



FACULTY OF SCIENCE

COUNCIL OF THE FACULTY OF SCIENCE

Notice of Meeting
Tuesday, October 9, 2018
at 3:00pm – 4:30pm
306 Lumbers

Agenda

1. Call to Order and Approval of the Agenda
2. Chair's Remarks
3. Approval of Minutes of September 11, 2018 meeting
4. Business Arising
5. Inquiries and Communications
6. Dean's Report to Council
7. Associate Deans' and Bethune Master's Remarks
8. Reports from Science Representatives on Senate Committees
9. Reports from Standing Committees of Council
 - 9.1 Executive Committee
 - Ratification of nominations to Senate and Standing Committees of FSc Council (item for action)
 - 9.2 Curriculum Committee (consent agenda items & one item for action: SC/STS 2222 3.0)
 - 9.3 Academic Policy and Planning Committee: annual report
 - 9.4 Committee on Examinations and Academic Standards: annual report
 - 9.5 Research and Awards Committee: annual report
10. Other Business
 - 10.1 Budget Consultation: Rhonda Lenton, President, Lisa Philipps, Provost and Vice-President Academic & Carol McAulay, Vice-President Finance & Administration
 - 10.2. Update: Procedures for establishing the Search Committee for the new Dean of the Faculty of Science



FACULTY OF SCIENCE

COUNCIL OF THE FACULTY OF SCIENCE

Tuesday, September 11, 2018

at 3:00pm – 4:30pm

306 Lumbers

Minutes

Attendances: P. Delaney, P. Hall, T. Kirchner, M. Marshall, W. Taylor, M. Zabrocki, P. Szeptycki, T. Walter, J. M. Heffernan, G. F. Audette, R. A. Fournier, D. R. Hastie, M. Xu, EJ Janse van Rensburg, G. G. Lavoie, P. G. Potvin, P. L. Lakin-Thomas, A. Mun, M. Xu, D. Hossain, J. Amanatides, M. Hough, J. Elwick, J. Steeves, T. Kelly, R. Tsushima, T. Baumgartner, C. Caputo, P. Wilson, D. Hastie, S. Siyakatshana (Assistant Secretary)

Guests: Brad Sheeller & H. McLellan

1. Call to Order and Approval of Agenda

P. Wilson, Chair of Council called the meeting to order and the Agenda was adopted with a notation that Lisa Philipps, Provost & Vice-President Academic's presentation was changed to be the first item on the Agenda. However, for purposes of these minutes, her presentation is inputted under Other Business.

2. Chair's Remarks

P. Wilson read the Acknowledgement From The Land script, which honours and respect the Aboriginal People.

She welcomed Council members to the first meeting of the academic year. She extended a warm welcome to new members of Council, the Interim Dean, Janse van Rensburg, Associate Dean for Faculty, Don Hastie and Jennifer Steeves, the Associate Dean, Research & Graduate Education.

3. Approval of Minutes of May 8, 2018 meeting

A motion was moved and carried to approve the Minutes with two abstentions.

4. Business Arising

There was no business arising.

5. Inquiries and Communications

Council noted the following Senate Synopsis;

- 646th Senate Synopsis: Meeting of May 24, 2018
- The 647th Senate Synopsis (Expanded): Meeting of June 14, 2018

- Senate Synopsis: Special Meeting of August 2, 2018

6. Dean's Report to Council

The Interim Dean, EJ Janse van Rensburg welcomed Council members to the first meeting. He extended a warm welcome to new faculty members.

He proceeded to thank all Chairs of Department for their outstanding leadership during the past year. He expressed gratitude to Don Hastie and Jennifer Steeves for taking on the roles of Associate Dean.

The Dean reported on the 2018 NSERC Summer Undergraduate Research Conference which was held on August 7, 2018. The following students were awarded prizes:

- 1st prize Nest Mann Award for Poster Presentation was awarded to Avanti Abraham (supervisor: biology Professor Ron Pearlman)
- 1st prize Nest Mann Award for Oral Presentation was awarded to Syed Hassan (supervisor: kinesiology Professor Ali Abdul Aster)

Announcements:

- The Allan I. Carswell Observatory team hosted Mars Extravaganza from July 25 to August 1 on top of the arboretum parking garage.
- \$1.5M gift from the Carswell Family Foundation
- \$3M in total with matching by York University
- Alan I. Carswell Chair for the Public Understanding of Astronomy University Professor and Senior Lecturer Paul Delaney appointed as the inaugural Chair holder.

Three new science communicators in residence for 2018-19:

- Molly Segal, Science Journalist, Residence: Oct.-Nov. 2018
- B. D. Collen, Reporter, Editor & Columnist, Residence: Winter & Fall 2019
- Dan Falk, Science Journalist, Residence: Early 2019

EJ Janse van Rensburg expressed confidence that the enrolment numbers for both undergraduate and graduate students are good. He noted that enrolment numbers were holding steady compared to last year and the admission averages were good. The Dean expressed confidence that given the numbers above, the faculty budget will remain stable.

The Dean extended a warm welcome to new administrative leaders,

- René Fournier, Chair of the Department of Chemistry
- Don Hastie, Associate Dean, Faculty Affairs
- Michael Scheid, Special Advisor to the Dean on Markham Campus Development
- Jennifer Steeves, Associate Dean, Research & Graduate Education

Welcome to new faculty members,

- Stephanie Pugliese, Assistant Lecturer (Division of Natural Science)
- Niko Troje, Professor (Biology)
- Andrew Skelton, Assistant Lecturer (Mathematics & Statistics)
- Conor Douglas, Assistant Professor (Science & Technology Studies)

- Iain Moyle's, Assistant Professor (Mathematics & Statistics)
- Ozzy Mermut, Assistant Professor (Physics & Astronomy)
- Joel Silberberg, Assistant Professor (Physics & Astronomy)

He noted that the other faculty members will be arriving in January 2019.

Welcome to the new administrative staff:

- Nailing Doodnauth, Undergraduate Program Secretary, Department of Biology
- Li Min Eng, Student Recruitment & Program Advisor, International and Distance, Academic Services
- Ruby Mahboob, Faculty Secretary, Mathematics and Statistics
- Felicia Mercier, Science Recruiting Coordinator, Academic Services (*Starting Sept 17*)
- Uzma Muzamal, Laboratory Technician, Department of Biology
- Ashley Nahornick, Educational Development Specialist, Office of the Dean
- Maria Stea, Senior Development Officer, Office of the Dean
- Cora Reist, Manager, Science Engagement Programs, Academic Services
- Kimberly Tran, Manager, Science Engagement Programs, Academic Services

Congratulations to our newly-promoted colleagues:

- Hélène Mialet promoted to associate professor
- Alexey Kuznetsov promoted to full professor
- Jane Heffernan promoted to full professor
- Jean-Paul Paluzzi promoted to associate professor
- Emanuel Rosonina promoted to associate professor
- Jennifer Chen promoted to associate professor

Additional Congratulations to:

- John McDermott (Biology) received Canadian Institutes of Health Research (CIHR) project grant totalling \$661,000 to study the molecular basis of heart disease mechanisms.
- Patrick Hall (Physics & Astronomy) received an NSERC Engage grant in partnership with Medical Confidence to train two graduate students in astrophysics to become healthcare data scientists and to enable new business analytic processes.
- Amenda Chow (Mathematics & Statistics) received an award from the Academic Innovation Fund to develop an experimental math space.
- Katrina Carver, a graduate of Citadel High School in Halifax, N.S., is a recipient of the \$80,000 Schulich Leader Scholarship and will join the Faculty of Science this Fall.

He noted the following upcoming events,

Bryden Alumni Awards

- 2018 Outstanding Achievement - Paul Sanberg, BSc '76,
Senior Vice-President for Research, Innovation & Knowledge Enterprise
Distinguished University Professor of Medicine, Engineering, and Business
University of South Florida
Recent recipients
- 2017 Outstanding Contribution - J. Mark Lievonen, CM BBA '79, MBA '87
Former President, Sanofi Pasteur Limited, an Honorary Doctor of Laws degree
- 2016 Outstanding Achievement - Dr. Catherine Zahn, BSc '74,

- President & CEO, Centre for Addiction and Mental Health
- 2014 Pinnacle Achievement - Nigel Lockyer, BSc '75 Director, Fermilab

The Dean informed Council that fourteen new faculty hires had been approved for the 2019-2020 faculty complement.

He concluded his report by announcing that Biodiversity Conservation in the Twenty-first Century in partnership with Ontario Nature and the Toronto Public Library will hold a Public Lecture Series October 4-27, 2018.

7. Associate Deans' and Bethune Master's Remarks

John Amanatidas updated Council on the academic orientation sessions for the first year students. He stated that the first orientation was well attended and they were now holding a second orientation session to accommodate those who missed the first session. He added that his office was currently in the process of facilitating the student caucus nominations and hoped to have the names ready by early October. He reported on the free first and second year tutoring sessions. He said during the fall session, they would be conducting Math tutorials for those students who were experiencing some challenges. Also, during the reading week, there would be tutorials for students struggling with Mathematics and algebra.

Associate Dean Jennifer Steeves updated Council on Science Graduate Admissions Acceptances as of September 11, 2018. She stated that the overall science acceptances were stable, rising slightly for both the master's level and the doctoral level.

Associate Dean Don Hastie, reminded faculty on the following,

- Notice to retire as per the YUFA Collective Agreement
- Advancement to Candidacy reports due on September 21st
- Those who returned from sabbatical to submit their reports by November 1st
- Reminder to update departmental Search Committee guidelines

8. Reports from Science Representatives on Senate Committees

There were no reports.

9. Reports from Standing Committees of Council

A motion was moved, seconded and carried to ratify nominations of the Standing Committees of Council.

Members of Council noted the annual reports from the Executive Committee; Appeals Committee, Committee on Teaching and Learning, Petitions Committee and Senate (T & P) Review Committee.

10. Other Business

10.1 FSc Dean's Search Committee: Lisa Philipps, Provost & Vice-President Academic

Provost Phillips updated Council on the FSc decanal search. She stated that the Search Committee would comprise of six full time faculty members elected by Council, one staff representative, two student representatives, one undergraduate student, one graduate student, a faculty member from outside Science but who is familiar with Science appointed by the President, a Chair designated by the Provost.

She added that the procedures call for a balance with respect to diversity, gender and demographics. She stressed the need for the⁵Faculty to consider electronic ballots to encourage

larger participation and a speedy process. She articulated the necessary steps in forming the Search Committee. Once the Committee is formed then the first meeting will be scheduled in order to issue the advertisement.

