program, or by permission of the instructor.

Calendar Description:
This course seeks to bring about an awareness and understanding of how organizations are managing change. The course will provide perspectives of the change strategists, the change implementors, and the change recipients. The objective of the course is to develop sensitive and effective change-agent skills in management ranks.

## JSGS 816 - Tax Policy and Fiscal Federalism

## Restrictions:

Admission into the Master of Public Administration (M.P.A.) program, Master of Public Policy (M.P.P.) program, Ph.D. program, or by permission of the instructor.

## Calendar Description:

Examination of objectives of tax policy and basic principles of taxation, with special reference to Canada. Various types of Canadian taxes - federal, provincial, municipal - will be analyzed and evaluated, including those on personal income, corporation income, manufacturers' sales, resource property and other taxes. Emphasis on evaluation of specific taxes and current issues in tax policies in Canada.

## JSGS 817 - Health Policy

## Restrictions:

Admission into the Master of Public Administration (M.P.A.) program, Master of Public Policy (M.P.P.) program, Ph.D. program, or by permission of the instructor.

## Calendar Description:

The course will review the historical development of the Canadian health care system and its supporting principles, governance structures and fiscal arrangements; and examine contemporary
structures and relationships. Issues such as benefit coverage, health human resources, user fees, pharmaceuticals, regional health boards, and health reform in a comparative context will be examined.

## JSGS 818 - Program Evaluation

Prerequisites: PUBP 806, or GSPP 806, or JSGS 806, or by permission of the instructor.

## Restrictions:

Admission into the Master of Public Administration (M.P.A.) program, Master of Public Policy (M.P.P.) program, Ph.D. program, or by permission of the instructor.

## Calendar Description:

Through extensive use of examples from various fields, students will be exposed to the art and science of applying evaluation methodologies and techniques to policies and programs in both the public and non-profit sectors.

## JSGS 819 - Gender and Public Policy

## Restrictions:

Admission into the Master of Public Administration (M.P.A.) program, Master of Public Policy (M.P.P.) program, Ph.D. program, or by permission of the instructor.

## Calendar Description:

The course will compare neo-classical and feminist approaches to the analysis of public policy. Students will examine the labour market and gender-based inequality; the family, with a particular focus on intra-household resource allocation; and will consider macro-economic issues and provide gender-based analysis in relation to public policy in Canada.

## JSGS 820 - Micro-Economics for Policy Analysis

Prerequisites: PUBP 805, or GSPP 805, or JSGS 805, or by permission of the instructor.

## Restrictions:

Admission into the Master of Public Administration (M.P.A.) program, Master of Public Policy (M.P.P.) program, Ph.D. program, or by permission of the instructor.

## Calendar Description:

This course will provide students with micro-economic tools needed for public policy analysis. Students are introduced to the economic approach to the study of human behaviour. Special emphasis will be placed on the study of the circumstances under which markets achieve, or fail to achieve, and efficient allocation of the economy's resources.

## JSGS 821 - Macro-Economics for Policy Analysis

Prerequisites: PUBP 805, or GSPP 805, or JSGS 805, or by permission of the instructor.

## Restrictions:

Admission into the Master of Public Administration (M.P.A.) program, Master of Public Policy (M.P.P.) program, Ph.D. program, or by permission of the instructor.

## Calendar Description:

This course introduces the major policy questions of macro-economics and presents macro-economic models to assist policy development. An emphasis will be placed on current policy issues including monetary policy, fiscal policy, currency regimes, productivity and growth, demographics patterns and fiscal sustainability.

## JSGS 822 - Comparative Public Policy

## Restrictions:

Admission into the Master of Public Administration (M.P.A.) program, Master of Public Policy (M.P.P.) program, Ph.D. program, or by permission of the instructor.

## Calendar Description:

This course uses a comparative perspective to analyze how public policy is formulated, how it can change, and why. It will discuss the roles of formal and informal institutions, of actors, structures, and networks. The aim of the course is to provide the participants with a greater understanding of
classical and contemporary theories of public policy; with the ability to critically analyze and compare public policy; and to develop frameworks for comparative policy analysis.

