## University Course Challenge - November 2014

The curricular revisions listed below were approved through the Arts \& Science College Course and Program Challenge and are now submitted to the University Course Challenge for approval.

## DIVISION OF HUMANITIES AND FINE ARTS

## Studio Art

## Minor Program Revisions

Bachelor of Fine Arts (B.F.A.) in Studio Art
Add the word "Honours" to the program title.

## Bachelor of Fine Arts Honours (B.F.A. Honours) in Studio Art

No change to program requirements.
Rationale: The B.F.A. in Studio Art has always required students to achieve the Honours standard for graduation (minimum overall and subject average of $70 \%$ ), and is considered to be an Honours-level program, though the name has never officially been associated with the program. It has come to the attention of the Department and College that the lack of this official indication on the program can have negative effects on graduates from the program, as they apply for admission to graduate level programs or for employment, and therefore we wish to officially clarify that the B.F.A. program is an Honours-level program. The only impact of this change, aside from appropriate recognition of alumni, is that qualified graduates will now graduate with "Honours" or "High Honours" rather than "Distinction" or "Great Distinction".

## Linguistics

## New Course(s)

## LING 250.3 World Englishes

1/2 (3L) This course provides an overview of the major varieties of English spoken today around the world. Different geographical varieties of English will be addressed and discussed with respect to core components of their phonology, phonetics, morphology, lexicon, and sentence structure. The course also examines factors in the development of language variation in the context of English such as language change, language planning, migration, language contact, and second language teaching. Prerequisite(s): LING 110.3 or LING 111.3 or 24 credit units at the university level Instructor(s): Veronika Makarova, Peter Wood, Bettina Spreng Rationale: The course fits well with other courses in the Linguistics program and complements courses that deal with sociolinguistics and language variation (LING 112 and 244, among others). It is of particular interest to Linguistics students who consider careers of English-as-a-Second-Language teachers. There is at this point no similar course offered at the College of Arts \& Science.

## Religion and Culture

## New Course(s)

## RLST 229.3 Religion and Sport

$1 / 2$ (3L) This course explores the interplay between religion and sport. These two endeavors represent the ultimate concern for a number of people around the world. We will analyze their similarities and differences in relation to how sport and religion serve as a total identity for some people. We will also map some of the influence and expression of religious traditions in sport. Case studies will include reviewing
arguments for considering the Montreal Canadiens and the Saskatchewan Roughriders as religions in their own right.
Prerequisite(s): 3 credit units RLST or 18 credit units at the university level.
Instructor(s): Chris Hrynkow
Rationale: This course will provide an opportunity to introduce Religious Studies methodology with an interesting subject matter. For instance, How do we define religion? What can be counted as a religion? The course will also attract a new constituency of students to the discipline as they learn how religion has intersected with sport cultures all over the world.

## RLST 237.3 Life After Death in World Religions

$1 / 2$ (3L) This course explores the ideas, beliefs and practices associated with life after death as they are expressed in various religious traditions. The course begins with a survey of afterlife beliefs in ancient cultures (especially Egypt and Mesopotamia), and moves on to afterlife concepts in Judaism, Christianity, Islam, Hinduism, Buddhism, and Chinese Religions. The course will also introduce afterlife beliefs in Spiritualism, and contemporary scholarship on Near Death Experiences.
Prerequisite(s): 3 credit units RLST or 18 credit units at university level.
Instructor(s): Mary Ann Beavis, Alisha Pomazon, Chris Hrynkow
Rationale: Although belief in an afterlife is a feature of many religious traditions, and religion is popularly regarded as preparing believers for life after death, no course devoted to the wide range of beliefs about the afterlife in world religions is offered at the University of Saskatchewan. Similar courses are taught at many North American universities (e.g., Carleton, University of Manitoba, University of Toronto, University of Arizona, University of Florida). This course will be complementary to the popular Religious Perspectives on Death and Dying (RLST 282.3) course.

## RLST 300.3 Hidden Books of the Bible

1/2 (3L) This course focuses on the Apocrypha ("Hidden Things"), Hellenistic Jewish books regarded as scripture by some, but not all, Christians, in their historical, literary and cultural contexts, as well as their influence on western culture.
Prerequisite(s): 6 credit units RLST or 24 credit units at University level. Instructor(s): Mary Ann Beavis, Alisha Pomazon
Rationale: This course is a much-needed addition to the 300-level course offerings in the Religion and Culture Program and addresses a body of ancient literature that has been very influential in the history of Christianity, and in western culture, but that is little-known today.

## DIVISION OF SCIENCE

## Computer Science

## Minor Program Revisions

## Bachelor of Science Double Honours in Computer Science

Update the list of Engineering courses used in the major requirement.

## Bachelor of Science Double Honours - Computer Science - Major 1

(unchanged except for the following section, context included)

## C6 Major Requirement (36 credit units)

o CMPT 214.3
o CMPT 215.3 or CME 331.3
o CMPT 260.3
o CMPT 270.3
o CMPT 280.3
o CMPT 360.3
o CMPT 400.3
Choose 3 credit units from the following:
o CMPT 317.3
o CMPT 320.3
o CMPT 350.3
o CMPT 355.3
o CMPT 370.3
o CMPT 385.3
o CMPT 394.3
Choose $\mathbf{3}$ credit units of CMPT courses with number 410 or higher.
o Note: Courses numbered 400-409 may not be used to fulfill this requirement
o 400-Level CMPT Courses
Choose 3 credit units from the following:
o 300-Level or 400-Level CMPT Courses
o BINF 300.3
o one of EE 332.3, CME 332.3, CME 341.3, CME 342.3, CME 433.3, CME 435.3, CME 451.3, CME 462.3