The Provost informed Council that this year she will not be able to chair all the Decanal Searches. Therefore, a Provost designate, Lyndon Martin, Dean of Education, will serve as Chair of the FSc Dean's Search Committee. This decision was made in consultation with the FSc Executive Committee. Administrative support will be provided by her office. The Search will be closed with an option for an open phase at the last stages, once the Committee has chosen the top 2-3 candidates. In this case the candidates are offered the opportunity to meet with Faculty Council. If one candidate does not agree to do so, then the search remains closed. Faculty Council may also elect to keep the search closed. Provost Phillips reiterated the need for strict confidentiality throughout the Search Committee process. Typically the top two candidates are recommended to the President by the search committee, and the final decision is made by the President. Provost Phillips stated that Faculty Council will be provided with regular updates. She is hoping to have the first Search Committee meeting the first week of October and hopefully start conducting interviews in January. She concluded by informing Council that a highly recommended recruitment Search Consultant was already in place. Provost Phillip responded to a few questions from the floor.

10.2 Procedures for establishing the Search Committee for the new Dean of the Faculty of Science

The Chair of Council, P. Wilson, led an extensive follow up discussion on creating procedures for establishing the Search Committee. She provided a detailed overview of the draft document crafted by the Executive Committee (by PowerPoint presentation). She emphasized the need to come up with procedures that align with University procedures as stipulated by the Provost, and to do so as quickly as possible in order to establish the search committee in a timely manner. She stated that the draft document would need to be approved by the Provost's office before the final approval by the Faculty Council. After a very constructive discussion, she agreed to amend the document based on input from Council, and to move the document through the approval stages (Executive, Provost, Council).

The meeting adjourned.

P. Wilson
Chair of Council

S. Siyakatshana
Assistant Secretary of Council

Executive Committee Report to Council

Ratification of Nominations

October 9, 2018

Committee on Teaching and Learning (term 2018 – 2020)

Amanda Liczner

Graduate student, Biology Department

Senate

Don Hastie: member at large

Senate Executive

Paul Szeptycki: Department of Mathematics & Statistics

York University

COUNCIL OF THE FACULTY OF SCIENCE

Report of the Science Curriculum Committee

September 2018

The Faculty of Science Curriculum Committee has reviewed proposals for changes to course information and degree requirements and recommends to the Executive Committee that the following changes be submitted to Council for approval.

Details regarding these proposals (and regarding other minor changes to Calendar/Repository course descriptions and prerequisites which were approved by the Committee but are not reported here) are included in the working papers of September 26, 2018, meeting of the Curriculum Committee, which are on file for your inspection in the Office of the Dean, with all members of the Curriculum Committee or by contacting the Secretary of the Committee at tinari@yorku.ca

Agenda

1.3 Biology

- 1.3.1 Change in course credit exclusion: SC/BIOL 1000 3.0 “Biology I - Cells, Molecular Biology and Genetics”
- 1.3.2 Change in course credit exclusion: SC/BIOL 1001 3.0 “Biology II - Evolution, Ecology, Biodiversity and Conservation Biology”
- 1.3.3 Change in pre-/co-requisite: SC/BIOL 2010 4.0 “Plant Biology”
- 1.3.4 Change in pre-requisite/co-requisite: SC/BIOL 2020 3.0 “Biochemistry”
- 1.3.5 Change in pre/co-requisites: SC/BIOL 2021 3.0 “Cell Biology”
- 1.3.6 Change in pre/co-requisites: SC/BIOL 2030 4.0 “Animals”
- 1.3.7 Change in pre/co-requisites: SC/BIOL 2040 3.0 “Genetics”
- 1.3.8 Change in pre/co-requisites: SC/BIOL 2050 4.0 “Ecology”
- 1.3.9 Change in pre/co-requisites: SC/BIOL 2060 3.0 “Statistics for Biologists”
- 1.3.10 Change in pre/co-requisites: SC/BIOL 2070 3.0 “Research Methods in Cell and Molecular Biology”
- 1.3.11 Change in pre/co-requisites: SC/BIOL 3070 4.0 “Animal Physiology II”
- 1.3.12 Change in calendar description and course credit exclusion: SC/BIOL 2900 3.0 “Clinical Microbiology for Nurses”

1.4 Science and Technology Studies

- 1.4.1 New course: SC/STS 2222 3.0 “Exploring Gender in Science, Technology, Engineering & Mathematics” (*item for action*).
- 1.4.2 Change in course credit exclusion: SC/STS 2210 3.0 “Technology in the Modern World”

- 1.4.3 Change in course credit exclusion: SC/STS 2411 3.0 “Introduction to Science and Technology Studies”
- 1.4.4 Change in course credit exclusion: SC/STS 4501 6.0 “Seminar in Science and Technology Studies”

1.5 Natural Science

Change in course credit exclusion: SC/NATS 1775 6.0 “Technology and Civilization”

Changes to Existing Course

1.3.1

Faculty:

Department:

Date of Submission:

Course Number:

Effective Session:

Course Title:

Type of Change:

- | | |
|--|---|
| <input type="checkbox"/> in pre-requisite(s)/co-requisite(s) in cross-listing in | <input type="checkbox"/> course number/level in degree credit |
| <input type="checkbox"/> exclusion(s) in credit value regularize course (from | <input checked="" type="checkbox"/> Special Topics) |
| <input type="checkbox"/> in title (max. 40 characters for short title) in course | <input type="checkbox"/> format/mode of delivery * in |
| <input type="checkbox"/> Calendar description (max. 40 words or 200 characters) | <input type="checkbox"/> retire/expire course other (please |
| <input type="checkbox"/> specify): | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> |

Change From:

To:

An introduction to major unifying concepts and fundamental principles of biology, including evolution and cell theory. Topics include cells, biological energetics, metabolism, cell division and genetics. The laboratory and lecture components must be passed independently to pass the course.
Prerequisite: OAC Biology or 12U Biology or SC/BIOL 1500 3.00; OAC Chemistry or 12U Chemistry or SC/CHEM 1500 4.00. Course credit exclusions: SC/BIOL 1010 6.00 (prior to Fall 2011), SC/ISCI 1101 3.00.

An introduction to major unifying concepts and fundamental principles of biology, including evolution and cell theory. Topics include cells, biological energetics, metabolism, cell division and genetics. The laboratory and lecture components must be passed independently to pass the course.
Prerequisite: OAC Biology or 12U Biology or SC/BIOL 1500 3.00; OAC Chemistry or 12U Chemistry or SC/CHEM 1500 4.00.
Course credit exclusions: ~~SC/BIOL 1010 6.00 (prior to Fall 2011)~~, SC/ISCI 1101 3.00; **SC/ISCI 1110 6.0.**

Rationale:

This proposal adds a variant of the ISCI Biology course offered in 2017 -2018 as a CCE. Removes BIOL 1010 6.00 as a CCE – the course has not been offered in seven years.

Note: For course proposals involving cross-listings, integrations and degree credit exclusions, approval from all of the relevant Faculties/department is required.
Note: Since one change (such as a change in year level or credit value) may result in several other changes (e.g., to the course description, evaluation, instruction, bibliography, etc.), please submit as many details as possible. If there are several changes, please feel free to use a New Course Proposal Form in order to ensure that all the required information is included.

* Note: If there is a technology component to the course, a statement is required from ATS indicating whether resources are adequate to support the course. Courses converted from face-to-face to an on-line delivery mode should follow the instructions provided on page 4 of the New Course Proposal Form to provide revised 'Course Design' and 'Method of Instruction' information.

Changes to Existing Course

1.3.2

Faculty:

Department:

Date of Submission:

Course Number:

Effective Session:

Course Title:

Type of Change:

- | | |
|--|---|
| <input type="checkbox"/> in pre-requisite(s)/co-requisite(s) in cross-listing in | <input type="checkbox"/> course number/level in degree credit |
| <input type="checkbox"/> exclusion(s) in credit value regularize course (from | <input checked="" type="checkbox"/> Special Topics) |
| <input type="checkbox"/> in title (max. 40 characters for short title) in course | <input type="checkbox"/> format/mode of delivery * in |
| <input type="checkbox"/> Calendar description (max. 40 words or 200 characters) | <input type="checkbox"/> retire/expire course other (please |
| <input type="checkbox"/> specify): | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> |

Change From:

To:

A continuation of SC/BIOL 1000 3.00, exploring major unifying concepts and fundamental principles of biology, building on earlier concepts. Topics include mechanisms of evolution, ecology, a survey of biodiversity and conservation biology. The laboratory and lecture components must be passed independently to pass the course.
Prerequisite: SC/BIOL 1000 3.00.
Course credit exclusions: SC/BIOL 1010 6.00 (prior to Fall 2011); SC/ISCI 1102 3.00.

A continuation of SC/BIOL 1000 3.00, exploring major unifying concepts and fundamental principles of biology, building on earlier concepts. Topics include mechanisms of evolution, ecology, a survey of biodiversity and conservation biology. The laboratory and lecture components must be passed independently to pass the course. Prerequisite: SC/BIOL 1000 3.00. Course credit exclusions: ~~SC/BIOL 1010 6.00 (prior to Fall 2011);~~ SC/ISCI 1102 3.00; **SC/ISCI 1110 6.0.**

Rationale:

This proposal adds a variant of the ISCI Biology course offered in 2017-2018 as a CCE. Removes BIOL 1010 6.00 as a CCE – the course has not been offered in seven years.

Note: For course proposals involving cross-listings, integrations and degree credit exclusions, approval from all of the relevant Faculties/department is required.
Note: Since one change (such as a change in year level or credit value) may result in several other changes (e.g., to the course description, evaluation, instruction, bibliography, etc.), please submit as many details as possible. If there are several changes, please feel free to use a New Course Proposal Form in order to ensure that all the required information is included.

* Note: If there is a technology component to the course, a statement is required from ATS indicating whether resources are adequate to support the course. Courses converted from face-to-face to an on-line delivery mode should follow the instructions provided on page 4 of the New Course Proposal Form to provide revised 'Course Design' and 'Method of Instruction' information.

Changes to Existing Course

1.3.3

Faculty:

Department:

Date of Submission:

Course Number:

Effective Session:

Course Title:

Type of Change:

- | | |
|---|---|
| <input checked="" type="checkbox"/> in pre-requisite(s)/co-requisite(s) in cross-listing in | <input type="checkbox"/> course number/level in degree credit |
| <input type="checkbox"/> exclusion(s) in credit value regularize course (from | <input type="checkbox"/> Special Topics) |
| <input type="checkbox"/> in title (max. 40 characters for short title) in course | <input type="checkbox"/> format/mode of delivery * in |
| <input type="checkbox"/> Calendar description (max. 40 words or 200 characters) | <input type="checkbox"/> retire/expire course other (please |
| <input type="checkbox"/> specify): | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> |

Change From:

To:

Current advances in plant biology research, highlighting plant structure, physiology, development and diversity. Prerequisite: SC/BIOL 1010 6.00 or both SC/BIOL 1000 3.00 and SC/BIOL 1001 3.00 or permission of the Instructor.