## JSGS 825 - Saskatchewan in Canadian Federalism

## Restrictions:

Admission into the Master of Public Administration (M.P.A.) program, Master of Public Policy (M.P.P.) program, Ph.D. program, or by permission of the instructor.

## Calendar Description:

Examines Canadian federalism from the perspective of Saskatchewan's post-war role in shaping national policy. The province's impact on the federation is analyzed through a series of topics.

## JSGS 827 - Health Care Organization and Administration

## Restrictions:

Admission into the Master of Public Administration (M.P.A.) program, Master of Public Policy (M.P.P.) program, Ph.D. program, or by permission of the instructor.

## Calendar Description:

This course will provide students with an understanding of issues involved in the management and organization of health services. Students will examine issues related to managing health in terms of regional health authorities, health ministries and individual health organizations.

## JSGS 828 - Project Management

## Restrictions:

Admission into the Master of Public Administration (M.P.A.) program, Master of Public Policy (M.P.P.) program, Ph.D. program, or by permission of the instructor.

## Calendar Description:

This course will introduce students to the many phases of a project's life cycle and how to address them through knowledge and understanding of project management principles and how to manage them effectively using project management techniques by monitoring and maintaining control of scope, time, and costs within a project.

## JSGS 832 - Population Based Health Program Management

## Restrictions:

Admission into the Master of Public Administration (M.P.A.) program, Master of Public Policy (M.P.P.) program, Ph.D. program, or by permission of the instructor.

## Calendar Description:

This course will apply the techniques of epidemiology and biostatistics to evaluate population-based health programs. In addition, students will become familiar with principles of public health, prevention, and health care quality management.

## JSGS 833 - Performance Measurement in Health Care Organizations

## Restrictions:

Admission into the Master of Public Administration (M.P.A.) program, Master of Public Policy (M.P.P.) program, Ph.D. program, or by permission of the instructor.

## Calendar Description:

Focusing on the health care imperative of accountability to the community, this course deals with the measurement of performance in health care organizations. Management control focuses on the implementation of business strategies and the attainment of organizational goals.

## JSGS 837 - Health Economics

## Restrictions:

Admission into the Master of Public Administration (M.P.A.) program, Master of Public Policy (M.P.P.) program, Ph.D. program, or by permission of the instructor.

## Calendar Description:

This course is designed to provide students with an introduction to economic concepts and analysis relevant to health, health care and health care systems. Students will examine economic aspects of various elements of the healthcare sector, identify relevant policy questions and apply economic concepts and techniques to analyze them.

## JSGS 839 - Classic and Contemporary Readings in Policy Theory

Restrictions:
Admission into the Master of Public Administration (M.P.A.) program, Master of Public Policy (M.P.P.) program, Ph.D. program, or by permission of the instructor.

## Calendar Description:

This course surveys classic and contemporary theories in public policy and public administration. It is intended to provide students with a solid theoretical foundation in decision-making processes, policy learning, policy change, institutionalism and the intellectual developments associated with the policy process.

## JSGS 840 - Public Policy and Public Opinion

## Restrictions:

Admission into the Master of Public Administration (M.P.A.) program, Master of Public Policy (M.P.P.) program, Ph.D. program, or by permission of the instructor.

## Calendar Description:

Public opinion in its many forms has become increasingly important for government decision making and accountability processes. This course examines the underlying assumptions and research methodology used in assessing public opinion as well as government's use of public opinion and its impact on decision-making and accountability practices.

## JSGS 842 - American Foreign Policy in a New Era

## Restrictions:

Admission into the Master of Public Administration (M.P.A.) program, Master of Public Policy (M.P.P.) program, Ph.D. program, or by permission of the instructor.

## Calendar Description:

Foreign policy decisions are the product of a historical context (individual and cultural), a complex bureaucratic process, and an intertwined domestic and international political and economic environment. In order to criticize, evaluate, and understand those decisions, this course will examine all these components in relation to emerging doctrines of U.S. foreign policy.