Choose 3 credit units from the following:
o CMPT 332.3
o CMPT 340.3
Choose 3 credit units from the following:
o CMPT 364.3
o CMPT 461.3
o CMPT 463.3

## Double Honours - Computer Science - Major 2

(unchanged except for the following section, context included)
Requirements ( 42 credit units)

- CMPT 214.3
- CMPT 215.3 or CME 331.3
- CMPT 260.3
- CMPT 270.3
- CMPT 280.3
- CMPT 360.3
- CMPT 400.3

Choose 6 credit units from the following:

- CMPT 111.3 or CMPT 116.3
- CMPT 115.3 or CMPT 117.3

Choose 3 credit units from the following:

- CMPT 317.3
- CMPT 320.3
- CMPT 350.3
- CMPT 355.3
- CMPT 370.3
- CMPT 385.3
- CMPT 394.3

Choose 3 credit units of CMPT courses with number 410 or higher:
Note: Courses numbered 400-409 may not be used to fulfill this requirement

- 400-Level CMPT Courses

Choose 3 credit units from the following:

- 300-Level or 400-Level CMPT Courses
- BINF 300.3
- one of EE 332.3, CME 332.3, CME 341.3, CME 342.3, CME 433.3, CME 435.3, CME 451.3, CME 462.3

Choose at least 3 credit units from the following:

- CMPT 332.3
- CMPT 340.3


## Choose at most 3 credit units from:

- CMPT 364.3
- CMPT 461.3
- CMPT 463.3

Rationale: When the Double Honours in Computer Science program was proposed it included a list of Engineering courses, from which 3 cu could be selected, that did not reflect corrections that would be made to a corresponding list for our Honours program. These corrections reversed the accidental removal of two courses from the list, and accounted for some course relabeling. The proposed revision applies these corrections to the list in the Double Honours program as well.

## Physics

## Minor Program Revisions

## Bachelor of Science Honours, Four-year, and Three-Year in Physics

Under C6: Requirements in the Major in the BSc 3-Year, 4-Year and Honours degree:

1. Include in the list of electives: EP 228.3, EP 325.3, EP 417.3, EP 428.3, PHYS 404.3, PHYS 456.3
2. Delete in the list of electives: ASTR 320.3, EP 431.3 (course has been deleted)

Under C6: Requirements for the Major for the BSc Honours degree (only):
3. Streamline the descriptions for the Specializations within the B.Sc. Honours degree in Physics by requiring a minimum of 18 credit units of specialized electives.
4. Update the specialized lists of electives taking into account the courses which were introduced or deleted during revisions to the EP program.

## Bachelor of Science Four-year (B.Sc. Four-year) - Physics

## C6 Major Requirement (36 credit units)

o EP 253.1
o PHYS 223.3
o PHYS 230.1
0 PHYS 231.1
o PHYS 252.3
o PHYS 323.3
o PHYS 356.3
o PHYS 371.3
o PHYS 383.3
o PHYS 490.0

Choose additional credit units from the following list to satisfy the 36 credit unit requirement under C6:

0 ASTR 213.3
0 ASTR 214.3
o ASTR 310.3
o ASTR 312.3

- ASTR 320.3
o ASTR 411.3
0 EP 317.3
0 EP 325.3
o EP 353.2
o EP 354.2
o EP 370.3
0 EP 421.3
0 EP 428.3
0 EP 431.3-(Course has been deleted)
0 PHYS 255.3
o PHYS 322.3
o PHYS 402.3
o PHYS 403.3
o PHYS 452.3
o PHYS 453.2
o PHYS 456.3
o PHYS 461.3
o PHYS 470.3
o PHYS 471.3
o PHYS 481.3
o PHYS 482.3
o PHYS 491.3
o PHYS 492.3
o PHYS 493.6
o PHYS 498.3
o PHYS 499.6


## Bachelor of Science Three-year (B.Sc. Three-year) - Physics

## C6 Major Requirement (24 credit units)

```
0 EP 253.1
o PHYS 223.3
o PHYS 230.1
0 PHYS 231.1
o PHYS 252.3
```


## Physics Electives

Choose additional credit units from the following list to satisfy the 24 credit unit requirement under C6:

```
o ASTR 213.3
o ASTR 214.3
o ASTR 310.3
0 ASTR 312.3
0 ASTR 320.3
o ASTR 411.3
o EP 228.3
o EP 317.3
o EP 325.3
O EP 353.2
O EP 354.2
O EP 370.3
O EP 417.3
O EP 421.3
o EP 428.3
0-EP 431.3- (Course has been deleted)
o PHYS 255.3
o PHYS 322.3
o PHYS 323.3
o PHYS 356.3
O PHYS 371.3
o PHYS 383.3
O PHYS 402.3
o PHYS 403.3
o PHYS 452.3
o PHYS 453.3
o PHYS 456.3
o PHYS 461.3
o PHYS 470.3
o PHYS 471.3
o PHYS 481.3
O PHYS 482.3
o PHYS 498.3
o PHYS 499.6
```


## C6 Major Requirement (48 credit units)

## Required core courses:

0 EP 253.1
o PHYS 223.3
o PHYS 230.1
o PHYS 231.1
o PHYS 252.3
o PHYS 323.3
o PHYS 356.3
o PHYS 371.3
o PHYS 383.3
o PHYS 490.0

Choose additional credit units from the following list to satisfy the 48 credit unit requirement. At least 6 credit units must be at the 400 -level.

```
o ASTR 213.3
o ASTR 214.3
o ASTR 310.3
o ASTR 312.3
0 ASTR 320.3
0 ASTR 411.3
o EP 228.3
o EP 317.3
O EP 353.2
O EP 354.2
O EP 370.3
0 EP 421.3
0 EP 431.3
o PHYS 255.3
o PHYS 322.3
o PHYS 402.3
o PHYS 403.3
o PHYS 404.3
O PHYS 452.3
o PHYS 453.2
o PHYS 456.3
o PHYS 461.3
o PHYS 470.3
o PHYS 471.3
O PHYS 481.3
O PHYS 482.3
O PHYS 491.3
o PHYS 492.3
O PHYS 493.6
O PHYS 497.15
O PHYS 498.3
O PHYS 499.6
```

Students can also choose a Specialization in their B.Sc. (Honours) in Physics. In this case students have to take the required core courses listed under C6, a 6 credit unit or 15 credit unit research project in the area of Specialization, additional core courses for the Specialization, and some electives from restricted lists.

