COUNCIL OF THE FACULTY OF SCIENCE

Notice of Meeting

Tuesday, February 14, 2017
at 3:00pm – 4:30pm, in 306 Lumbers

Agenda

1. Call to Order and Approval of Agenda
2. Chair’s Remarks
3. Minutes of January 10, 2017 meeting
4. Business Arising
5. Inquiries and Communications
   - Senate Synopsis: Meeting of January 26, 2017
6. Associate Deans’ and Bethune Master’s Remarks
7. Reports from Science Representatives on Senate Committees
8. Reports from Standing Committees of Council
   - Science Curriculum Committee (consent items)
9. Other Business
   9.1 Professor Derek Wilson to speak about YBioCore, one of FSc’s strategic initiatives
   9.2 Professor Martin Bunch, Chair of the President’s Sustainability Council to discuss the development of the York University Sustainability Strategy
COUNCIL OF THE FACULTY OF SCIENCE

Minutes

Tuesday, January 10, 2017
at 3:00pm – 4:30pm, in 306 Lumbers


Guest: B. Sheeller

1. Call to Order and Approval of Agenda
   The Chair of Council, N. Madras called the meeting to order and the agenda was adopted as presented.

2. Chair's Remarks
   There were no Chair’s Remarks.

3. Minutes of December 13, 2016 meeting
   The minutes were approved.

4. Business Arising
   There was no Business Arising.

5. Inquiries and Communications
   There were no communications reports.

6. Associate Deans’ and Bethune Master’s Remarks
   Associate Dean Janse van Rensburg presented the Dean’s report on behalf of the Dean. He noted the following;
PhD student Jordan Bimm (Science & Technology Studies, supervised by Edward Jones-Imhotep) won the 2016 Cold War History Prize from the John Adams Centre for Military History & Strategic Analysis for his paper "Putting Mars in a Jar: The Military Origin of Astrobiology."

The Department of Physics & Astronomy hosted their annual Teacher’s Night. Local high-school physics teachers were invited to York and had the opportunity to interact with faculty members and listen to short talks by Matthew Johnson, A. Kumarakrishnan and Scott Menary.

Research highlights included Scott Menary (Physics & Astronomy) was part of an international collaboration that shone a laser on antimatter atoms to come up with the first successful spectroscopic measurement.

In the media;

Amro Zayed (Biology) spoke about declining bee populations on Bloomberg TV Canada.

Scott Menary (Physics & Astronomy) spoke to CBC News about a study that he collaborated on to measure a transition of anti-hydrogen for the first time.

Paul Delaney (Physics & Astronomy) commented on John Glenn’s death, China's space ambitions, Mars, and the longest night hoax with various media outlets including CTV News Channel, SiriusXM, AM900 CHML, and Newstalk 1010. He also spoke to Global News about our unpreparedness to deal with an asteroid strike.

Upcoming events

January 10th: Part II: Everything Under the Sun, a research symposium organized by the VPRI office, featuring talks by Sapna Sharma and Roberto Quinlan (Biology) and chaired by Associate Dean Sylvie Morin. There will be a call on the upcoming symposium.

February 9th: Public lecture on “Alzheimer’s, Parkinson’s & Neurodegenerative Disease: When Brain Proteins Go Rogue” by Derek Wilson (Chemistry) in Markham, as part of Scholars Hub speaker series.

The Associate Dean encouraged faculty to send in their nominations for the honorary degree recipient.

7. Reports from Science Representatives on Senate Committees

Associate Dean Janse van Rensburg informed faculty that his office had sent out a memo on the YUFA True Visitor Call with a deadline of February 10th. He reminded members on the Conversion, LSTA and the academic equipment program Calls which were currently ongoing.

He noted that the faculty searches were progressing well. He also reminded departments to complete the CUPE TA workload forms and ensure that this is done. He noted that the first meeting for the SRC Tenure and Promotion Committee will be held on January 27th.

Associate Dean Sylvie Morin announced to Council that the university had forty one USRA awards for the whole university and Science would get nineteen. We also have ten Dean’s Undergraduate Research Awards (DURA). Both calls will be sent out shortly.

The Canada Foundation for Innovation Infrastructure Operating Fund (CFI IOF) only received four applications to be adjudicated soon in consultation with the Dean.