Current advances in plant biology research, highlighting plant structure, physiology, development and diversity. Prerequisite: ~~SC/BIOL 1010 6.00 or Both SC/BIOL 1000 3.00 and SC/BIOL 1001 3.00, or SC/ISCI 1110 6.00, or both SC/ISCI 1101 3.00 and SC/ISCI 1102 3.00.~~ or permission of the Instructor.

Rationale:

This course change allows the ISCI Biology courses (equivalent to the traditional first year biology courses) to be used as prerequisite for BIOL 2010, and removes BIOL 1010 6.00 which has not been offered in seven years.

Note: For course proposals involving cross-listings, integrations and degree credit exclusions, approval from all of the relevant Faculties/department is required. Note: Since one change (such as a change in year level or credit value) may result in several other changes (e.g., to the course description, evaluation, instruction, bibliography, etc.), please submit as many details as possible. If there are several changes, please feel free to use a New Course Proposal Form in order to ensure that all the required information is included.

* Note: If there is a technology component to the course, a statement is required from ATS indicating whether resources are adequate to support the course. Courses converted from face-to-face to an on-line delivery mode should follow the instructions provided on page 4 of the New Course Proposal Form to provide revised 'Course Design' and 'Method of Instruction' information.

Changes to Existing Course

1.3.4

Faculty:

Department:

Biology

Date of Submission:

Sept. 2018

Course Number:

SC/BIOL 2020 3.00 SC/BCHM
2020 3.00

Effective Session:

Summer 2019

Course Title:

Biochemistry

Type of Change:

- | | |
|---|---|
| <input checked="" type="checkbox"/> in pre-requisite(s)/co-requisite(s) in cross-listing in | <input type="checkbox"/> course number/level in degree credit |
| <input type="checkbox"/> exclusion(s) in credit value regularize course (from | <input type="checkbox"/> Special Topics) |
| <input type="checkbox"/> in title (max. 40 characters for short title) in course | <input type="checkbox"/> format/mode of delivery * in |
| <input type="checkbox"/> Calendar description (max. 40 words or 200 characters) | <input type="checkbox"/> retire/expire course other (please |
| <input type="checkbox"/> specify): | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> |

Change From:

To:

A study of the cell biology and biochemistry of biomolecules. Topics include intermediary metabolism related to bioenergetics, including the biology of mitochondria and chloroplasts, protein structure and function, nucleic acid replication, gene expression, chromosome organization and recombinant DNA technology. Prerequisites: Both SC/BIOL 1000 3.00 and SC/BIOL 1001 3.00 or SC/BIOL 1010 6.00; both SC/CHEM 1000 3.00 and SC/CHEM 1001 3.00, or SC/CHEM 1000 6.00. Course credit exclusions: SC/BCHM 2020 4.00 (prior to Winter 2012), SC/CHEM 2050 4.00. Previously offered as: SC/BIOL 2020 4.00.

A study of the cell biology and biochemistry of biomolecules. Topics include intermediary metabolism related to bioenergetics, including the biology of mitochondria and chloroplasts, protein structure and function, nucleic acid replication, gene expression, chromosome organization and recombinant DNA technology. **Not open to Chemistry majors.** Prerequisites: (1) Both SC/BIOL 1000 3.00 and SC/BIOL 1001 3.00, or ~~SC/BIOL 1010 6.00~~, or SC/ISCI 1110 6.00, or both SC/ISCI 1101 3.00 and SC/ISCI 1102 3.00; and (2) both SC/CHEM 1000 3.00 and SC/CHEM 1001 3.00, or SC/CHEM 1000 6.00, or both SC/ISCI 1201 3.00 and SC/ISCI 1202 3.00, or SC/ISCI 1210 6.00. Course credit exclusions: ~~SC/BCHM 2020 4.00 (prior to Winter 2012), SC/CHEM 2050 4.00. Previously offered as: SC/BIOL 2020 4.00.~~

Rationale:

This proposal allows the ISCI Biology and Chemistry courses (equivalent to the traditional first year biology courses) to be used as prerequisite for BIOL 2020. Modified list of prerequisites to make it clearer to students that both BIOL and CHEM first year courses are required. Removes references to BIOL 1010 6.00, and BCHM 2020 4.00 and BIOL 2020 4.0 which have not been offered in seven years.

Note: For course proposals involving cross-listings, integrations and degree credit exclusions, approval from all of the relevant Faculties/department is required.
Note: Since one change (such as a change in year level or credit value) may result in several other changes (e.g., to the course description, evaluation, instruction, bibliography, etc.), please submit as many details as possible. If there are several changes, please feel free to use a New Course Proposal Form in order to ensure that all the required information is included.

Changes to Existing Course

1.3.5

Faculty:

Department:

Biology

Date of Submission:

Sept. 2018

Course Number:

SC/BIOL 2021 3.00 SC/BCHM
2021 3.00

Effective Session:

Summer 2019

Course Title:

Cell Biology

Type of Change:

- | | |
|---|---|
| <input checked="" type="checkbox"/> in pre-requisite(s)/co-requisite(s) in cross-listing in | <input type="checkbox"/> course number/level in degree credit |
| <input type="checkbox"/> exclusion(s) in credit value regularize course (from | <input type="checkbox"/> Special Topics) |
| <input type="checkbox"/> in title (max. 40 characters for short title) in course | <input type="checkbox"/> format/mode of delivery * in |
| <input type="checkbox"/> Calendar description (max. 40 words or 200 characters) | <input type="checkbox"/> retire/expire course other (please |
| <input type="checkbox"/> specify): | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> |

Change From:

To:

Prerequisite: One of the following: (1) SC/BIOL 2020 3.00, (2) SC/BCHM 2020 3.00, or (3) SC/BIOL 1000 3.00 and SC/BIOL 1001 3.00 and SC/CHEM 2050 4.00. Course credit exclusions: SC/BIOL 2021 4.00, SC/BCHM 2021 4.00.

Prerequisite: One of the following: (1) SC/BIOL 2020 3.00, or (2) SC/BCHM 2020 3.00, or (3) SC/BIOL 1000 3.00 and SC/BIOL 1001 3.00 and SC/CHEM 2050 4.00, or (4) SC/ISCI 1110 6.00 and SC/CHEM 2050 4.00, or (5) SC/ISCI 1101 3.00 and SC/ISCI 1102 3.00 and SC/CHEM 2050 4.00. Course credit exclusions: SC/BIOL 2021 4.00, SC/BCHM 2021 4.00.

Rationale:

This proposal allows the ISCI Biology courses (equivalent to the traditional first year biology courses) to be used as prerequisite for BIOL 2021.

Note: For course proposals involving cross-listings, integrations and degree credit exclusions, approval from all of the relevant Faculties/department is required.
Note: Since one change (such as a change in year level or credit value) may result in several other changes (e.g., to the course description, evaluation, instruction, bibliography, etc.), please submit as many details as possible. If there are several changes, please feel free to use a New Course Proposal Form in order to ensure that all the required information is included.

* Note: If there is a technology component to the course, a statement is required from ATS indicating whether resources are adequate to support the course. Courses converted from face-to-face to an on-line delivery mode should follow the instructions provided on page 4 of the New Course Proposal Form to provide revised 'Course Design' and 'Method of Instruction' information.

Changes to Existing Course

1.3.6

Faculty:

Department:

Biology

Date of Submission:

Sept. 2018

Course Number:

SC/BIOL 2030 4.00

Effective Session:

Summer 2019

Course Title:

Animals

Type of Change:

- | | |
|--|---|
| <input checked="" type="checkbox"/> in pre-requisite(s)/co-requisite(s) in | <input type="checkbox"/> course number/level in degree credit |
| <input type="checkbox"/> exclusion(s) in credit value regularize course (from | <input type="checkbox"/> Special Topics) |
| <input type="checkbox"/> in title (max. 40 characters for short title) in course | <input type="checkbox"/> format/mode of delivery * in |
| <input type="checkbox"/> Calendar description (max. 40 words or 200 characters) | <input type="checkbox"/> retire/expire course other (please |
| <input type="checkbox"/> specify): | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> |

Change From:

To:

A study of the diversity of animals, their structure, physiology and evolution. Prerequisite: SC/BIOL 1010 6.00 or SC/BIOL 1000 3.00 and SC/BIOL 1001 3.00. Previously offered as: SC/BIOL 2030 5.00.

A study of the diversity of animals, their structure, physiology and evolution. Prerequisite: ~~SC/BIOL 1010 6.00, or Both~~ SC/BIOL 1000 3.00 and SC/BIOL 1001 3.00, or SC/ISCI 1110 6.00, or both SC/ISCI 1101 3.00 and SC/ISCI 1102 3.00. Previously offered as: ~~SC/BIOL 2030 5.00.~~

Rationale:

This proposal allows the ISCI Biology courses (equivalent to the traditional first year biology courses) to be used as prerequisite for BIOL 2030, and removes BIOL 1010 6.00 which has not been offered in seven years. Removing "previously offered as" – the 5.00 version has not been offered in more than a decade.

Note: For course proposals involving cross-listings, integrations and degree credit exclusions, approval from all of the relevant Faculties/department is required.
 Note: Since one change (such as a change in year level or credit value) may result in several other changes (e.g., to the course description, evaluation, instruction, bibliography, etc.), please submit as many details as possible. If there are several changes, please feel free to use a New Course Proposal Form in order to ensure that all the required information is included.

* Note: If there is a technology component to the course, a statement is required from ATS indicating whether resources are adequate to support the course. Courses converted from face-to-face to an on-line delivery mode should follow the instructions provided on page 4 of the New Course Proposal Form to provide revised 'Course Design' and 'Method of Instruction' information.

Changes to Existing Course

1.3.7

Faculty:

Department:	Biology	Date of Submission:	Sept. 2018
Course Number:	SC/BIOL 2040 3.00	Effective Session:	Summer 2019
Course Title:	Genetics		

Type of Change:

<input checked="" type="checkbox"/> in pre-requisite(s)/co-requisite(s) in cross-listing in	<input type="checkbox"/> course number/level in degree credit
<input type="checkbox"/> exclusion(s) in credit value regularize course (from	<input type="checkbox"/> Special Topics)
<input type="checkbox"/> in title (max. 40 characters for short title) in course	<input type="checkbox"/> format/mode of delivery * in
<input type="checkbox"/> Calendar description (max. 40 words or 200 characters)	<input type="checkbox"/> retire/expire course other (please
<input type="checkbox"/> specify):	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

Change From:

To:

<p>A study of the organization and behaviour of genes and chromosomes and their roles in cells, organisms, populations and evolution. Prerequisite: Both SC/BIOL 1000 3.00 and SC/BIOL 1001 3.00 or SC/BIOL 1010 6.00. Previously offered as: SC/BIOL 2040 4.00.</p>	<p>A study of the organization and behaviour of genes and chromosomes and their roles in cells, organisms, populations and evolution. Prerequisite: Both SC/BIOL 1000 3.00 and SC/BIOL 1001 3.00, or SC/BIOL 1010 6.00 or SC/ISCI 1110 6.00, or both SC/ISCI 1101 3.00 and SC/ISCI 1102 3.00. Previously offered as: SC/BIOL 2040 4.00.</p>
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Rationale:

This proposal allows the ISCI Biology courses (equivalent to the traditional first year biology courses) to be used as prerequisite for BIOL 2040, and removes BIOL 1010 6.00 which has not been offered in seven years.