## Specialization in Astronomy

At least 93 credit units must be taken in Astronomy courses, with at least 3 credit units at 300level or above.
o PHYS 493.6 or PHYS 497.15 research project in Astronomy
Choose 1812 credit units (if you take PHYS 493.6) or 96 credit units (if you take PHYS 497.15) from the following list:

0 ASTR 213.3
o ASTR 214.3
o ASTR 310.3
0 ASTR 312.3
0 ASTR 320.3
0 ASTR 411.3
0 PHYS 402.3
0 PHYS 403.3
o PHYS 452.3
o PHYS 456.3
o PHYS 461.3
$\theta$ PHYS-481.3

- PHYS-482.3
o ASTR or PHYS Special Topics Courses can be used with departmental approval.


## Specialization in Atmospheric, Space, and Plasma Sciences

o PHYS 322.3
o PHYS 456.3
0 PHYS 461.3
o PHYS 493.6 or PHYS 497.15 research project in a subject of Atmospheric, Space, and Plasma Sciences

If you take PHYS 493.6 choose 93 credit units from the following list:

```
o ASTR 312.3
0 ASTR 320.3
O EP 421.3
0 EP 431.3-(Course has been deleted)
o PHYS 255.3
0 PHYS 402.3
0 PHYS 403.3
O PHYS 452.3
0 PHYS 470.3
0 PHYS-471.3
0 PHYS-481.3
o PHYS Special Topics Courses can be used with departmental approval
```


## Specialization in Materials Science

Students taking the Material Science Specialization must also take CHEM 112.3 and CHEM 115.3. These courses may be counted in Program Requirement C1 and/or Program Requirement C7.

```
o EP 317.3
```

o EP 417.3

- EP 370.3 and PHYS 470.3 or CHEM 242.3 and CHEM 334.3
o PHYS 493.6 or PHYS 497.15 research project in Material Science

Choose 12 credit units (if you take PHYS 493.6) or 3 credit units (if you take PHYS 497.15) from the following list:

If you take PHYS 493.6 choose 6 credit units from the following list:

0 EP 317.3
o EP 353.2
0 EP 354.2
o EP 421.3
$\theta$ EP 431.3-(Course has been deleted)
o PHYS 402.3
o PHYS 403.3
o PHYS 453.2
0 PHYS 461.3
o PHYS 471.3
o PHYS 481.3
o PHYS 482.3
o PHYS Special Topics Courses can be used with departmental approval

Specialization in Nuclear Science

```
0 EP 353.2
0 EP354.2
o PHYS 255.3
o PHYS 452.3
0 PHYS 453.2
o PHYS 493.6 or PHYS 497.15 research project in Nuclear Science
```

If you take PHYS 493.6 choose 6 credit units from the following list:
o EP 353.2
o EP 354.2
o PHYS 402.3
0 PHYS 403.3
o PHYS 453.3
0 PHYS 470.3
o PHYS 471.3
o PHYS 481.3
o PHYS 482.3
o PHYS Special Topics Courses can be used with departmental approval.

- A student may also choose Nuclear Science courses from the University of Ontario Institute of Technology with departmental approval.


## Specialization in Theoretical Physics

- PHYS 402.3
o PHYS 456.3
o PHYS 481.3
o ASTR 411.3

If you take PHYS 493.6 choose 93 credit units from the following list:
o MATH 211.3
o MATH 277.3
o MATH 313.3
o MATH 314.3
o MATH 352.3
o MATH 366.3
o MATH 432.3
o MATH 433.3
o MATH 438.3
o MATH 452.3
o PHYS 402.3
o PHYS 403.3
o PHYS 452.3
o PHYS 461.3
o PHYS 470.3
o PHYS 482.3
o PHYS or MATH Special Topics Courses can be used with departmental approval.

Rationale: We have replaced several old courses with new courses during the revisions of the EP program in 2011, e.g. EP 464.3 with PHYS 456.3, EP 225.3 with EP 325.3, EP 431.3 with EP 428.3, and we need to update the BSc program descriptions accordingly.
We also wish to streamline the descriptions for the Specializations within the BSc Honours degree. We have now four years of experience with offering the Specializations, and the most important component of the specialized training was found to be the specialized undergraduate research project ( 6 cu or 15 cu ) and a limited number of mandatory specialized elective courses. Having 18 cu of specialized lecture courses in addition to the 6 cu project was too restrictive and both students and supervisors felt that 12 cu of specialized lecture courses in addition to a 6 cu specialized research project provided adequate depth for the Specializations.
Students who opt for the 15 cu research term will require 21-24 cu to complete a Specialization (6-9 cu of specialized courses in addition to the research course). This will not be a problem for the students because the total Physics electives space in C6 is 27 cu.