She also informed Council that Science was being requested to provide two representatives to sit on Human Participation Review Committee.
Associate Dean Mills informed Council that Science had held a number of successful speaker series and that the Neuroscience one was being re-delivered through the Markham Public Library system. He provided an update on the York University Markham initiative. He noted that the university was still discussing issues regarding the governance structure of the York University Markham campus. Dr. Mills informed Council on the proposed curriculum programs. He also stated that professional consultants have been engaged by the university on the interior and building designs in order that we maximize the space in an innovative and modernized manner. He also outlined the timelines related to this project. The initial opening date was Fall 2019 but York is now speculating that it could be Fall 2020. Lastly, he answered some questions from the floor.

A motion was moved, seconded and carried to extend the meeting by ten minutes.

8. Reports from Standing Committees of Council

Professor W. van Wijngaarden, Chair of the Committee on Teaching and Learning reminded faculty on the nominations for the Science Excellence in Teaching Awards.

He noted that the deadline for submitting applications was January 31st.

9. Other Business

9.1 Presentation by Lucy Bellissimo, Deputy Registrar & Linda West, Assistant Registrar on Accommodated Tests and Exams

Lucy Bellissimo informed Council that requests for accommodations are rising exponentially year over year. More students are registered despite declining enrolments in university overall. Part of the reason is because York University is well known for providing very good accommodations for students in such need. There is more awareness and less stigma for students requesting accommodation. She noted that on average science students write eleven tests with accommodation; non science students average six. She appealed to faculty to adhere to deadlines regarding their examinations submission to the Registrar’s office. She also reiterated on the need for faculty to be responsive to the Registrar’s communication regarding examinations. A discussion ensued followed by a question and answer session. In conclusion, it was recommended that Lucy’s office should prepare and send out one page document outlining critical information to all faculty members on this matter.

9.2 Consultation with Council regarding Metrics for research and other indicators

The Chair of Council referred to the draft memo from the university Secretariat’s office regarding the matter. Council had a brief discussion on the matter. In conclusion, Dr. S. Morin and Dr. L. Donaldson were tasked to work on the response.

___________________________________________________________
N. Madras, Chair of Council

___________________________________________________________
S. Siyakatshana, Assistant Secretary of Council
Remarks

Presiding over his final meeting as Chair, Professor George Comninel expressed appreciation to Senators for their ongoing support during his terms as Vice-Chair and Chair. He thanked his predecessor, Roxane Mykitiuk, successor Lesley Beagrie, and University Secretary Maureen Armstrong and her University Secretariat colleagues for their assistance and guidance. He spoke of an experience that was both enlightening and rewarding, and he urged Senators to sustain and enhance collegial governance, which remains essential to the life of the University. Senators applauded Professor Comninel, who served with distinction and dedication, as he received and flourished a commemorative gavel presented to him by the Secretary. As he had on several previous occasions, Professor Ian Roberge served as Acting Vice-Chair for the meeting and the Vice-Chair-elect, Franck van Breugel, was introduced and welcomed. The Chair expressed condolences on the passing of three individuals who had contributed to Senate and its committees over the years: Dean David Bell, Professor David Logan and Professor Tim Edgar.

York’s President, Dr Mamdouh Shoukri, joined in celebrating Professor Comninel and in doing so stressed an unparalleled depth of governance knowledge and experience. The President was pleased to report that applications to York from high school graduates were running well ahead of the system average and results for other GTA universities. A 5.4 per cent rise in first choice applications was especially heartening, and he praised those responsible for strategic enrolment management strategies and to all members of the community for helping to achieve an impressive boost. Applications from those not coming directly from high school were also forecast to be strong. The focus will now fall on converting applicants into registrants.

Dr Shoukri also commented on the following:

- a visit to the Keele campus by Premier Wynne and her positive encounters with students
- final confirmation of government funding for the Markham Centre Campus, a milestone that coincides with the accelerating development of academic program proposals that will inform the design of the facility
- the status of a provincial postsecondary funding review and its relationship to the pending Strategic Mandate Agreement negotiations
- the tuition fee framework announced by Queen’s Park (no decision has yet been made on how the three per cent overall cap will be applied at the University)
- approval by the Board of Governors of a Policy on Sexual Violence and steps to its implementation
- efforts to improve the participation rate for this year’s National Survey of Student Engagement
In response to questions about risks associated with demographic trends and policy contexts, the President stressed the need for the community to rally around the vision of York as a comprehensive, research-intensive institution and to contribute to its realization.