Note: For course proposals involving cross-listings, integrations and degree credit exclusions, approval from all of the relevant Faculties/department is required.
 Note: Since one change (such as a change in year level or credit value) may result in several other changes (e.g., to the course description, evaluation, instruction, bibliography, etc.), please submit as many details as possible. If there are several changes, please feel free to use a New Course Proposal Form in order to ensure that all the required information is included.

* Note: If there is a technology component to the course, a statement is required from ATS indicating whether resources are adequate to support the course. Courses converted from face-to-face to an on-line delivery mode should follow the instructions provided on page 4 of the New Course Proposal Form to provide revised 'Course Design' and 'Method of Instruction' information.

Changes to Existing Course

1.3.8

Faculty:

Department:

Date of Submission:

Course Number:

Effective Session:

Course Title:

Type of Change:

- | | |
|---|---|
| <input checked="" type="checkbox"/> in pre-requisite(s)/co-requisite(s) in cross-listing in | <input type="checkbox"/> course number/level in degree credit |
| <input type="checkbox"/> exclusion(s) in credit value regularize course (from | <input type="checkbox"/> Special Topics) |
| <input type="checkbox"/> in title (max. 40 characters for short title) in course | <input type="checkbox"/> format/mode of delivery * in |
| <input type="checkbox"/> Calendar description (max. 40 words or 200 characters) | <input type="checkbox"/> retire/expire course other (please |
| <input type="checkbox"/> specify): | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> |

Change From:

To:

A study of the interactions between organisms and their abiotic environments, presented in an evolutionary context. Includes processes of evolution, ecosystems and communities, competition, predation, population ecology and current environmental problems such as habitat loss and extinction. Prerequisite: SC/BIOL 1010 6.00 or SC/BIOL 1000 3.00 and SC/BIOL 1001 3.00. Prerequisite or corequisite: SC/BIOL 2060 3.00. Previously offered as: SC/BIOL 2050 3.00.

A study of the interactions between organisms and their abiotic environments, presented in an evolutionary context. Includes processes of evolution, ecosystems and communities, competition, predation, population ecology and current environmental problems such as habitat loss and extinction. Prerequisite: ~~SC/BIOL 1010-6.00~~ or Both SC/BIOL 1000 3.00 and SC/BIOL 1001 3.00, or SC/ISCI 1110 6.00, or both SC/ISCI 1101 3.00 and SC/ISCI 1102 3.00. Prerequisite or corequisite: SC/BIOL 2060 3.00. Previously offered as: SC/BIOL 2050 3.00.

Rationale:

This proposal allows the ISCI Biology courses (equivalent to the traditional first year biology courses) to be used as prerequisite for BIOL 2050, and removes BIOL 1010 6.00 which has not been offered in seven years. Removing "previously offered as" – the 3.00 version has not been offered in more than a decade.

Note: For course proposals involving cross-listings, integrations and degree credit exclusions, approval from all of the relevant Faculties/department is required.
 Note: Since one change (such as a change in year level or credit value) may result in several other changes (e.g., to the course description, evaluation, instruction, bibliography, etc.), please submit as many details as possible. If there are several changes, please feel free to use a New Course Proposal Form in order to ensure that all the required information is included.

* Note: If there is a technology component to the course, a statement is required from ATS indicating whether resources are adequate to support the course. Courses converted from face-to-face to an on-line delivery mode should follow the instructions provided on page 4 of the New Course Proposal Form to provide revised 'Course Design' and 'Method of Instruction' information.

Changes to Existing Course

1.3.9

Faculty:

Department:

Date of Submission:

Course Number:

Effective Session:

Course Title:

Type of Change:

- | | |
|---|---|
| <input checked="" type="checkbox"/> in pre-requisite(s)/co-requisite(s) in cross-listing in | <input type="checkbox"/> course number/level in degree credit |
| <input type="checkbox"/> exclusion(s) in credit value regularize course (from | <input type="checkbox"/> Special Topics) |
| <input type="checkbox"/> in title (max. 40 characters for short title) in course | <input type="checkbox"/> format/mode of delivery * in |
| <input type="checkbox"/> Calendar description (max. 40 words or 200 characters) | <input type="checkbox"/> retire/expire course other (please |
| <input type="checkbox"/> specify): | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> |

Change From:

To:

<p>Statistical problem solving for biologists. Basic theory for the analysis of parametric and non-parametric data. A project period is devoted to discussion and solving of statistical problems. One project period. Prerequisites: LE/CSE 1520 3.00, or LE/CSE 1530 3.00, or LE/CSE 1540 3.00, or LE/EECS 1520 3.00, or LE/EECS 1530 3.00, or LE/EECS 1540 3.00 ; SC/MATH 1014 3.00 or SC/MATH 1505 6.00 or both SC/MATH 1013 3.00 and SC/MATH 1025 3.00 or equivalent. Course Credit Exclusions: AP/ECON 2500 3.00, AP/ECON 3210 3.00, AP/ECON 3480 3.00, AP/ECON 3500 3.00, AP/GEOG 2420 3.00 or SC/GEOG 2420 3.00, HH/KINE 2050 3.00, HH/KINE 3150 3.00, SC/MATH 1131 3.00, SC/MATH 2560 3.00, SC/MATH 2565 3.00, SC/MATH 2570 3.00, AP/POLS 3300 6.00, HH/PSYC 2020 6.00, HH/PSYC 2021 3.00, AP/SOCI 3030 6.00.</p>	<p>Statistical problem solving for biologists. Basic theory for the analysis of parametric and non-parametric data. A project period is devoted to discussion and solving of statistical problems. One project period. Prerequisites: LE/CSE 1520 3.00, or LE/CSE 1530 3.00, or LE/CSE 1540 3.00, or LE/EECS 1520 3.00, or LE/EECS 1530 3.00, or LE/EECS 1540 3.00; and SC/MATH 1014 3.00, or SC/MATH 1505 6.00, or both SC/MATH 1013 3.00 and SC/MATH 1025 3.00, or ISCI 1410 6.00, or both ISCI 1401 3.00 and 1402 3.00, or both ISCI 1401 3.00 and MATH 1025 3.00, or equivalent. Course Credit Exclusions: AP/ECON 2500 3.00, AP/ECON 3210 3.00, AP/ECON 3480 3.00, AP/ECON 3500 3.00, AP/GEOG 2420 3.00 or SC/GEOG 2420 3.00, HH/KINE 2050 3.00, HH/KINE 3150 3.00, SC/MATH 1131 3.00, SC/MATH 2560 3.00, SC/MATH 2565 3.00, SC/MATH 2570 3.00, AP/POLS 3300 6.00, HH/PSYC 2020 6.00, HH/PSYC 2021 3.00, AP/SOCI 3030 6.00.</p>
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Changes to Existing Course

1.3.10

Faculty:

Department:

Biology

Date of Submission:

Sept. 2018

Rationale:

This proposal allows the ISCI Math courses to be used as prerequisite for BIOL 20 60

Note: For course proposals involving cross-listings, integrations and degree credit exclusions, approval from all of the relevant Faculties/department is required.

Note: Since one change (such as a change in year level or credit value) may result in several other changes (e.g., to the course description, evaluation, instruction, bibliography, etc.), please submit as many details as possible. If there are several changes, please feel free to use a New Course Proposal Form in order to ensure that all the required information is included.

* Note: If there is a technology component to the course, a statement is required from ATS indicating whether resources are adequate to support the course. Courses converted from face-to-face to an on-line delivery mode should follow the instructions provided on page 4 of the New Course Proposal Form to provide revised 'Course Design' and 'Method of Instruction' information.

Note: For course proposals involving cross-listings, integrations and degree credit exclusions, approval from all of the relevant Faculties/department is required.

Note: Since one change (such as a change in year level or credit value) may result in several other changes (e.g., to the course description, evaluation, instruction, bibliography, etc.), please submit as many details as possible. If there are several changes, please feel free to use a New Course Proposal Form in order to ensure that all the required information is included.

* Note: If there is a technology component to the course, a statement is required from ATS indicating whether resources are adequate to support the course. Courses converted from face-to-face to an on-line delivery mode should follow the instructions provided on page 4 of the New Course Proposal Form to provide revised 'Course Design' and 'Method of Instruction' information.

Changes to Existing Course

1.3.10

Faculty:

Department:

Biology

Date of Submission:

Sept. 2018

Course Number:

SC/BIOL 2070 3.00

Effective Session:

Summer 2019

Course Title:

Research Methods in Cell and Molecular Biology

Type of Change:

- | | |
|---|---|
| <input checked="" type="checkbox"/> in pre-requisite(s)/co-requisite(s) in cross-listing in | <input type="checkbox"/> course number/level in degree credit |
| <input type="checkbox"/> exclusion(s) in credit value regularize course (from | <input type="checkbox"/> Special Topics) |
| <input type="checkbox"/> in title (max. 40 characters for short title) in course | <input type="checkbox"/> format/mode of delivery * in |
| <input type="checkbox"/> Calendar description (max. 40 words or 200 characters) | <input type="checkbox"/> retire/expire course other (please |
| <input type="checkbox"/> specify): | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> |

Change From:

To:

This course focuses on laboratory techniques in the life sciences. Practical research skills are developed through experiential learning using current biochemistry, cell and molecular biology techniques. Research skills include scientific writing, data analysis/interpretation, experimental design and hypothesis testing. Prerequisites: SC/BIOL 1010 6.00, or SC/BIOL 1000 3.00 and SC/BIOL 1001 3.00; SC/CHEM 1000 3.00 and SC/CHEM 1001 3.00.

This course focuses on laboratory techniques in the life sciences. Practical research skills are developed through experiential learning using current biochemistry, cell and molecular biology techniques. Research skills include scientific writing, data analysis/interpretation, experimental design and hypothesis testing. Prerequisites: **SC/BIOL 1010 6.00, or (1) Both SC/BIOL 1000 3.00 and SC/BIOL 1001 3.00, or SC/ISCI 1110 6.00, or both SC/ISCI 1101 3.00 and SC/ISCI 1102 3.00; and (2) both SC/CHEM 1000 3.00 and SC/CHEM 1001 3.00, or both SC/ISCI 1201 3.00 and SC/ISCI 1202 3.00, or SC/ISCI 1210 6.00**

Rationale:

This proposal allows the ISCI Biology courses (equivalent to the traditional first year biology courses) to be used as prerequisite for BIOL 2070, and removes BIOL 1010 6.00 which has not been offered in seven years. Modified the list of prerequisites to make it clear that both first year BIOL and CHEM courses are required.