## Minor in Physics

Include the courses EP 253.1, EP 353.2, EP 354.2, EP 417.3, EP 428.3 in the lists of courses for the Minor in Physics

## Physics - Minor

Students who, in conjunction with a major in a different subject or an interdisciplinary program, take 18 credit units or more of Physics or Engineering Physics courses from the following lists will receive a Minor in Physics. At least 3 credit units must be at the 300 - or 400 -level. A maximum of 9 credit units at the 100 -level may be counted toward these requirements. Courses listed under the "C6 Major Requirement" of the student's program Major cannot be used to meet requirements for the Minor.

## Requirements (18 credit units)

Choose 18 credit units from the following:

- 100-Level, 200-Level, 300-Level or 400-Level PHYS Courses
- EE 202.3
- EP 228.3
- EP 253.1
- EP 317.3
- EP 320.3
- EP 325.3
- EP 353.2
- EP 354.2
- EP 370.3
- EP 413.3
- EP 414.3
- EP 417.3
- EP 421.3
- EP 428.3
- EP 431.3-(Course has been deleted)

Rationale: EP 253.1, EP 353.2 and EP 354.2 were already included previously as PHYS 253.1, PHYS 353.2, PHYS 354.2. However, when the labels were changed from PHYS to EP, the relabeled courses were accidentally not included in the explicit list, because they were contained in the implicit lists "200level, 300-level PHYS Courses". The courses EP 417.3 and EP 428.3 had been introduced in 2011 for the new EP program, but are also interesting and accessible for Arts and Science students with interest in applied materials physics (EP 417) or computational physics (EP 428).

## DIVISION OF SOCIAL SCIENCES

## Environment \& Society

## Minor Program Revisions - Addition of a Work Experience Option Bachelor of Arts and Science in Environment \& Society

The Geography - Co-operative Education Option was previously available to students in the B.A. or B.Sc. Four-year and Honours programs in Geography, which have now been deleted. These revisions create this option for the Environment \& Society program, recognizing that it can no longer exist as part of the deleted programs. Thus, the Co-operative Education Option would from here on be available to students in the B.A.\&Sc. Four-year and Honours programs in Environment \& Society.

## Environment and Society - Co-operative Education Option

This five-year program is available to students in the B.A.\&Sc. Four-year and Honours programs. Entrance Requirements for Environment \& Society majors: Students must hold a Cumulative Weighted Average of $70 \%$ or higher (or have permission of the department) and must have completed no fewer than 54 and no more than 84 credit units of course work. To qualify for participation in the Co-operative Education Program, students must have successfully completed the following courses: GEOG 120, 130, 222, 280; STAT 245 or PLSC 214; 3 credit units of human geography or physical geography at the senior level; MATH 110.3 or MATH 125; 6 credit units of electives in the social sciences or sciences.

Satisfactory completion of each work term is required prior to registration in the next work term. Each work term is graded on a Pass/Fail basis. Courses are taken in the following sequence: University courses ( 54 to 84 credit units), two years or more; Work placement GEOG 272, summer (May to August); Work placement GEOG 372, Term 1 (September to December); University courses (partial third year), Term 2 (January to April); Work placement GEOG 373, summer (May to August); University courses (remainder of third year), Term 1 (September to December); Work placement GEOG 472, Term 2 (January to April); Work placement GEOG 473 (if desired), summer (May to August); University courses (fourth year), Term 1 and 2 (September to April).

## Geography

## Minor Program Revisions <br> Deletion of a Work Experience Option

When the B.A. and B.Sc. programs in Geography were deleted, no mention was made of deleting the Cooperative Education Option available in those majors. This program option should also have been deleted at that time as such a program option can not exist without the accompanying program. (Per the above revision to the B.A.\&Sc. in Environment \& Society, this program option will effectively be moved to that program.)

## Deletion of a Lesser Depth of Study

When the B.A. and B.Sc. programs in Geography were deleted, no mention was made of deleting the Specializations in Geomatics and Water Science available in those majors. These Specializations should also have been deleted at that time as such lesser depths of study can not exist without the accompanying program. (These areas of study continue to exist as Minors, which can be taken by students in all majors except the B.Sc. in Geography.)

## Native Studies

## New Course(s)

## NS 241.3 Weaving Indigenous Science and Western Science

1/2 (3L) What is science? Is Indigenous knowledge scientific knowledge? These and related questions are addressed in this course through an exploration of Indigenous and Western scientific ways of understanding nature and the universe. The course is designed to develop students' scientific literacy and cultural competence, providing a foundation for future learning and/or work with science and Indigenous peoples. Special attention will be paid to the ways that these knowledge systems situate humans in relation to the natural world. This class uses online learning; readings; classroom discussions; field experiences; and visits with Elders, scientists, and knowledge keepers to explore the tensions, complementarities, and combined possibilities of Indigenous and Western science.
Prerequisite(s): NS 107.3 and 3 additional credit units from ANTH, ARCH, ECON, GEOG, LING, NS, POLS, PSY, SOC, or WGST.
Note: This intensive course utilizes online learning, classroom learning, and three full days of land-based, experiential learning (one urban and two wilderness days). Students enrolling in this course will be responsible for providing their own transportation, food, and other equipment as required.
Instructor(s): Jeff Baker
Rationale: This course is being created to regularize a special topics course that has been offered through the Department of Native Studies on two occasions. It is the only Departmental course that is focused on the intersection of Western scientific knowledge and Indigenous knowledge, and there was considerable student interest in both prior offerings. The redevelopment of this course as a regular offering introduces a blended instructional approach, adding an online component and important landbased learning opportunities to existing classroom based activities.
It is hoped that this course will contribute to:

- improved social relations between Indigenous and non-Indigenous peoples;
- increased numbers of Indigenous peoples pursuing higher education and careers in science (where we are presently badly underrepresented), leading to greater scientific expertise within Indigenous communities (fostering autonomy, health, and resilience);
- and the creation of more equitable and sustainable social practices through the respectful inclusion of Indigenous knowledge in scientific and other endeavors.