**Reports**

Senate’s nominees to the Board of Governors, Professors Bernard Lightman and Lauren Sergio, presented synopses of the Board meetings of November 29 and December 14, 2016.

The Academic Colleague to the Council of Ontario Universities, Professor David Leyton-Brown, reported on recent facilitated discussions at colleagues’ meetings devoted to quality indicators, experiential learning and student learning outcomes.

Under the auspices of the Academic Policy, Planning and Research Committee (APPRC) Senate received and discussed Provost Rhonda Lenton’s overview of the nature and implications of negotiations with the province for new Strategic Mandate Agreements.

**Senate Elections**

Senate approved a slate of nominees for election to Senate committees and other positions, an action that resulted in acclamations or e-votes scheduled to begin on January 30.

**Policy Amendments**

Senate approved a recommendation of APPRC to amend the *Senate Policy on Organized Research Units*.

**Curriculum Approvals**

On recommendations made by the Academic Standards, Curriculum and Pedagogy Committee (ASCP), Senate approved

- the establishment of a Co-Registration Option in Chemistry between York and Seneca, Faculty of Science
- a change in the name and revision of degree and admission requirements, PhD Program in Computer Science, Lassonde School of Engineering / Faculty of Graduate Studies
- the closure of the Joint York-Seneca BSc (Tech) Program in Applied Biotechnology, Faculty of Science
- changes to degree requirements, Master of Social Work, Faculty of Graduate Studies
Committee Information Items

Senate Executive reported on the following items:

- its approval of Faculty Council nominees for membership on Senate committees
- remaining committee vacancies for 2017 – 2020 terms and the positive impact made by changes in the nominations process instituted in 2016
- timelines for the bi-annual review of Senate membership
- confirmation that changes to Faculty Council rules and procedures submitted by Graduate Studies and Science were consistent with principles of collegial governance and practices elsewhere at the University
- the establishment of a group comprised of members of the Senate and Board Executive committees to consider the re-appointment of the Chancellor, and an invitation to Senators to comment on the prospect of re-appointing Chancellor Sorbara
- timelines set by the Sub-Committee on Equity for the completion of its review of the Senate Policy on Accommodations for Students with Disabilities

APPRC reported that it had elected Professor Les Jacobs as Chair from January to June 2017. It also provided information on the questions to be explored in upcoming meetings with the Deans, Principal and University Librarian and consultations with Faculty Councils on tracking progress on academic objectives. APPRC conveyed the most recent report of the Sub-Committee on Organized Research Units. As a centerpiece of the meeting, facilitated discussion by Senators of objectives in University Academic Plan 2015-2020 priority number 2 (Advancing Exploration, Innovation and Achievement in Scholarship, Research and Related Creative Activities).

Academic Standards, Curriculum and Pedagogy

ASCP advised that the Registrar has agreed to adopt a three-year outlook for Sessional Dates and described an editorial amendment to the Senate Policy and Guidelines on Withdrawn from Course (W) Option. Modifications to curriculum and degree requirements approved by the Committee in December and January were the following:

Glendon
- minor changes to the Certificate in Technical and Professional Communication, School of Translation
• establishment of LYON as a new rubric for the York-EM Lyon Dual Credential BBA – ILST program, Department of International Studies

Health
• minor changes to the degree requirements for the Specialized Honours BA and BSc programs in Global Health

Liberal Arts & Professional Studies
• minor changes to the degree requirements for the BSW program, School of Social Work
• minor changes to the degree requirements for the Honours BA program in Children’s Studies, Department of Social Science
• minor changes to the degree requirements for the 90-credit BA in Linguistics, Department of Languages, Literatures and Linguistics
• adoption of DEMS as a rubric for the Bachelor of Disaster & Emergency Management program (in addition to use by the graduate programs), School of Administrative Studies

Science
• a minor change to the requirements for the Honours Minor degree option in Biology, Department of Biology

Appeals
The Appeals Committee filed its annual report on Faculty and Senate adjudications.