Note: For course proposals involving cross-listings, integrations and degree credit exclusions, approval from all of the relevant Faculties/department is required.
 Note: Since one change (such as a change in year level or credit value) may result in several other changes (e.g., to the course description, evaluation, instruction, bibliography, etc.), please submit as many details as possible. If there are several changes, please feel free to use a New Course Proposal Form in order to ensure that all the required information is included.

* Note: If there is a technology component to the course, a statement is required from ATS indicating whether resources are adequate to support the course. Courses converted from face-to-face to an on-line delivery mode should follow the instructions provided on page 4 of the New Course Proposal Form to provide revised 'Course Design' and 'Method of Instruction' information.

Changes to Existing Course

1.3.11

Faculty:

Department:

Biology

Date of Submission:

Sept. 2018

Course Number:

SC/BIOL 3070 4.0

Effective Session:

Summer 2019

Course Title:

Animal Physiology II

Type of Change:

- | | |
|---|---|
| <input checked="" type="checkbox"/> in pre-requisite(s)/co-requisite(s) in cross-listing in | <input type="checkbox"/> course number/level in degree credit |
| <input type="checkbox"/> exclusion(s) in credit value regularize course (from | <input type="checkbox"/> Special Topics) |
| <input type="checkbox"/> in title (max. 40 characters for short title) in course | <input type="checkbox"/> format/mode of delivery * in |
| <input type="checkbox"/> Calendar description (max. 40 words or 200 characters) | <input type="checkbox"/> retire/expire course other (please |
| <input type="checkbox"/> specify): | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> |

Change From:

To:

The processes of digestion, osmoregulation and excretion, circulatory systems and gaseous exchange, metabolism, growth and reproduction are considered. The course adopts a comparative approach, first analyzing the basic principles underlying physiological activities, then examining the means whereby different organisms perform them. Prerequisites: SC/BIOL 2030 4.00, SC/BIOL 2020 3.00, SC/BIOL 2021 3.00.

The processes of digestion, osmoregulation and excretion, circulatory systems and gaseous exchange, metabolism, growth and reproduction are considered. The course adopts a comparative approach, first analyzing the basic principles underlying physiological activities, then examining the means whereby different organisms perform them. Prerequisites: ~~SC/BIOL 2030 4.00~~, SC/BIOL 2020 3.00, SC/BIOL 2021 3.00, **and SC/BIOL 2030 4.00.**

Rationale:

Reorders prerequisites in numerical order similar to BIOL 3060 prerequisite list.

Note: For course proposals involving cross-listings, integrations and degree credit exclusions, approval from all of the relevant Faculties/department is required.
 Note: Since one change (such as a change in year level or credit value) may result in several other changes (e.g., to the course description, evaluation, instruction, bibliography, etc.), please submit as many details as possible. If there are several changes, please feel free to use a New Course Proposal Form in order to ensure that all the required information is included.

* Note: If there is a technology component to the course, a statement is required from ATS indicating whether resources are adequate to support the course. Courses converted from face-to-face to an on-line delivery mode should follow the instructions provided on page 4 of the New Course Proposal Form to provide revised 'Course Design' and 'Method of Instruction' information.

Changes to Existing Course

1.3.12

Faculty:

Department:

Biology

Date of Submission:

Sept. 2018

Course Number:

SC/BIOL 2900 3.0

Effective Session:

Summer 2019

Course Title:

Clinical Microbiology for Nurses

Type of Change:

- | | |
|--|--|
| <input type="checkbox"/> in pre-requisite(s)/co-requisite(s) in cross-listing in | <input type="checkbox"/> course number/level in degree credit |
| <input type="checkbox"/> exclusion(s) in credit value regularize course (from | <input checked="" type="checkbox"/> Special Topics) |
| <input type="checkbox"/> in title (max. 40 characters for short title) in course | <input type="checkbox"/> format/mode of delivery * in |
| <input type="checkbox"/> Calendar description (max. 40 words or 200 characters) | <input type="checkbox"/> retire/expire course <input type="checkbox"/> other |
| <input checked="" type="checkbox"/> (please specify): | <input type="checkbox"/> |
| | <input type="checkbox"/> |

Change From:

To:

An introductory course in medical microbiology designed for nursing students. Topics include: structure/function relationships of viruses, bacteria and fungi; physical and chemical control of microbial growth; human/microbe interactions; immunology; major infectious diseases of humans; epidemiology and public health. Prerequisite: Entry in the collaborative Nursing program. Course credit exclusions: SC/BIOL 2905 3.00, SC/BIOL 3150 3.00 (prior to Fall 2016), SC/BIOL 3150 4.00. Note: Not eligible for biology credit towards a Biology/Biochemistry program. Not open to students who have taken SC/BIOL 3150 3.00 or SC/BIOL 3150 4.00.

An introductory course in medical microbiology designed for nursing students. Topics include: structure/function relationships of viruses, bacteria and fungi; physical and chemical control of microbial growth; human/microbe interactions; immunology; major infectious diseases of humans; epidemiology and public health. Prerequisite: Entry in the collaborative Nursing program. Course credit exclusions: SC/BIOL 2905 3.00, ~~SC/BIOL 3150 3.00 (prior to Fall 2016)~~, SC/BIOL 3150 4.00. Note: Not eligible for biology credit towards a Biology/Biochemistry/E ~~Environmental Biology~~ program. Not open to students who have taken ~~SC/BIOL 3150 3.00 or SC/BIOL 3150 4.00.~~

Rationale:

Clarifies that students in Environmental Biology cannot take this for biology credit. Removes SC/BIOL 3150 3.00 as a CCE as the course hasn't been offered in over ten years.

Note: For course proposals involving cross-listings, integrations and degree credit exclusions, approval from all of the relevant Faculties/department is required.
 Note: Since one change (such as a change in year level or credit value) may result in several other changes (e.g., to the course description, evaluation, instruction, bibliography, etc.), please submit as many details as possible. If there are several changes, please feel free to use a New Course Proposal Form in order to ensure that all the required information is included.

* Note: If there is a technology component to the course, a statement is required from ATS indicating whether resources are adequate to support the course. Courses converted from face-to-face to an on-line delivery mode should follow the instructions provided on page 4 of the New Course Proposal Form to provide revised 'Course Design' and 'Method of Instruction' information.

June 25, 2018

Dear Prof. Monaldi,

Thank you for sending me the proposal for the course:

Gender Issues in Science, Technology, Engineering & Mathematics

I have reviewed the bibliography that you provided with the course description and find that we have all of the readings available in our collection, in addition to related books and journals that may provide additional reading and support for this course.

Please note that you may request that required and recommended readings be placed on Reserve for student use at Steacie Library. Information about what items can be placed on reserve is found here: <https://www.library.yorku.ca/web/ask-services/facultyinstructorssupport/places-items-on-reserve/> and the form is found under the heading: *How do I make items available for course reserve?*

Interlibrary loan and document delivery options are available through RACER for any additional information needs that may come up. Undergraduate students can order up to 25 journal articles through RACER per year, and these are delivered to the desktop, free of charge. Books can also be requested through this system free of charge. Registration and requesting is available from: <https://www.library.yorku.ca/web/ask-services/borrow-renew-return/racerinterlibrary-loan/>.

Collection development in the library is ongoing, and is based on a commitment to developing library resources that are in alignment with the University's curricular and research activities. Additional books in this field will be added to the library collection as they are published. Please submit your purchase requests by using the form at <https://www.library.yorku.ca/web/suggestion-for-purchase-form/>

Please note that librarians provide research skills workshops to students and faculty on request, including:

- Searching the library catalogue and databases
- Evaluating information sources
- Assistance with designing assignments that incorporate principles of Information Literacy skills development
- Managing references using bibliographic management systems such as Mendeley

The Learning Commons provides additional support around academic writing and study skills. For support in scientific writing in particular, the Bethune Writing Centre offers on-on-one or small group instruction: <http://bethune.yorku.ca/writing/>

A Research Guide has been created for students enrolled in Science and Technology Studies, and this is available here: <http://researchguides.library.yorku.ca/sts> Research Guides are maintained by subject librarians to bring together online and print resources that are useful to students and faculty. Resources and links will be added upon request.

<http://researchguides.library.yorku.ca/>

In summary, I would state that we are well positioned to support this course.

Sincerely,

Ilo-Katryn Maimets, Science Librarian
Head, Steacie Science and Engineering Library
Ext: x33927
E-mail: ilo@yorku.ca

COMMITTEE ON ACADEMIC STANDARDS, CURRICULUM AND PEDAGOGY TEMPLATE

NEW COURSE PROPOSAL FORM

Faculty: Science
Indicate all relevant
Faculty(ies)

Department: Date of
Indicate department and
course prefix (e.g.
Languages, GER)

Science & Technology Studies
(STS)

Submission:

Course Number: Special
Topics courses Include
variance (e.g.
HUMA 3000C 6.0,
Variance is "C")

STS 2222 3.00

Var:

Academic Credit Weight:
Indicate both the fee, and
MTCU weight if different from
academic weight (e.g. AC=6,
FEE=8, MET=6)

3.00

Course Title:
The official name of the
course as it will appear in
the Undergraduate
Calendar and on the
Repository

Exploring Gender in Science, Technology, Engineering & Mathematics

Short Title:
Appears on any
documents where space
is limited - e.g.
transcripts and lecture
schedules - **maximum 40
characters**

Exploring Gender in STEM

With every new course proposal it is the Department's responsibility to ensure that new courses do not overlap with existing courses in other units. If similarities exist, consultation with the respective departments is necessary to determine degree credit exclusions and/or cross-listed courses.

Brief Course Description:

Maximum 2000 characters (*approximately 300 words including spaces and punctuation*).

The course description should be carefully written to convey what the course is about. It should be followed by a statement of prerequisites and corequisites, if applicable. This description appears in the calendar.

For editorial consistency, and in consideration of the various uses of the Calendars, verbs should be in the present tense (i.e., "This course analyzes the nature and extent of...", rather than "This course will analyze...")

Generic Course Description:

This is the description of the "Parent / Generic course" for Special Topics courses under which variances of the "Generic" course can be offered in different years (Max. 40 words). Generic course descriptions are published in the calendar.

List all degree credit exclusions, prerequisites, integrated courses, and notes below the course description.

Gender is one of the most powerful shapers of human societies. How does it affect, and how is it affected by, science, technology, engineering and mathematics (STEM)? This course explores the relationship between STEM based disciplines and gender. It examines how concepts of gender shape STEM based institutions, practices, and cultures. Conversely, it investigates how STEM research has shaped historical and current understandings of gender. It highlights the productive contributions that gender analysis can make to the STEM disciplines, not only to address equity issues, but also to improve methodologies of research and innovation. Selected topics include: theories of gender and techno-science, gendered representations of science and technology in popular media, gender imbalance in STEM, and the gendering of military, medical, domestic, and digital technologies.