## Items for Information

The curricular revisions listed below were approved through the Arts \& Science College Course and Program Challenge and are now submitted to the University Course Challenge for information.

## DIVISION OF HUMANITIES AND FINE ARTS

## Catholic Studies

## Minor Program Revisions

Minor in Catholic Studies
Add INTS 203.3 (Cultivating Humanity) to the list of courses eligible to be used in Area 3: Catholocism and the Modern World.
Rationale: This course was an elective in this program in the past, but was inadvertently removed when program revisions were made last year.

## English

## Minor Program Revisions

## Bachelor of Arts Honours in English

Delete ENG 307.3 (Digital Literature and New Media) from A6, Category 4: $20^{\text {th }}$ Century
Rationale: When Category 5: Media, Culture and Community was created, ENG 307.3 was intended to be listed in that category (as it currently is). Since the program states that students must take classes from Cat. 4 and/or Cat. 5, the department feels that the course should not be listed in both. We are correcting this error by removing ENG 307.3 from Category 4 but leaving it listed under Category 5.

## New Course:

## ECUR 326.3: Methods for Teaching Science in Secondary School

## Calendar Description:

Students will develop a series of conceptual frameworks that have practical implications for reflecting on classroom practice. Topics include: curriculum intentions, the nature of the scientific enterprise, concept development, assessment and evaluation, and pedagogical methods and strategies that support curriculum intentions.

Students will develop and demonstrate an informed and practical philosophy of teaching the life sciences by exploring the nature of science, reflecting on the pedagogical implications of provincial science curriculum intentions and examining how current research in science education informs planning, the development of resource materials, and teaching methodologies.

Rationale: The primary purpose of our course work is to explore various methods, approaches and perspectives for engaging others in science teaching and learning. This involves further developing yourself as a reflexive practitioner as opposed to a "technician" who "unthinkingly" delivers the "products" of science to learners. This means examining and re-conceptualizing taken-for-granted assumptions and predispositions about how people learn, what is science, science teaching and our apprenticeship" into science teaching/learning. To make this course permanent.

Prerequisites: 12 credit units in CHEM or PHYS or BIO

## New Course:

## ECUR 415.3 - Current Issues in EAL--

Calendar Description: With globalization and the increase in migration in today's world, English is spreading rapidly as a global language. This course examines the social, political and pedagogical issues pertaining to English as an additional language and other second/foreign language education, primarily from a sociolinguistic perspective. Emphasis is placed on how to prepare teachers to better address linguistic and cultural diversity that actually exists in the classrooms.

## Relabeled Course: EDUC 422.15 Professional Internship Field Experience (effective 201505)

## Calendar Description:

This extended practicum is a period of intensive field study experience where interns are expected to develop and demonstrate program outcomes in the categories of professional, knowledge, instructional and curricular competency. Interns will work with one or more co-operating teachers and will function as professionals-in-training, engaging with students and their families, and working alongside colleagues on a regular and in-depth basis, team-teaching, planning units, lessons and other school-based programs, and progressing toward a full teaching load within their school context Assessment for internship will address Ministry of Education competency goals, within the framework of the Professional Growth Portfolio (PGP)

Rationale: For students admitted 2103/14 \& 2014/15 EDUC 471.3 \& EDUC 421.12 are required, both are no longer available as of 2015/16. They have been replaced with EDUC 422.15 - it would be great if the system recognized this for those that do not complete in a timely manner and to make this course permanent this course replaces two courses that have been amalgamated; EDUC 421.12 + EDUC 471.3

Prerequisite: EDUC 321.3; EDUC 322.3; plus 24 credit units of EDUC (including the completion of credits for two teaching areas)

Course equivalencies: EDUC 421.12 + EDUC 471.3

## New Calendar Description for existing course:

## EFDT 486.3 - 1/2(3L)

## Queering our Schools and Communities

Focuses on philosophical and pedagogical praxis surrounding contemporary *Igbttq issues in education. Course addresses inclusive/anti-homophobic curriculum, policy, resources and supporting students, teachers, counsellors, and administrators.
*Lesbian, gay, bi-sexual, trans, two-spirited, queer.

## Introduction of a new Teaching Area; Native Studies

UPC proposes to re-establish Native Studies as a teaching area for our Elementary and Secondary B. Ed programs. The rationale for this is to ensure that our programs align with College of Education and University of Saskatchewan institutional priorities, especially IP3's focus on Aboriginal engagement and to assist school divisions in Saskatchewan and beyond to meet the needs of the growing Aboriginal student population.

Propose that the Native Studies teaching area consists of any combination of below for EDSE \& EDEL teaching area 1 and 2.

Both Elementary \& Secondary Teaching Areas must contain 6 cu in the following:
NS 100:499

Elementary Teaching Area 1: Choose 1812 additional credit units from the following:
Elementary Teaching Area 2: Choose 126 additional credit units from the following:

## May contain:

NS 200:499
History 263.6 (Formerly HIST 222)
History 264.3
History 265.3
Political Studies 222.3
Political Studies 322.3
Political Studies 323.3

Sociology 219.3
Sociology 319.3
Sociology 320.3
Sociology 341.3

Please note that a maximum of 6 credit units of the following may be used as part of the NS teaching area:
Cree 101.6
Cree 110.3
Cree 120.6

Please note that a maximum of 3 cu's of the following may be used in the NS teaching area:
Art History 252.6
Art History 253.3
Art History 255.3
Art History 323.3
Art History 358.3
Art History 340.3
Art History 345.3
Art History 355.3
Art History 418.3
Art History 455.3
Secondary Teaching Area 1: Choose 2418 additional credit units from the following:
Secondary Teaching Area 2: Choose 159 additional credit units from the following:

## May contain:

NS 200:499
History 263.6 (Formerly HIST 222)
History 264.3
History 265.3
Political Studies 222.3
Political Studies 322.3
Political Studies 323.3
Sociology 219.3
Sociology 319.3
Sociology 320.3
Sociology 341.3

Please note that a maximum of 6 credit units of the following may be used as part of the NS teaching area:
Cree 101.6
Cree 110.3
Cree 120.6

Please note that a maximum 3 cu's of the following may be used in the NS teaching area:
Art History 252.6
Art History 253.3

Art History 255.3
Art History 323.3
Art History 358.3
Art History 340.3
Art History 345.3
Art History 355.3
Art History 418.3
Art History 455.3

Further Teaching area updates 2015-16:

## Home Economics

Year 1 \& Year 2-60 credit units

- HED 111.3
- HED 142.3
- HED 222.3
- HED 223.3
- HED 232.3
- HED 313.3
- HED 431.3
- $\underline{\text { HSC } 120.3}$ or HLTH 100.3 or NUTR 120.3


## Social Sciences/Social Studies

Please note that any 100 level course taken after the first 6 credit units will be counted as a senior course. Also note: At least 6 credit units of the total 18 credit units must include Canadian content. HIST courses with Canadian content are: HIST 125.3, HIST 151.3, HIST 152.3, HIST 253.3, HIST 255.3, HIST 256.3, HIST 257.3, HIST 258.3, HIST 259.3, HIST 260.3, HIST 263.6, HIST 264.3, HIST 265.3, HIST 266.3, HIST 310.3, HIST 350.3, HIST 353.3, HIST 361.3, HIST 363.3, HIST 364.3, HIST 365.3, HIST 410.3, HIST 450.6, HIST 464.6, HIST 466.3, HIST 492.6; ECON course with Canadian content is: ECON 231.3; GEOG courses with Canadian content are: GEOG 202.3, GEOG 204.3, GEOG 381.3, GEOG 386.3, PLAN 342.3, PLAN 343.3, PLAN 442.3; POLS courses with Canadian content are: POLS 204.3, POLS 205.3, POLS 222.3, POLS 225.3, POLS 226.3, POLS 303.3, POLS 304.3, POLS 305.3, POLS 306.3, POLS 307.3, POLS 322.3, POLS 323.3, POLS 349.3, POLS 375.3, POLS 376.3, POLS 404.3, POLS 405.3, POLS 422.3, POLS 424.3, POLS 425.3; SOC courses with Canadian content are: SOC 203.3, SOC 204.3, SOC 219.3, SOC 227.6, SOC 244.3, SOC 246.3, SOC 319.3; all NS courses are acceptable except NS 221.3 and NS 272.3.

Choose 6 credit units from the following:

- COMM 347.3
- 100-Level, 200-Level, 300-Level or 400-Level NS Courses
- SOC 203.3
- SOC 219.3
- SOC 320.3
- SOC 341.3


## Choose 6 credit units from the following:

- NS 271.3
- NS 2801. 36
- NS 2810.63
- 100-Level, 200-Level, 300-Level or 400-Level HIST Courses

Choose 12 credit units from the following:

- 100-Level, 200-Level, 300-Level or 400-Level ANTH Courses
- 100-Level, 200-Level, 300-Level or 400-Level ECON Courses
- 100-Level, 200-Level, 300-Level or 400-Level HIST Courses
- 100-Level, 200-Level, 300-Level or 400-Level NS Courses
- 100-Level, 200-Level, 300-Level or 400-Level POLS Courses
- 100-Level, 200-Level, 300-Level or 400-Level PSY Courses
- 100-Level, 200-Level, 300-Level or 400-Level RLST Courses
- 100-Level, 200-Level, 300-Level or 400 -Level SOC Courses
- 100-Level, 200-Level, 300-Level or 400-Level WGST Courses
- CLAS 110.3
- CLAS 111.3
- CLAS 220.3
- CLAS 225.3
- CLAS 240.3
- CLAS 242.3
- CLAS 247.3
- CLAS 248.3
- GEOG 130.3
- GEOG 202.3
- GEOG 204.3
- GEOG 208.3
- GEOG 240.3
- GEOG 340.3
- GEOG 364.3
- GEOG 381.3
- GEOG 385.3
- GEOG 386.3
- GEOG 392.3
- GEOG 486.3
- GEOG 491.3
- PLAN 341.3
- PLAN 342.3
- PLAN 343.3
- PLAN 346.3
- PLAN 350.3
- PLAN 442.3
- PLAN 446.3

Elementary Science Teaching area requirements:
Please note that PLSC 214.3 cannot be used to fulfill this requirement. Also, please note that any 100 -level course taken after the first 6 credit units will be counted as a senior course.