## JSGS 845 - Behavioural Social Policy

## Restrictions:

Admission into the Master of Public Administration (M.P.A.) program, Master of Public Policy (M.P.P.) program, Ph.D. program, or by permission of the instructor.

## Calendar Description:

This course focuses on social programs and social policy analysis in a Canadian context. Applied interdisciplinary methods used in the administration and design of social policy are discussed at length. Students will also be introduced to various types of social programs including; income security, housing and homelessness, child protection and family services.

## JSGS 847 - Strategic Planning for Non-Profit and Public Organizations

## Restrictions:

Admission into the Master of Public Administration (M.P.A.) program, Master of Public Policy (M.P.P.) program, Ph.D. program, or by permission of the instructor.

## Calendar Description:

Strategic and operational planning through discussion of the relevance of organizational values, development of mission and vision statements and techniques to align goals and objectives with organizational priorities. Financial capability analysis and budgetary role in planning will be
addressed. Skills developed include critical thinking, problem solving, writing, and presentation skills.

## JSGS 852 - Inside Government - Practices and Procedures

Restrictions:
Admission into the Master of Public Administration (M.P.A.) program, Master of Public Policy (M.P.P.) program, Ph.D. program, or by permission of the instructor.

## Calendar Description:

Examines the principles underlying aspects of public management with an emphasis on the machinery of government and the ways in which governments apply public administration principles and use various instruments. Students will practice some of the competencies expected of public servants through lectures, student presentations, in-class exercises and field trips.

## JSGS 853 - Negotiation and Conflict Resolution

## Restrictions:

Admission into the Master of Public Administration (M.P.A.) program, Master of Public Policy (M.P.P.) program, Ph.D. program, or by permission of the instructor.

## Calendar Description:

This course addresses negotiations and alternative dispute resolution (ADR) in the workplace, including theoretical models and applications relevant to managing conflict in employment settings. Students will gain a firm understanding of how to resolve workplace conflict in both unionized and non-unionized environments.

## JSGS 867 - Advanced Policy Analysis

## Restrictions:

Admission into the Master of Public Administration (M.P.A.) program, Master of Public Policy (M.P.P.) program, Ph.D. program, or by permission of the instructor.

Calendar Description:
This course will introduce students to applied policy analysis and key policy research methods including interviews, focus groups, and surveys. As an applied project class students will work with faculty and representatives from the Saskatchewan Government to conduct a policy analytic review for a provincial ministry.

## JSGS 881 - Constitutional Law and Public Policy

## Restrictions:

Admission into the Master of Public Administration (M.P.A.) program, Master of Public Policy (M.P.P.) program, Ph.D. program, or by permission of the instructor.

## Calendar Description:

Students will develop the critical skills necessary to examine Canada's constitutional framework, including the judicial system, the division of powers, the treatment and rights of Aboriginal Peoples, and the Charter of Rights and Freedoms.

## JSGS 838 - Public Sector Financial Management

## Restrictions:

Admission into the Master of Public Administration (M.P.A.) program, Master of Public Policy (M.P.P.) program, Ph.D. program, or by permission of the instructor.

## Calendar Description:

The purpose of this course is to expose students to the significant financial issues that have practical significance in the management and operations of public sector departments, agencies, and initiatives. The course will focus on select aspects of public sector governance and financial management. Students will be expected to apply the knowledge they learn from the course materials and lectures to problems and assignments that could typically arise in a public administration setting.
Rationale:

A proposal has been submitted to make changes to the Master of Public Administration (M.P.A.) program. One of those changes is to have this course included in a short list of restricted electives on public administration/management from which M.P.A. students are required to take 3 credit units.
Contact Person: amber.mccuaig@usask.ca
Approval: Graduate Programs Committee, January 18, 2011

## JSGS 868 - Resource and Environmental Policy

Restrictions:
Admission into the Master of Public Administration (M.P.A.) program, Master of Public Policy (M.P.P.) program, Ph.D. program, or by permission of the instructor.

## Calendar Description:

An examination of recent trends in resource and environmental policy. The course will focus on policy processes in the context of the growing integration of resource and environmental policies, multi-level governance, and civil society engagement.