Gender is one of the most powerful shapers of human societies. How does it affect, and how is it affected by, science, technology, engineering and mathematics (STEM)? This course explores the relationship between STEM based disciplines and gender. It examines how concepts of gender shape STEM based institutions, practices, and cultures. Conversely, it investigates how STEM research has shaped historical and current understandings of gender. It highlights the productive contributions that gender analysis can make to the STEM disciplines, not only to address equity issues, but also to improve methodologies of research and innovation. Selected topics include: theories of gender and techno-science, gendered representations of science and technology in popular media, gender imbalance in STEM, and the gendering of military, medical, domestic, and digital technologies.

Course credit exclusion: AP/HUMA 3970 3.0, "Science and Gender in Modern Western Culture."

**Expanded Course
Description:**

Please provide a detailed course description, including topics / theories and learning objectives, as it will appear in supplemental calendars.

A. Course Outcomes and Learning Objectives

By the end of this course, students will be able to:

1. Identify, describe, critique, and apply STS theories about the relationship between gender, science, and technology
2. Increase civic awareness by surveying and assessing the literature pertaining to gender imbalances in STEM
3. Formulate informed opinions regarding scientific claims about innate sex and gender differences in cognitive abilities, social attributes, and professional interests
4. Analyze and evaluate how science and technology contribute to the shaping of gender identities and ideas about gender within different environments (e.g. online communities, households, biomedical infrastructure)
5. Evaluate how ideas about gender influence the production and dissemination of scientific and technical knowledge
6. Determine how cultural notions of gender influence perceptions and understandings of techno-scientific products
7. Effectively communicate an understanding of course content through a variety of oral and written assignments

B. Selected Topics

The following should be taken as a sample of how the course could be structured over a single term. The focus is upon the application of STS theoretical approaches, the gendered structure of STEM disciplines, gender and ICT, gender in biomedicine, and the popular representation of gender in a technoscientific era. A variety of other case studies are available to illustrate these various themes.

Week 1

Theories of Science, Technology and Gender

Central STS and gender studies theories will be introduced. These theories will then serve as the foundation that students can use when exploring future lecture topics.

Week 2

Gender in STEM Institutions, Practices, and Cultures

An exploration of current research and state-of-the-art data about the gender composition of STEM fields in Canada and internationally. Possible causes of persisting gender imbalances in certain fields are examined in terms of institutional and professional identities, cultures, and practices. Gender-equity initiatives and other proposed solutions are discussed.

Week 3

Exploring Norms of Masculinity and Femininity, Part I: Industrial Environments and Military Technologies

Students explore how gender norms and identities became constitutive of engineering and scientific cultures, and came to function as selective gender filters in and around STEM disciplines. The gendered effects of the widescale industrialization and militarization of science and technology are also examined.

Week 4

Exploring Norms of Masculinity and Femininity Part II: Everyday Technologies

Masculinity and femininity can be viewed as sets of practices performed through everyday technologies which embody values, skills, tastes, desires, playfulness, sociability, and self-identities. Technological masculinities can be grouped into two kinds, one based on toughness, muscular strength, and manual dexterity; the other on intellectual acumen. Industrial culture consigns women to the roles of users and consumers, but STS analysis highlights the agency of consumers in the appropriation and reshaping of technologies.

Week 5

Gender Imbalance in Computer Science Part I: The Google Manifesto

In the 1980's, women comprised 40% of computer science degree recipients. Today, that number is in the low 20s. To understand this phenomenon, students explore what kinds of barriers women have faced when pursuing a career in technology, including structural, cultural, and social bias. In addition, students examine the controversy over the "Google Manifesto" of 2017 to investigate the ways in which science is invoked to frame arguments that women are not "programmed" or "wired" to succeed in computer engineering and other technology-related fields.

Week 6

Gender Imbalance in Computer Science Part II: Gamer-Gate and the SubCulture of Online Misogyny

While the debate over video games and violent behavior is a well-known topic, less attention has historically been paid to another area of gaming research – gender and video gaming. Gender and gaming became part of public discourse

in 2014 with “Gamergate” – an episode which brought attention to the prevalence of misogyny in the video gaming industry. The development and repercussions of the “manosphere” – a subculture of male internet users who form online groups and communities to rage against gender equality and often blame women for their economic, social, or even sexual problems – is also examined.

Week 7

Gender in Biomedical Research and Technologies

Gender, alongside ethnicity, social status, education, sexuality, and age, is an important variable in the health of individuals and communities. Gender prejudices have affected biomedical research, and gender-blind or genderbiased medical, pharmaceutical, and biomedical engineering practices have resulted in distorted diagnostic and therapeutic tools. Innovative approaches, as for example initiatives to create gender-balanced research communities and to include both sexes in clinical and laboratory trials, are discussed.

Week 8

The Biology of Sexual Difference

Genetics and endocrinology have focused on the biological mechanisms of sex determination and differentiation. More recently, neurobiologists and evolutionary psychologists have searched for “essential differences” between the sexes in the brain. At the same time, research is revealing great complexity and plasticity in the dynamical processes involving interacting genes, hormonal functions, and body and brain structure that undermine simplistic assumptions about the binarity and fixity of sexual difference. Students explore these seemingly oppositional research programmes, and investigate the ways that stereotypes based on “XX” and “XY” chromosomes and hormone-dictated abilities persist in popular culture, as well as in research programs focused on cognitive differences between men and women.

Week 9

Medical Interventions and the Sexual Body

As modern medicine gained increasing power of intervention on the body, intersexuality was medicalized as a condition to be “fixed” by means of surgery and pharmaceuticals. In the mid-twentieth century, John Money and other professionals introduced the term “gender” for what was previously known as “psychological sex” and established the treatment of intersexual bodies in conformity with the binary imperative. Increasing awareness of gender and sexuality issues in the public and in scientific communities since the 1990s has led to an improved appreciation of the complexity of sex determination,

sexuality, and gender identity, and has transformed the understanding of intersexuality.

Week 10**Representations of STEM and Gender in Popular Media**

The long running and successful television show “CSI” – with its strong female characters - led to a surge in females enrolling in forensic science in the 2000s. This has been labelled the “CSI effect”, an acknowledgement that media representations of scientists and technologists can have a great impact on adolescent girls who are considering future professions in STEM-related fields. Students explore how popular media has both promoted stereotypical representations of what it means to be a scientist or engineer, even as it provides an important venue for better understanding the relationship between gender and STEM identity formation.

Course Design:

Indicate how the course design supports students in achieving the learning objectives. For example, in the absence of scheduled contact hours what role does student-to-student and/or student-to-instructor communication play, and how is it encouraged?

Detail any aspects of the content, delivery, or learning goals that involve "face-to-face" communication, noncampus attendance or experiential education components.

Alternatively, explain how the course design encourages student engagement and supports student learning in the absence of substantial oncampus attendance.

The course supports the achievement of the learning objectives by means of face-to-face communication with instructors and peers, class activities, and assignments. Class time is broken into lecture periods and in-class activities. Activities and assignments follow the classroom-focused experiential education strategy of encouraging active learning through structured reflection that connects students' concrete experiences of gender, science, and technology with course topics, thereby helping students make clear connections with STS-driven conceptualizations of the mutual dynamics or "co-construction" of STEM and gender.

Instruction:

1. Planned frequency of offering and number of sections anticipated (every year, alternate years, etc.).
2. Number of department members currently competent to teach the course.
3. Instructor(s) likely to teach the course in the coming year.
4. An indication of the number of contact hours (defined in terms of hours, weeks, etc.) involved, in order to indicate whether an effective length of term is being maintained **OR** in the absence of scheduled contact hours a detailed breakdown of the estimated time students are likely to spend engaged in learning activities required by the course.

1. This 3-credit, 12 week course will be offered once a year, preferably in the fall or winter term.
2. This course could be taught by at least two department members.
3. Dr. Daniela Monaldi and Dr. Vera Pavri would co-teach this course during its inaugural session. While the ideal format for this particular course is coteaching, either instructor could also teach this course independently as required.
4. In addition to three hours of class time, one designated office hour would also be held each week for student consultation.
5. On average students will be required to do about two hours of preparation per week for each class (excluding work on major assignments).

Evaluation:

A detailed percentage breakdown of the basis of evaluation in the proposed course must be provided. If the course is to be integrated, the additional requirements for graduate students are to be listed.

If the course is amenable to technologically mediated forms of delivery please identify how the integrity of learning evaluation will be maintained. (e.g. will "onsite" examinations be required, etc.)

Mark Breakdown

Test 1 (in class)	25%
Test 2 (in class)	25%
Research Project	20%
Reading Responses	20%
In-class activities	10%

The Tests are in-class supervised tests to be administered, respectively, at the mid-point and at the end of the course. They are composed of objective, shortanswer, and longer-answer questions. Together, they cover all the course material, and assess mainly the student's depth and breadth of knowledge of the course topics, the "know-what" or information basis needed for learning objectives 1-6. Demonstration of medium-level skills, as for example analysis and application of concepts, is also required for the longer-answer questions.

The Reading Responses are take-home assignments consisting of long-answer questions on specific readings. They assess reading comprehension, analytical thinking and application of knowledge, reflexivity, and writing skills. They can be aligned with learning objectives 1-6, with more emphasis on one or the other, depending on the readings in question. They are strongly focused on the reading and writing component of learning objective 7.

The Research Project will assess students' research, analytical, critical thinking, knowledge application, collaboration, time management, and communication skills. This project will involve both independent research and group work, and will require both a written component and oral presentation. This evaluation component stresses learning objectives 1-7, depending on the topics of research, with a strong focus on objective 7.

The in-class activities incentivize and enhance the student's engagement and participation. They provide opportunities to practice listening, critical thinking, and effective communication in real time. They support all the learning objectives.

Bibliography:**A READING LIST MUST BE INCLUDED FOR ALL NEW COURSES**

The Library has requested that the reading list contain complete bibliographical information, such as full name of author, title, year of publication, etc., and that you distinguish between required and suggested readings. A statement is required from the bibliographer responsible for the discipline to indicate whether resources are adequate to support the course.

Also please list any online resources.

If the course is to be integrated (graduate/undergraduate), a list of the additional readings to be required of graduate students must be included. If no additional readings are to be required, a rationale should be supplied.

LIBRARY SUPPORT STATEMENT MUST BE INCLUDED.