## Choose 18 credit units from the following:

- 200-Level, 300-Level or 400-Level ACB Courses
- 100-Level, 200-Level, 300-Level or 400-Level ARCH Courses
- 100-Level, 200-Level, 300-Level or 400 -Level ASTR Courses
- 200-Level, 300-Level or 400 -Level BIOC Courses
- 100-Level, 200-Level, 300-Level or 400-Level BIOL Courses
- 100-Level, 200-Level, 300-Level or 400-Level BMSC Courses
- 100-Level, 200-Level, 300-Level or 400-Level CHEM Courses
- 100-Level, 200-Level, 300-Level or 400 -Level CMPT Courses
- 100-Level, 200-Level, 300-Level or 400 -Level GEOL Courses
-     - 100-Level, 200-Level, 300-Level or 400-Level HSC Courses
- 100-Level, 200-Level, 300-Level or 400-Level MCIM Courses
- 100-Level, 200-Level, 300-Level or 400-Level PHYS Courses
- 100-Level, 200-Level, 300-Level or 400 -Level PLSC Courses
- CE 212.3
- CE 315.3
- CE 317.3
- CE 321.3
- CE 415.3
- CE 416.3
- CE 417.3
- CE 418.3
- CE 463.3
- CE 466.3
- CE 470.3
- CHE 201.3
- CHE 454.3
- EP 225.3
- EP 370.3
- EP 421.3
- EVSC 210.3
- EVSC 220.3
- EVSC 380.3
- EVSC 420.3
- EVSC 430.3
- GE 213.3
- GE 226.3
- GEOG 120.3
- GEOG 125.3
- GEOG 233.3
- GEOG 235.3
- GEOG 271.3
- GEOG 280.3
- GEOG 322.3
- GEOG 323.3
- GEOG 325.3
- GEOG 328.3
- GEOG 335.3
- GEOG 351.3
- GEOG 423.3
- GEOG 490.3
- GEOE 475.3
- GEOL 282.3
- GEOL 334.3
- GEOL 335.3
- HSC 350.3
- ME 215.3
- ME 227.3
- NUTR 120.3
- PHPY 301.3
- PHPY 302.3
- PHPY 303.3
- PHPY 304.3
- PHPY 305.3
- PHPY 306.3
- PHPY 307.3
- PHPY 401.3
- PHPY 403.3
- PHPY 405.3
- PHPY 432.6
- SLSC 273.3
- TOX 300.3


## College of Graduate Studies and Research

The curricular revisions listed below were approved through the Graduate Academic Affairs Committee and are now submitted to the University Course Challenge for approval.
University Course Challenge - November 2014

## Course Revision

Label and number of course: Current: VSAC 868.6
Proposed: VSAC 878.3
Title of course: Current: Advanced Anesthesia Proposed: Small Animal Anesthesia

## Prerequisite Current. DVM

Proposed: An undergraduate degree in veterinary medicine
Calendar description Current: Advanced veterinary anesthesiology. Subjects include anesthetic equipment, pain control pharmacology of anesthetic agents, mechanisms of anesthesia and the effects of anesthetic agents on the various body systems. Anesthetic techniques for specific body systems and disease conditions will also be discussed.

Proposed: The course includes pharmacology of anesthetic and related drugs for small animal use, pathophysiology and anesthesia for procedures and disease states encountered in small animals. Anesthetic complications pertinent to small animal anesthesia and anesthetic equipment are included. The course includes pain physiology and prevention of pain in small animals.
Rationale: This course was originally set up over 20 years ago. The course contains material which does not match the current needs of the graduate students who take this course and whose focus is in other specialties (surgery, medicine, dentistry. exotic animals). The course can be condensed to provide more focussed and relevant material to these graduates and the more detailed material more applicable to an anesthesia graduate moved into another new course. The 4 weeks of clinical work will also be removed as it is becoming increasingly difficult for the student to obtain the time required to work with the anesthesia section for an uninterrupted period. This part of the course has become non-productive and difficult to effectively manage.

## New Courses

## ENVS 813.3: Numerical Modeling for Environmental Scientists and Engineers

The purpose of this course is to provide graduate students with a set of modelling skills to allow them to develop their own numerical models to solve a range of hydrological and hydrogeological problems. The course requires a basic understanding of groundwater flow and transport processes. A particular set of numerical methods for solving sets of partial differential equations are introduced to the student. Models are written in MATLAB using ODE solvers. Specific applications include models for rainfall-runoff simulation, water supplies in aquifers, contamination in aquifers, and water and energy balances in soils. This will also provide the student with an appreciation of how widely used commercial and non-commercial software (such as USGS MODFLOW) works and can be used effectively. The models help the student to think through the physical processes and interpret field data. The course also aims to provide the student with an ability to critically assess results from modelling studies which they will be faced with throughout their career.

Prerequisite: Enrolment in a graduate program in the School of Environment and Sustainability or permission of the Instructor
Instructor: Andrew Ireson, PhD
Rationale: As an 898, the course has been popular with students, getting around 17 students enrolled each year mainly from SENS and Engineering, but also from other units such as Geology and Soil Science. This course fills a gap in teaching of water related topics at the $U$ of $S$, in that it is the only course explicitly focusing on modelling. Moreover, the course is designed to be interdisciplinary, with methods that can be used in other quantitative disciplines in the sciences and engineering.

## ENVS 832.3: Risk Assessment and Negotiation of Environmental Issues

The class will be taught in an open format using cLassic (e.g. Lectures by instructors and guest speakers and interactive (group discussions; student projects) elements. As the aim of the course is to expose students to the different view-points and approaches used by the different stakeholders typically involved with the negotiation and assessment of environmental issues, several experts from Local, provincial or federal agencies as well as experts in the areas of environmental journalism, law, and industry will give presentations on specific topics during approximately $10 \%$ of the Lecture periods. This not only done for the transfer of technical information, but also to provide students with the opportunity to meet role models from different fields and to discuss and ask questions about career opportunities in industry, government agencies, and non-government organizations (NGOs). Furthermore, an overview of the concept of risk assessment will be given, and similarities and differences between human and environmental risk assessments wilt be explored.
Instructors: Markus Hecker, PhD; Paul Jones, PhD
Rationale: This course will provide critical information and teach essential skills to students that are working in the field of environmental risks assessment and management. It will supplement current courses in the field of environmental risk assessment and environmental studies As these topics and the associated learning outcomes are of interest to students from numerous units across the UofS that work in the field of environmental studies such as SENS, TOX, LAW, ENG, BIOL etc, this course will fill a significant niche at the UofS This is supported by the large enrolments this class had experienced when it was taught as a special topics course in T2 2011/2012 and T1 2013/2014.