## Rationale:

This course fits clearly into one of the Johnson-Shoyama Graduate School's areas of expertise identified in our strategic plan: resource and environmental policy. It is anticipated that it will be a popular and sought-after elective for students in the MPA and MPP programs, as well as other graduate programs on campus, particularly those in the School of Environment and Sustainability.
Contact Person: amber.mccuaig@usask.ca
Approval: Graduate Programs Committee, January 18, 2011

## JSGS 870 - Water Policy in an Age of Uncertainty

## Restrictions:

Admission into the Master of Public Administration (M.P.A.) program, Master of Public Policy (M.P.P.) program, Ph.D. program, admission into a program in the School of Environment and Sustainability, or by permission of the instructor.

## Calendar Description:

This course will ask whether contemporary water systems embody principles that will allow them to adapt and function in a changing climate, a rapidly evolving economy, a changing settlement system, and new lifestyles. The format will include lectures, class discussion, jigsaw readings in which students read separate material and then teach content to peers, guest lecturers, documentaries, and Web-based content. Students will develop a collaborative, interdisciplinary framework for evaluating sustainable water governance. Each student will use this framework to evaluate climate adaptation policy in the water sector in a major world city.

## Rationale:

This course fits clearly into one of the Johnson-Shoyama Graduate School's areas of expertise identified in our strategic plan: resource and environmental policy. It is anticipated that it will be a popular and sought-after elective for students in the MPA and MPP programs, as well as other graduate programs on campus, particularly those in the School of Environment and Sustainability.
Contact Person: amber.mccuaig@usask.ca
Approval: Graduate Programs Committee, January 18, 2011

## Graduate Course Deletion

## PUBP 820 - Comparative Public Policy

## Rationale:

The course has been utilized as a reading course to help prepare PhD student for their comprehensive exam. The title and calendar description do not adequately describe the course. In a suite of Graduate Course Modification/New Graduate Course Proposals recently submitted by the School, we have utilized the 820 number for a different course (Micro-Economics for Policy Analysis). A new course proposal will be submitted (for JSGS 869 PhD Reading Course) to replace the existing PUBP 820 Comparative Public Policy Course.
Contact Person: amber.mccuaig@usask.ca

Approval: Graduate Programs Committee, March 1, 2011

## Graduate Course Modifications

Rationale: The JSGS is a provincial school, and students in our programs are eligible to take courses at either campus. Currently, SUGA is the process that allows this to happen, although it is a cumbersome process. In discussions with the College of Graduate Studies and Research and the Registrar's Office, it was decided that the School would create a single suite of courses under a common subject code (JSGS) that would be in the Course Calendars of both universities. A number change is being requested for this course, as well as several others, so that the School has a single suite of numbered courses. The restriction is being added so that all JSGS courses have the same restrictions.
Contact Person: amber.mccuaig@usask.ca
Approval: Graduate Programs Committee, January 18, 2011
The following courses are being modified:
JSGS 871 - Research Methods in International Trade Policy
Restriction Current: NONE
Restriction Proposed: Admission into the Master of International Trade (M.I.T.) program or by permission of the instructor.

JSGS 872 - International Trade and Commercial Policy Restriction Current: NONE
Restriction Proposed: Admission into the Master of International Trade (M.I.T.) program or by permission of the instructor.

JSGS 873 - International Trade Theory
Restriction Current: NONE
Restriction Proposed: Admission into the Master of International Trade (M.I.T.) program or by permission of the instructor.

## JSGS 874 - International Monetary Economics

Restriction Current: NONE
Restriction Proposed: Admission into the Master of International Trade (M.I.T.) program or by permission of the instructor.

JSGS 875 - Politics of International Trade
Restriction Current: NONE
Restriction Proposed: Admission into the Master of International Trade (M.I.T.) program or by permission of the instructor.

JSGS 876 - International Trade Law
Restriction Current: NONE
Restriction Proposed: Admission into the Master of International Trade (M.I.T.) program or by permission of the instructor.

JSGS 877 -International Commercial Transactions
Restriction Current: NONE
Restriction Proposed: Admission into the Master of International Trade (M.I.T.) program or by permission of the instructor.