Additional Information about this Meeting
Please refer to the full Senate agenda and supplementary material posted online with the January 26, 2017 meeting for details about these items.

http://secretariat.info.yorku.ca/senate/meeting-agendas-and-synopses/

February Meeting of Senate
Senate’s next meeting will be held at 3:00 p.m. on Thursday, February 16, 2017. Senators and members of the community are asked to take special note of the date, which comes one week prior to normal to avoid a conflict with Reading Week.
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 January 31, 2017, 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 jpearson@yorku.ca

Course Changes

1. Change in pre/co-requisites and calendar description: SC/MATH 4939 3.0 “Statistical Data Analysis using SAS and R
2. Change in calendar description and Course Credit Exclusion: SC/BPHS 4080 3.00 “Cellular Electrodynamics
3. Change in calendar description and Course Credit Exclusion: SC/BPHS 4090 3.00 “Biophysical Techniques
Changes to Existing Course

Faculty: SCIENCE
Department: MATH
Course Number: 4939 3.0
Date of Submission: 
Effective Session: W2017-18
Course Title: Statistical Data Analysis using SAS and R

Type of Change:

- [x] in pre-requisite(s)/co-requisite(s)
- [ ] in course number/level
- [ ] in credit value
- [ ] in title (max. 40 characters for short title)
- [x] in Calendar description (max. 40 words or 200 characters)
- [ ] other (please specify):

Change From:
Prerequisite: SC/MATH 3131 3.00, SC/MATH 3132 3.00, SC/MATH 3330 3.00, SC/MATH 3430 3.00, SC/MATH 4330 3.00, SC/MATH 4730 3.00.

To:
Prerequisite: SC/MATH 3131 3.00, SC/MATH 3330 3.00, SC/MATH 4330 3.00
Rationale:

Changing the prerequisites for this course serves a number of objectives.

1. The Operations Stream in Math for Commerce is merging with the Honours Major Statistics Programme. MATH 4939 is a required course in the Honours Major Statistics Programme but its full list of prerequisites would have made it impossible for Operations Research students to complete the prerequisites as well as the courses required in the Operations Research stream.
2. The areas of statistics stressed in MATH 4939 emphasize the material covered in the three courses that are proposed to be retained as prerequisites: basic probability theory and linear models for continuous and categorical responses. The courses that we propose to omit contribute to statistical maturity but are less critical for their specific content.
3. MATH 4730 is traditionally offered in the winter term and retaining it as a prerequisite would require students to plan ahead and complete it in their third year. Failure to do so would prevent them from graduating in 4 years.
4. MATH 4330, which we propose to retain as a prerequisite, is traditionally offered in the fall term, and thus fits more easily into students' programmes.

For reference, the following is the current course description for MATH 4939:

This course helps students to connect the statistical theory they have studied in their undergraduate program with reality through case-studies and data analysis representing in-depth investigations into the day-to-day practice of statistics. The course provides a hands-on approach with regular data-analysis laboratories and oral/written presentation of results by students. The course examines the role of hypothesis testing, estimation, power, regression, categorical data in practice using both SAS and R.

Prerequisite: SC/MATH 3131 3.00, SC/MATH 3132 3.00, SC/MATH 3330 3.00, SC/MATH 3430 3.00, SC/MATH 4330 3.00, SC/MATH 4730 3.00.

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 Courses & Degree Programs

**Department:** Physics and Astronomy  
**Course Number:** SC/BPHS 4080 3.00  
**Course Title:** Cellular Electrodynamics  
**Date of Submission:** January 2017  
**Effective Session:** Summer 2017

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

**Change From:**  
BPHS 4080 3.00 Cellular Electrodynamics

This course will focus on physics relevant to cellular dynamics and transport. Basic principles will include: electrodynamics (e.g., charge transport across cells, Nernst potentials), diffusion, osmosis, and wave propagation. Salient biological topics will be approached in a rigorous mathematical fashion and include those such as: cellular homeostasis, the Hodgkin-Huxley model for action potentials, molecular biology of ion channels, and molecular motors (e.g., motion in low Reynolds-number regimes). The objective of the course is to help students to integrate the knowledge gained in second and third year biology and physics courses and to use methods of physics to study biological processes. Prerequisites: SC/BPHS 2090 3.00 or instructor permission; SC/PHYS 2020 3.00 or equivalent; SC/PHYS 2060 3.0 or equivalent.