## ME 828.3: Design and Fabrication of Tissue Scaffolds

This course is to provide students with advanced knowledge on design and fabrication of scaffolds for various tissue engineering applications. Topics include: introduction to tissue engineering and bio-fabrication, scaffold mechanical properties, scaffold degradation, scaffold biocompatibility, scaffold surface properties, scaffold design, scaffold fabrication, biofabrication, controlled release strategies, bioreactors, and vascularization strategies. Prerequisite: Permission of the instructor is required.

The curricular revisions listed below were approved by Graduate Council and are now submitted to the University Course Challenge for information.

## Direct Entry PhD Admission option in Applied Microbiology

## Admission Requirements

With the recommendation of the unit, direct entry Ph.D. admission is available to exceptionally strong students, who show great promise in terms of academic accomplishments and potential for research.
> a four-year honours, or equivalent, from a recognized university in a relevant academic discipline in an academic discipline relevant to the proposed field of study
> a cumulative weighted average of at least a $80 \%$ ( $U$ of S grade system equivalent) in the last two years of full-time undergraduate study (i.e. 60 credit units of course work)
> Language Proficiency Requirements: Proof of English proficiency may be required for international applicants and for applicants whose first language is not English. See the College of Graduate Studies and Research Academic Information and Policies in this Catalogue for more information

## Degree Requirements

Students must maintain continuous registration in the 996 course.
$>$ At least 9 credit units of course work at the graduate level must be successfully completed in the first year of the program.
> Within the first year of the program, successfully complete a Ph.D. Qualifying Examination that is at least as rigorous as the defence for a Master's thesis in the program area.
> GSR 960
> GSR 961 if research involves human subjects
> GSR 962 if research involves animal subjects
$>$ A minimum of 12 credit units at the 800 -level
$>990$
$>996$
> Pass a comprehensive examination, after completing the required course work, and prior to focusing on their research and doctoral thesis.
> Write and successfully defend a thesis based on original investigation.

## Direct Entry PhD Admission option in Food Science

## Admission Requirements

With the recommendation of the unit, direct entry Ph.D. admission is available to exceptionally strong students, who show great promise in terms of academic accomplishments and potential for research.
> a four-year honours, or equivalent, from a recognized university in a relevant academic discipline in an academic discipline relevant to the proposed field of study
> a cumulative weighted average of at least a $80 \%$ (U of S grade system equivalent) in the last two years of full-time undergraduate study (i.e. 60 credit units of course work)
> Language Proficiency Requirements: Proof of English proficiency may be required for international applicants and for applicants whose first language is not English. See the College of Graduate Studies and Research Academic Information and Policies in this Catalogue for more information
Degree Requirements
Students must maintain continuous registration in the 996 course.
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$>$ GSR 960
$>$ GSR 961 if research involves human subjects
$>$ GSR 962 if research involves animal subjects
$>$ A minimum of 12 credit units at the 800 -level
$>990$
$>996$
> Pass a comprehensive examination, after completing the required course work, and prior to focusing on their research and doctoral thesis.
$>$ Write and successfully defend a thesis based on original investigation.

| New Course | LAW 411.3 Drinking and Driving in the Criminal Justice <br> System <br> The course will provide an overview and introduction to the law of <br> drinking and driving in Canada, Emphasis will be placed on the <br> statutory requirements of drinking and driving, as well as the <br> Charter-protected interest of the accused including, but not limited <br> to, right to counsel (section 10(b)), search and seizure (section 8) <br> and arbitrary detention (section 9). The various Charter remedies <br> available pursuant to sections 24(1) and 24(2) will also be <br> explored. The course will be considered in both an academic and <br> practical context. Discussion will include balancing the interests <br> of the accused versus the protection of the public from drunk <br> drivers. The course will also examine the sentencing regime for |
| :--- | :--- |
|  | both occasional and chronic offenders. |
| Rationale | Prerequisites: Law 351 or Law 423 or permission of instructor. <br> To add to and complement the existing array of course offerings. <br> Contact Person |
| Consultation <br> Approval Date | Instructor - Dorinda Stahl |
| Consultation within the College |  |

New Course

## Rationale <br> Contact Person <br> Consultation <br> Approval Date

## LAW 435.3 Law and Economics

This seminar is an examination of various concepts which are often considered part of the subfield "law and economics". Each week, we meet to discuss these components and debate their implications upon all levels of legal argumentation in both Canadian and international jurisdictions. Topics include Rational Choice Theory, Game Theory, Neuroeconomics, Public Choice modulations, Political Economy, Behavioural Law and Economics, Public Administration, and Rent Seeking. This course is constructed so that no previous background in economics is required.
Prerequisite: None.
To add to and complement the existing array of course offerings.
Instructor - Christopher Donald
Consultation within the College
October 27, 2014

| New Course | LAW 464.3 Davies Corporate/Securities Moot <br> The Davies Corporate/Securities Law Moot provides an <br> opportunity for students to debate current legal issues in corporate <br> and securities law. Students will research the issues and then <br> engage in written and oral advocacy. Most of the work will occur <br> in January and February prior to the moot in Toronto in late |
| :--- | :--- |
|  | February/early March. |
| Prerequisite or Co-requisite: Law 361. Note: Law 401 and |  |
| Law 461 are also recommended. |  |
| Rationale | To add to and complement the existing array of course offerings. <br> Contact Person <br> Consultation |
| Instructor - Michael Wright |  |
| Consultation within the College |  |