JSGS 878 - International Business Environment
Restriction Current: NONE
Restriction Proposed: Admission into the Master of International Trade (M.I.T.) program or by permission of the instructor.

JSGS 879 - The Management of Technology
Restriction Current: NONE
Restriction Proposed: Admission into the Master of International Trade (M.I.T.) program or by permission of the instructor.

## JSGS 866 - Public Leadership: Theory and Practice

Restriction Current: Admission into the Master of Public Administration (M.P.A.) program or the Master of Public Policy (M.P.P.) program, admission into a graduate program in the Department of Political Studies or the Department of Educational Administration or by permission of the instructor.
Restriction Proposed: Admission into the Master of Public Administration (M.P.A.) program, Master of Public Policy (M.P.P.) program, Ph.D. program, or by permission of the instructor.

JSGS 863 - Aboriginal Peoples and Public Policy
Restriction Current: Permission of the instructor.
Restriction Proposed: Admission into the Master of Public Administration (M.P.A.) program, Master of Public Policy (M.P.P.) program, Ph.D. program, or by permission of the instructor.

JSGS 864 - Social Policy: Interdisciplinary Perspectives
Restriction Current: Permission of the instructor.
Restriction Proposed: Admission into the Master of Public Administration (M.P.A.) program, Master of Public Policy (M.P.P.) program, Ph.D. program, or by permission of the instructor.

JSGS 806 - Public Policy Analysis
Restriction Current: None
Restriction Proposed: Admission into the Master of Public Administration (M.P.A.) program, Master of Public Policy (M.P.P.) program, Ph.D. program, or by permission of the instructor.

JSGS 849 - Social Economy and Public Policy
Restriction Current: Permission of the instructor.
Restriction Proposed: Admission into the Master of Public Administration (M.P.A.) program, Master of Public Policy (M.P.P.) program, Ph.D. program, or by permission of the instructor.

JSGS 851 - Qualitative Methods
Restriction Current: Admission to the M.P.A., M.P.P., or Ph.D. or permission of the instructor.
Restriction Proposed: Admission into the Master of Public Administration (M.P.A.) program, Master of Public Policy (M.P.P.) program, Ph.D. program, or by permission of the instructor. Students must also have successfully completed an undergraduate course in statistics.

## JSGS 854 - Higher Education Policy

Restriction Current: Admission to the M.P.A., M.P.P., or Ph.D. or permission of the instructor Restriction Proposed: Admission into the Master of Public Administration (M.P.A.) program, Master of Public Policy (M.P.P.) program, Ph.D. program, or by permission of the instructor.

JSGS 801 - Governance and Administration
Restriction Current: NONE
Restriction Proposed: Admission into the Master of Public Administration (M.P.A.) program, Master of Public Policy (M.P.P.) program, Ph.D. program, or by permission of the instructor.

JSGS 802 - Public Finance
Restriction Current: Permission of the instructor.
Restriction Proposed: Admission into the Master of Public Administration (M.P.A.) program, Master of Public Policy (M.P.P.) program, Ph.D. program, or by permission of the instructor.

Restriction Current: Admission to the M.P.A., M.P.P., or Ph.D. or permission of the instructor. Restriction Proposed: Admission into the Master of Public Administration (M.P.A.) program, Master of Public Policy (M.P.P.) program, Ph.D. program, or by permission of the instructor. Students must also have successfully completed an undergraduate course in statistics.

## JSGS 804 - Research and Writing

Restriction Current: NONE
Restriction Proposed: Admission into the Master of Public Administration (M.P.A.) program, Master of Public Policy (M.P.P.) program, Ph.D. program, or by permission of the instructor.

## JSGS 805 - Economics for Public Policy Analysis

Restriction Current: Admission to the M.P.A., M.P.P., or Ph.D. or permission of the instructor. Restriction Proposed: Admission into the Master of Public Administration (M.P.A.) program, Master of Public Policy (M.P.P.) program, Ph.D. program, or by permission of the instructor.