- Anne-Jorunn Berg and Merete Lie, "Feminism and constructivism: Do artifacts have gender?" *Science, Technology & Human Values* 20, 3 (1995), 332-351.
- A. Braithwaite, "It's about ethics in games journalism? Gamergaters and geek masculinity," *Society Media and Society* 2, No. 4, Nov. 1 2016
- Francesca Bray, "Gender and technology", *Annual Review of Anthropology* 36 (2007), 37-53
- S. Banet-Weiser and K. Miltner, "#MasculinitySoFragile: Culture, Structure and Networked Misogyny," *Feminist Media Studies*, No. 1, 2016, 171-74.
- J. Burgess and A. Matamros-Fernandez, "Mapping Socio-cultural controversies across digital media platforms: one week of #Gamergate on Twitter, YouTube and Tumblr," *Communication Research and Practice* 2, No. 1, 2016, 79-96.
- S. Chess and A. Shaw, "A Conspiracy of Fishes, or, how we learned to stop worrying about #Gamergate and embrace hegemonic masculinity," *J. of Broadcasting and Electronic Media*, Vol. 59, No. 1, 2015, 208-220.
- Carol Cohn, "Sex and Death in the Rational World of Defense Intellectuals", *Signs* 12,4 (1987), 687-718
- Angela N. H. Creager, Elizabeth Lunbeck, and Londa Schiebinger, *Feminism in Twentieth Century Science, Technology, and Medicine* (Chicago and London: The University of Chicago Press, 2001)
- Ruth Schwartz Cowan, *More Work for Mother. The Ironies of Household Technology from the Open Hearth to the Microwave* (New York: Basic Book, 1983)
- Henry Etzkowitz, Stefan Fuchs, Namrata Gupta, Carol Kemelgor, and Marina Ranga, "The coming gender revolution in science", in Edward Hackett, Olga Amsterdamska, Michael Lynch, and Judy Wajcman, eds., *The Handbook of Science and Technology Studies*. Third Edition (Cambridge MA and London, England: The MIT Press, 2007), 403-428
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- Wendy Faulkner, "'Nuts and bolts and people': Gender-troubled engineering identities", *Social Studies of Science* 37, 3 (2007), 331-356
- Jill A. Fisher, ed., *Gender and the science of difference. The cultural politics of contemporary science and medicine* (New Brunswick, NJ: Rutgers University Press, 2011)
- Heather Ford and Judy Wajcman, "'Anyone can edit', not everyone does: Wikipedia's infrastructure and the gender gap", *Social Studies of Science* 47, 4 (2017), 511-527
- Anne Fausto-Sterling, *Sexing the Body. Gender Politics and the Construction of Sexuality* (New York: Basic Book, 2000)
- Anne Fausto-Sterling, "The Bare Bones of Sex: Part 1—Sex and Gender", *Signs* 30, 2 (2005), 1491-1527
- "Health and Medicine Case Studies" in Londa Schiebinger at al., eds., *Gendered Innovations in Science, Health and Medicine, Engineering, and the Environment (2011-2015)*, at <http://genderedinnovations.stanford.edu/case-studies-medicine.html>
- Darcy Hango, "Gender differences in science, technology, engineering, mathematics and computer Science (STEM) programs at university", *Statistics Canada*, Dec. 2013, <http://www.statcan.gc.ca/pub/75-006-x/2013001/article/11874-eng.pdf>
- Donna Haraway, 'Situated knowledges: the Science Question in Feminism and the Privilege of Partial Perspective,' *Feminist Studies* 14:3, 1988, pp. 575-599
- Sandra Harding, "After the Neutrality Ideal: Science, Politics, and 'Strong Objectivity'," *Social Research* 59:3, 1992), 567-87
- Marie Hicks, "De-programming the history of computing", *IEEE Annals of the History of Computing*, Jan-March 2013, 85-87
- Roger Horowitz, ed., *Boys and Their Toys? Masculinity, Class, and Technology in America* (New York and London: Routledge, 2001)
- Rebecca M. Jordan-Young, *Brain Storm: The flaws in the science of sex difference* (Cambridge MA: Harvard University Press, 2010)
- Jenny Kleeman, "The Wikipedia wars: Does it matter if our biggest source of knowledge is written by men?" *New Statesman*, 22-28 May 2015.

- Nina Lerman, Ruth Oldenziel, and Arwen P. Mohun, eds., *Gender & Technology: A Reader* (Baltimore: The Johns Hopkins University Press, 2003)
- Linda Layne, Sharra Vostral, and Kate Boyer, eds., *Feminist Technology* (Urbana: University of Illinois Press, 2010)
- Maria Lohan and Wendy Faulkner, eds., *Masculinities and Technologies*, special issue of *Men and Masculinities* 6, 4 (2004)
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- Alice Marwick, "Gender, Sexuality and Social Media", in Theresa Senft and Jeremy Hunsinger, eds., *The Social Media Handbook* (New York: Routledge, 2014), 59-75
- A. Marwick and R. Lewis, Media Manipulation and Disinformation Online, *Data and Society*, May 15, 2017, online
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- Ian Nicholson, "'Shocking Masculinity'. Stanley Milgram, 'Obedience to Authority', and the 'Crisis of Manhood' in Cold War America", *Isis* 102 (2011), 238-268
- Ruth Oldenziel, *Making Technology Masculine: Men, Women and Modern Machines in America, 1870-1945* (Amsterdam: Amsterdam University Press, 1999)
- Ruth Oldenziel, "Boys and Their Toys: The Fisher Body Craftsman's Guild, 1930-1968, and the Making of a Male Technical Domain", *Technology and Culture* 38, 1 (1997), 60-96
- Joseph Reagle, "Free as in sexist? Free culture and the gender gap" *First Monday* 18, 1 (7 January 2013)
- Elizabeth Reis, *Bodies in doubt: an American history of intersex* (Baltimore: Johns Hopkins University Press, 2009)
- Vernon Rosario, "Quantum sex: Intersex and the molecular deconstruction of sex", *GLQ* 15, 2(2009), 267-284
- Rosalind Rosenberg, "Gender", in Theodore Porter and Dorothy Ross, eds., *The Cambridge History of Science*, Vol. 7: *The Modern Social Sciences* (Cambridge: Cambridge University Press, 2003), 678-692
- Cindy Royal, "Gender and technology: Women's usage, creations, and perspectives", in Adrienne Trier-Bieniek and Patricia Leavy, eds., *Gender & Pop Culture. A Text Reader* (Rotterdam: SensePublishers, 2014)
- Veronica Sanz, "No Way Out of the Binary: A Critical History of the Scientific Production of Sex", *Signs* 43, 1 (2017), 1-27
- Londa Schiebinger, ed., *Gendered Innovations in Science and Engineering* (Stanford CA: Stanford University Press, 2008)
- Catherine V. Scott, "Tradition and gender in modernization theory", in Sandra Harding, ed., *The Postcolonial Science and Technology Studies Reader* (Durham: Duke University Press, 2011), 290-309
- J. Steinke, "Adolescent Girls' STEM Identity Formation and Media Images of STEM Professionals: Considering the Influence of Contextual Cues," *Frontiers in Psychology*, Volume 8, May 2017, Article 716.
- Lucy Suchman, "Feminist STS and the sciences of the artificial", in Edward Hackett, Olga Amsterdamska, Michael Lynch, and Judy Wajcman, eds., *The Handbook of Science and Technology Studies*. Third Edition (Cambridge MA and London, England: The MIT Press), 139-164
- Sharon Traweek, "When Eliza Doolittle studies 'enry 'iggins", in Stanley Aronowitz, Barbara Martinsons, and Michael Menser, eds., *Technoscience and Cyberculture* (Routledge, 1996), 37-56
- Ernst Waltraud and Ilona Horwath, eds., *Gender in Science and Technology. Interdisciplinary Approaches* (Bielefeld: transcripts Verlag, 2014)
- Judy Wajcman, "From women and technology to gendered technoscience", *Information, Communications and Society* 10, 3 (2007), 287-298

Mary Wyer, Donna Giesman, Hatice Örun Öztürk, and Martha Wayne, eds., *Women, Science, and Technology. A Reader in Feminist Science Studies*. First Edition (First edition, Routledge, 2001; second edition, Taylor and Francis, 2008; third edition, Routledge, 2014)

Other Resources:

A statement regarding the adequacy of physical resources (equipment, space, etc.) must be appended. If other resources will be required to mount this course, please explain

COURSES WILL NOT BE APPROVED UNLESS IT IS CLEAR THAT ADEQUATE RESOURCES ARE AVAILABLE TO SUPPORT IT.

This course does not require additional resources outside of classroom space.

Course Rationale:

The following points should be addressed in the rationale:

How the course contributes to the learning objectives of the program / degree.

The relationship of the proposed course to other existing offerings, particularly in terms of overlap in objectives and/or content. If interFaculty overlap exists, some indication of consultation with the Faculty affected should be given. The expected enrolment in the course.

According to the recent STS self-study report (2017), STS' general objective is to "expand and deepen students' understanding of science and technology by exploring the social, cultural, philosophical, historical and material dimensions of science and

technology." More specifically, STS seeks to explore questions about science and technology that include how science and technology shape – and are shaped by – social, ethical, legal, economic, political and cultural forces.

As a 2000-level course, this course will contribute to the STS mandate by focusing on how gender interacts with science and technology at the very outset of students' introduction to STS. This focus on gender is essential to understanding how scientific and technical knowledge is defined, produced, and used in various environments. As our course description suggests, students will explore how concepts of gender shape STEM based institutions, practices and cultures and conversely, how STEM research has shaped historical and current understandings of gender. By taking this course, students will also be able to participate in inquiries that will enhance their understanding of social justice as well as help them become better global citizens (as outlined by York's Strategic Mandate Agreement, or SMA).

In addition, the evaluation design of this course has been designed to fulfil another SMA mandate – teaching students transferable skills that are deemed attractive to employers in a "knowledge based economy." In addition to learning how to apply gender analysis productively toward the solution of current issues, in this course, students will have many opportunities to enhance their communication, critical thinking and analytical skills (see evaluation section).

This course will attract students from a wide variety of disciplines (e.g. STEM, gender studies, and science and technology studies). The Dept of Humanities (LA&PS) currently has a course on gender and science in modern western culture. (The course was cross-listed and routinely taught by STS Dept members, but the STS cross-listing has recently been removed by the Dept of Humanities). Our proposed course complements and extends the reach of AP/HUMA 3970 3.00 by including technology, and by directing students' attention to technology-related matters in a global, contemporary perspective. Emphasizing the mutual dynamics of the technical and cultural dimensions of these issues, we show the constructive, rather than just critical, potential of interdisciplinary gender analysis for STEM disciplines.

The expected enrolment in this course is fifty to seventy-five students.

Faculty and Department Approval for Crosslistings:

If the course is to be cross-listed with another department, this section needs to be signed by all parties. In some cases there may be more than two signatures required (i.e. Mathematics, Women's Studies). In the majority of the cases either the Undergraduate Director or Chair of a unit approves the agreement to cross-list. All relevant signatures must be obtained prior to submission to the Faculty curriculum committee.

Dept:	_____	_____	_____
	Signature (Authorizing cross-listing)	Department	Date
Dept:	_____	_____	_____
	Signature (Authorizing cross-listing)	Department	Date
Dept:	_____	_____	_____
	Signature (Authorizing cross-listing)	Department	Date

Accessible format can be provided upon request.