**To:**  
BPHS 4080 3.00 Cellular Electrodynamics

This course will focus on physics relevant to cellular dynamics and transport. Basic principles will include: electrodynamics (e.g., charge transport across cells, Nernst potentials), diffusion, osmosis, and wave propagation. Salient biological topics will be approached in a rigorous mathematical fashion and include those such as: cellular homeostasis, the Hodgkin-Huxley model for action potentials, molecular biology of ion channels, and molecular motors (e.g., motion in low Reynolds-number regimes). The objective of the course is to help students to integrate the knowledge gained in second and third year biology and physics courses and to use methods of physics to study biological processes. Prerequisites: SC/BPHS 2090 3.00 or permission of the instructor; SC/PHYS 2020 3.00; SC/PHYS 2060 3.00. **Course Credit Exclusion:** BPHS 3090 3.00.
Rationale:

BPHS 4080 3.00 is identical in content to BPHS 3090 3.00, which it replaced. The course description is different from that of BPHS 3090 3.00 only because it formalizes what was actually being taught in BPHS 3090 3.00. Thus, students who took BPHS 3090 3.00 in the past should be excluded from taking BPHS 4080 3.00 for independent credit. Besides the addition of the course credit exclusion, the only changes to the calendar copy are clerical adjustments to the pre-requisites.

Note: For course proposals involving cross-listings, integrations and degree credit exclusions, approval from all of the relevant Faculties/department/divisions 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 (Form 1) 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 ATSG indicating whether resources are adequate to support the course.
**Department:** Physics and Astronomy  
**Course Number:** SC/BPHS 4090 3.00  
**Course Title:** Biophysical Techniques  
**Date of Submission:** January 2017  
**Effective Session:** Summer 2017  

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This course will focus on applications of atomic, nuclear, and quantum physics in biology and medicine. Topics will include interactions between radiation and matter (including spectroscopy), principles of biological and medical imaging, radiation therapy in medicine, and micro/nano-fluidics. An array of modern experimental techniques will also be covered, including: optical tweezers, atomic force microscopy (AFM), x-ray crystallography, and nuclear magnetic resonance (NMR, MRI). Relevant signal processing strategies such as spectral analysis (e.g., Fourier transforms) and image analysis (e.g., convolutions, tomography) will be covered in detail. A regular one-hour tutorial will serve to provide background training and hands-on support for student lab work. Prerequisites: SC/BPHS 2090 3.00; SC/PHYS 2020 3.00; SC/PHYS 2060 3.00. Corequisite: SC/PHYS 3040 6.00  

This course will focus on applications of atomic, nuclear, and quantum physics in biology and medicine. Topics will include interactions between radiation and matter (including spectroscopy), principles of biological and medical imaging, radiation therapy in medicine, and micro/nano-fluidics. An array of modern experimental techniques will also be covered, such as: optical tweezers, atomic force microscopy (AFM), x-ray crystallography, and nuclear magnetic resonance (NMR, MRI). Relevant signal processing strategies such as spectral analysis (e.g., Fourier transforms) and image analysis (e.g., convolutions, tomography) will be covered in detail. A regular one-hour tutorial will serve to provide background training and hands-on support for student lab work. Prerequisites: SC/BPHS 2090 3.00 or permission of the instructor; SC/PHYS 2020 3.00; SC/PHYS 2060 3.00. Corequisite: SC/PHYS 3040 6.00.  

Course Credit Exclusion: SC/BPHS 4090 4.00.
Rationale:

BPHS 4090 3.00 is identical in content to BPHS 4090 4.00, which it replaced. The course description is different from that of BPHS 4090 4.00 because it formalizes what was actually being taught in BPHS 4090 4.00 and because of the replacement of a one-credit laboratory sequence by a single laboratory project. Thus, students who took BPHS 4090 4.00 in the past should be excluded from taking BPHS 4090 3.00 for independent credit. Besides the addition of the course credit exclusion, the only changes to the calendar description are intended to give the instructor more flexibility and to give students with a wider range of backgrounds the opportunity to enrol.

Note: For course proposals involving cross-listings, integrations and degree credit exclusions, approval from all of the relevant Faculties/department/divisions 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 (Form 1) 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 ATSG indicating whether resources are adequate to support the course.