## JSGS 815 - Strategic Human Resource Management Legal and Policy Issues

Restriction Current: Admission to the Master of Public Administration (M.P.A.) program, Master of Public Policy (M.P.P.) program, or permission of the instructor.
Restriction Proposed: Admission into the Master of Public Administration (M.P.A.) program, Master of Public Policy (M.P.P.) program, Ph.D. program, or by permission of the instructor.

JSGS 809 - Introduction to Law in Public Administration and Policy
Restriction Current: Admission to the Master of Public Administration (M.P.A.) program, Master of Public Policy (M.P.P.) program, or permission of the instructor.
Restriction Proposed: Admission into the Master of Public Administration (M.P.A.) program, Master of Public Policy (M.P.P.) program, Ph.D. program, or by permission of the instructor.

JSGS 859 - Innovation Policy
Restriction Current: Admission to the Master of Public Administration (M.P.A.) program, Master of Public Policy (M.P.P.) program, or permission of the instructor.
Restriction Proposed: Admission into the Master of Public Administration (M.P.A.) program, Master of Public Policy (M.P.P.) program, Ph.D. program, or by permission of the instructor.

JSGS 862 - Political Economy
Restriction Current: Admission to the Master of Public Administration (M.P.A.) program, Master of Public Policy (M.P.P.) program, or permission of the instructor.
Restriction Proposed: Admission into the Master of Public Administration (M.P.A.) program, Master of Public Policy (M.P.P.) program, Ph.D. program, or by permission of the instructor.

## JSGS 861 - Health, Post-Secondary Education and Social Programs: Funding, Structure and

 ReformRestriction Current: Restricted to students in the College of Graduate Studies and Research. Restriction Proposed: Admission into the Master of Public Administration (M.P.A.) program, Master of Public Policy (M.P.P.) program, Ph.D. program, or by permission of the instructor.

JSGS 808 - Ethical Leadership and Democracy in Public Service
Restriction Current: Admission into the Master of Public Administration (M.P.A.) program or the Master of Public Policy (M.P.P.) program, admission into a graduate program in the Department of Department of Educational Administration or by permission of the instructor.
Restriction Proposed: Admission into the Master of Public Administration (M.P.A.) program, Master of Public Policy (M.P.P.) program, Ph.D. program, or by permission of the instructor.

## Biomedical Engineering <br> New Graduate Course Proposal <br> BIOE 806 - Biomaterials <br> Calendar Description:

In the first month, the course will review biomaterials by classification. In the second month, the students will select a project topic to pursue. The course will then address manufacturing and testing of biomaterials, covering the topics such as corrosion, wear, and nanofabrication of biomaterials.

## Rationale:

This course on biomaterials is essential for students pursuing a degree in engineering, especially biomedical engineering and students from other health science disciplines such as dentistry. Adding a course on biomaterials will strengthen the curriculum and scientific background of the students. There are different schools of thought on materials selection, biocompatibility, and design that the students should be exposed to. Civil engineers can apply finite element methods to design a hip implant. Medical students will learn how a material that is biocompatible in a total knee replacement application is bioincompatible in a nanoscale application. For dentists, the debate continues on whether to use mercurybased dental amalgams or to apply epoxy composite fillings. The course will cover all these topics as well as others listed in the course outline.
Contact Person: chris.zhang@usask.ca
Approval: Graduate Student Affairs Committee, February 10, 2011
Veterinary Pathology
Graduate Course Modification
VTPA 872 - Avian Necropsy II
Prerequisite Current: VTPA 445 and VTPA 869 or equivalent
Prerequisite Proposed: Permission of the instructor.
Rationale:
Previous prerequisite VTPA 445 no longer exists and because the department admits graduate students with varied experience (i.e. some could be with no experience to some with more than 5-10 years of experience) in poultry, to various programs (i.e. MVetSci, $\mathrm{MSc}, \mathrm{PhD}$ ) every student would not require a prerequisite to register for VTPA 872 . When a prerequisite is required it will be advised by the department.
Contact Person: susantha.gomis@usask.ca
Approval: Graduate Academic Affairs Committee, February 10, 2011