Changes to Existing Course

Faculty:

Department:

Science and Technology
Studies

Date of Submission:

Sept. 19, 2018

Course Number:

2210

Effective Session:

SU19

Course Title:

Technology in the Modern World

Type of Change:

- | | |
|--|--|
| <input type="checkbox"/> in pre-requisite(s)/co-requisite(s) | <input checked="" type="checkbox"/> in cross-listing |
| <input type="checkbox"/> in course number/level | <input type="checkbox"/> in degree credit exclusion(s) |
| <input type="checkbox"/> in credit value | <input type="checkbox"/> regularize course (from Special Topics) |
| <input type="checkbox"/> in title (max. 40 characters for short title) | <input type="checkbox"/> in course format/mode of delivery * |
| <input type="checkbox"/> in Calendar description (max. 40 words or 200 characters) | <input type="checkbox"/> retire/expire course |
| <input checked="" type="checkbox"/> other (please specify): Remove cross-listing to AP/HUMA 2412 3.0 | <input type="checkbox"/> |

Change From:

PRIOR TO WINTER 2014: course credit exclusions: SC/STS 3700 6.00, AP/HUMA 3700 6.00

To:

Course Credit Exclusion: AP/HUMA 2412 3.0, SC/STS 3700 6.00, AP/HUMA 3700 6.00

Rationale:

LAPS has approved curricular request request from Humanities department to remove cross-listing to STS for this course. The STS department is not opposed to this request and will continue to run the course without any cross-listing to the Humanities department. The course would retain its cross-listing to HIST 2822 3.0 and a course credit exclusion to AP/HUMA 2412 has been added.

Note: For course proposals involving cross-listings, integrations and degree credit exclusions, approval from all of the relevant Faculties/department is required.

Note: Since one change (such as a change in year level or credit value) may result in several other changes (e.g., to the course description, evaluation, instruction, bibliography, etc.), please submit as many details as possible. If there are several changes, please feel free to use a New Course Proposal Form in order to ensure that all the required information is included.

* Note: If there is a technology component to the course, a statement is required from ATS indicating whether resources are adequate to support the course. Courses converted from face-to-face to an on-line delivery mode should follow the instructions provided on page 4 of the New Course Proposal Form to provide revised 'Course Design' and 'Method of Instruction' information.

Changes to Existing Course

Faculty:

Department:

Science and Technology Studies

Date of Submission:

Sept. 19, 2018

Course Number:

2411

Effective Session:

SU19

Course Title:

Introduction to Science and Technology Studies

Type of Change:

- | | |
|--|--|
| <input type="checkbox"/> in pre-requisite(s)/co-requisite(s) | <input checked="" type="checkbox"/> in cross-listing |
| <input type="checkbox"/> in course number/level | <input type="checkbox"/> in degree credit exclusion(s) |
| <input type="checkbox"/> in credit value | <input type="checkbox"/> regularize course (from Special Topics) |
| <input type="checkbox"/> in title (max. 40 characters for short title) | <input type="checkbox"/> in course format/mode of delivery * |
| <input type="checkbox"/> in Calendar description (max. 40 words or 200 characters) | <input type="checkbox"/> retire/expire course |
| <input checked="" type="checkbox"/> other (please specify): Remove cross-listing to AP/HUMA 2411 3.0 | <input type="checkbox"/> |

Change From:

To:

Course credit exclusions: AP/HUMA 2411 6.00. Previously offered as: SC/STS 2411 6.00.

Course credit exclusions: AP/HUMA 2411 3.0, AP/HUMA 2411 6.00, SC/STS 2411 6.0

Rationale:

LAPS has approved curricular request request from Humanities department to remove cross-listing to STS for this course. The STS department is not opposed to this request and will continue running the course without any cross-listing to HUMA. A course credit exclusion to AP/HUMA 2411 has been added.

Note: For course proposals involving cross-listings, integrations and degree credit exclusions, approval from all of the relevant Faculties/department is required.

Note: Since one change (such as a change in year level or credit value) may result in several other changes (e.g., to the course description, evaluation, instruction, bibliography, etc.), please submit as many details as possible. If there are several changes, please feel free to use a New Course Proposal Form in order to ensure that all the required information is included.

* Note: If there is a technology component to the course, a statement is required from ATS indicating whether resources are adequate to support the course. Courses converted from face-to-face to an on-line delivery mode should follow the instructions provided on page 4 of the New Course Proposal Form to provide revised 'Course Design' and 'Method of Instruction' information.

Changes to Existing Course

Faculty:

Department:	Science and Technology Studies	Date of Submission:	Sept. 19, 2018
Course Number:	4501	Effective Session:	SU19
Course Title:	Seminar in Science & Technology Studies		

Type of Change:

- | | |
|--|---|
| <input type="checkbox"/> in pre-requisite(s)/co-requisite(s) | <input checked="" type="checkbox"/> in cross-listing |
| <input type="checkbox"/> in course number/level | <input checked="" type="checkbox"/> in degree credit exclusion(s) |
| <input type="checkbox"/> in credit value | <input type="checkbox"/> regularize course (from Special Topics) |
| <input type="checkbox"/> in title (max. 40 characters for short title) | <input type="checkbox"/> in course format/mode of delivery * |
| <input type="checkbox"/> in Calendar description (max. 40 words or 200 characters) | <input type="checkbox"/> retire/expire course |
| <input checked="" type="checkbox"/> other (please specify): Remove cross-listing to AP/HUMA 4501 6.0 | <input type="checkbox"/> |

Change From:

To:

Course Credit Exclusions: AK/STS 4720 6.00 (prior to Fall/Winter 2006-2007).	Course Credit Exclusions: AP/HUMA 4501 6.0, AK/STS 4720 6.00 (prior to Fall/Winter 2006-2007).
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Rationale:

LAPS has approved curricular request request from Humanities department to remove cross-listing to STS for this course. The STS department is not opposed to this request and will continue to run the course without any cross-listing to the Humanities department. The course would retain its cross-listing to SOOSC 4501 and a course credit exclusion to AP/HUMA 4501 has been added.

Note: For course proposals involving cross-listings, integrations and degree credit exclusions, approval from all of the relevant Faculties/department is required.

Note: Since one change (such as a change in year level or credit value) may result in several other changes (e.g., to the course description, evaluation, instruction, bibliography, etc.), please submit as many details as possible. If there are several changes, please feel free to use a New Course Proposal Form in order to ensure that all the required information is included.

* Note: If there is a technology component to the course, a statement is required from ATS indicating whether resources are adequate to support the course. Courses converted from face-to-face to an on-line delivery mode should follow the instructions provided on page 4 of the New Course Proposal Form to provide revised 'Course Design' and 'Method of Instruction' information.

Changes to Existing Course

Faculty: Science

Department:

Date of Submission:

Course Number:

Effective Session:

Course Title:

Type of Change:

- | | |
|--|---|
| <input type="checkbox"/> in pre-requisite(s)/co-requisite(s) | <input type="checkbox"/> in cross-listing |
| <input type="checkbox"/> in course number/level | <input checked="" type="checkbox"/> in degree credit exclusion(s) |
| <input type="checkbox"/> in credit value | <input type="checkbox"/> regularize course (from Special Topics) |
| <input type="checkbox"/> in title (max. 40 characters for short title) | <input type="checkbox"/> in course format/mode of delivery * |
| <input type="checkbox"/> in Calendar description (max. 40 words or 200 characters) | <input type="checkbox"/> retire/expire course |
| <input type="checkbox"/> other (please specify): | <input type="checkbox"/> |

Change From:

To:

<p>A study of the most important technological advances in the context of various civilizations throughout history. Selected important innovations (e.g. mechanized agriculture, wind, water, steam and nuclear power generation, aviation and railways and communications). Course credit exclusions: SC/NATS 1810 6.00.</p>	<p>A study of the most important technological advances in the context of various civilizations throughout history. Selected important innovations (e.g. mechanized agriculture, wind, water, steam and nuclear power generation, aviation and railways and communications). Course credit exclusions: SC/NATS 1810 6.00.</p>
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Rationale

This CCE is no longer applicable. In addition, the cooresponding CCE (NATS 1775 as a CCE for NATS 1810) is has never been presented in the NATS 1810 calendar description.



FACULTY OF SCIENCE

Annual Report to Faculty Council

Academic Policy and Planning Committee (APPC)

The APPC held only one meeting during the 2017-2018 academic year. The reason being, it did not receive any items from the Curriculum Committee which had resource implications.

The Committee reviewed and approved courses below at a meeting held on November 2, 2017,

MATH 3333 – Data analytics: A Hands on Approach (item for action)

NATS 1590 – The Mathematics of Politics (information only)

NATS 1795 – The Physics of Time and Timekeeping (information only)

BIOL 4720 -- Environmental Contaminants: Impacts on Organisms and Ecosystems

ANNUAL REPORT ON ACADEMIC HONESTY
2017/2018

1ST YR LEVEL	2ND YR LEVEL	3RD YR LEVEL	4TH YR LEVEL
148	16	3	2

CHEATING	UNAUTHORIZED AIDS	AIDING & ABEITING	PLAGIARISM	FALSIFICATION
18	1	7	137	1
CHEAT&PLAGIARISM	CHEAT&FALSIFICATION			
4	1			

HEARING	PENALTY HEARING	RATIFICATION
8	22	139

CEAS is still waiting for documents form units regarding anomalous grades from both 2017 and 2018 (strike related).

**Council of the Faculty of Science
Report of the Research and Awards Committee
2017-2018**

The Research and Awards (R&A) committee membership is comprised of Profs. Raymond Kwong (Biology), Philip Johnson (Chemistry), Ilijas Farah (Mathematics and Statistics), William van Wijngaarden (Physics and Astronomy) and Robin Metcalfe (Science and Technology Studies).

1. The R&A committee adjudicated applications for the Junior Faculty Fund (JFF) and Minor Research Grant (MRG). Eight JFF applications totaling \$16,000 in funding support, and 15 MRG applications totaling \$35,400 were awarded.

2. The R&A committee reviewed applications for the York Research Chair Program. The committee received eight nominations from the Faculty of Science. The selection committee members considered the merit of the nominees' research accomplishments, leadership potential, record of HQP training and career level in their evaluation and each member recommended the top two nominees to move forward in the institutional competition.

3. The R&A committee reviewed and adjudicated applications for the Faculty of Science Early Career Research Award, Established Research Award and Graduate Mentorship Award. Awards were provided to Profs. Derek Wilson, Gary Sweeney and Arturo Orellana. Each recipient received a \$3000 research stipend.

4. The R&A committee helped to adjudicate an additional Carswell Doctoral Scholarship for the Faculty of Science. The committee received two applications and awarded a \$10,000 scholarship to Brendon Boyd, an incoming PhD student in the Department of Biology.