Notice of Meeting
Tuesday, April 14, 2015
at 3:00pm – 4:30pm
306 Lumbers

Agenda

1. Call to Order and Approval of Agenda
2. Chair’s Remarks
3. Minutes of March 10, 2015 meeting
4. Business Arising
5. Dean’s Report to Council
6. Associate Deans’ and Bethune Master’s Remarks
7. Reports from Science Representatives on Senate Committees
8. Reports from Standing Committees of Council
   • Curriculum Committee (consent agenda item)
9. Inquiries and Communications
   • Senate Synopsis of the 612 meeting held on March 16, 2015
   • Senate Synopsis of the 613 meeting held on March 19, 2015
   • Senate Synopsis of the 614 meeting held on March 26, 2015
10. Any Other Business
COUNCIL OF THE FACULTY OF SCIENCE

Tuesday, March 10, 2015
at 3:00pm – 4:30pm
306 Lumbers

Minutes


1. Call to Order and Approval of Agenda

   The Chair of Council, Dr. Alex Mills called the meeting to order and the Agenda was adopted with only one amendment that Jennifer Foster’s presentation had been cancelled.

2. Chair’s Remarks

   The Chair noted that Dean Jayawardhana was away and Dr. R. Tsushima would provide the Dean’s report on his behalf.
3. **Minutes of February 10, 2015 meeting**

   Minutes of February 10th meeting were approved.

4. **Business Arising**

   There was no Business Arising.

5. **Dean’s Report to Council**

   Associate Dean Tsushima presented the Dean’s report. He commented on the CUPE strike and was concerned that it would have a negative impact on the student conversion process.

   He also reported that the Faculty of Science was well represented at the recent York Research Leaders Celebration, an event held to celebrate the accomplishments of students and researchers. Big announcements of the night were the President’s Research Excellence Award and the President Emerging Research Leader Award. Prof. Sergey Krylov (Chemistry) won the 2015 President’s Research Excellence Award.

   Dr. Tsushima added that the Dean’s Office had provided the Faculty of Science’s response to the Institutional Strategic Directions document by the March 2 deadline. It is expected that Provost R. Lenton and Vice-President G. Brewer will draft a single document, based on input from various Faculties, which will be posted online for feedback before the document is finalized for presentation to the Board of Governors.

   He also reported that the Dean had made a presentation to the APPRC and responded to queries from APPRC members. The content of the APPRC discussion focused on our priorities as well as the academic planning strategy.

   He added that the Science Faculty members continued to enjoy good media coverage.

   He updated members on the Neuroscience talk series at Toronto Public Library branches. The first two talks drew capacity audiences.

   Dr. Tsushima congratulated two of our undergraduate students who won first and second place for the best presentation category at the Undergraduate Research Fair held by the Library. This project allows undergraduate students to present their research projects.

6. **Associate Deans’ and Bethune Master’s Remarks**

   On behalf of the Acting Dean, Janse van Rensburg, Dr. Tsushima informed Council that the university is holding ongoing discussions on whether or not to resume classes during the CUPE strike. A brief discussion ensured. There was a question of whether or not those TAs wishing to resume their duties could do so. Dr. Tsushima responded that this can only be determined by the Senate Executive.

   Associate Dean Tsushima updated Council that they had adjudicated the YUFA Minor Research Grant and the Faculty Fund. Twenty-nine YUFA Minor Research Grant applications were received and eleven awards were funded. Eight applications were received for the Junior Faculty Fund and all eight applications were funded. He added that students and supervisors had been notified of the NSERC USRA
awards results. Overall, the university received forty-one applications and Science received eighteen awards. The Research Awards Committee recommended that a minimum of three awards will go to each of the departments and the remaining six distributed according to the overall student ranking to ensure even distribution.

7. **Reports from Science Representatives on Senate Committees**
   
   There were no reports.

8. **Reports from Standing Committees of Council**

   **Executive Committee**
   
   Council noted Executive Committee’s Vacancies Report on Senate and FSc Committees.

9. **Inquiries and Communications**

   Council noted the Board of Governors Synopsis of the 437th meeting held on February 23, 2015.

10. **Any Other Business**

    10.1 **Motion from the Department of Biology Teaching Committee: To review Anomalous Grades Policy**

    Dr. P. Wilson provided Council with a summarized rationale on the need to review and revise the current anomalous grades policy (and final grade approval process).

    A brief discussion ensued on this matter. Council moved, seconded and carried that a Task Force be struck by the Chair of Council to undertake a review and to propose changes in the Faculty of Science current anomalous grades policy (and final grade approval process) and report back to Council by September 2015.

    Other members suggested that the Task Force include P. Wilson and T. Kelly and one member of Committee on Examination and Standards one member of Committee on Teaching and Learning.

    10.1.1 **Motion from Tamara Kelly, seconded by P. Wilson:**

    To seek to alter the start date of classes in January

    Motion by Dr. T. Kelly, seconded by P. Wilson: that the Faculty Council requests the University to delay the start of classes in January (Winter term) for two or three days to allow the administrative start of term to begin without the complication of classes beginning at the same time.

    Dr. Tamara Kelly spoke to the motion above. She added that this would allow students enough time to make an informed decision whether to drop off a course or not. Council deliberated on this motion taking into account its implications. At the end of discussion, the motion was moved, seconded and carried.

A. Mills, Chair of Council

B. Mun-Shimoda, Secretary of Council

S. Siyakatshana, Assistant Secretary of Council
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) but 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 Change

SC/PHYS 3090 3.0 Biophysics I: - in course number/level, in pre/co-requisite(s)
### Changes to Existing Courses & Degree Programs

**Department:** Physics and Astronomy  
**Date of Submission:** March 2015  
**Effective Session:** [ASAP]

**Course Number:** 3090  
**Course Title:** Biophysics I

#### Type of Change:

- [ ] in degree requirements  
- [ ] in cross-listing  
- [x] in course number/level  
- [ ] 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 3090  
**Prerequisites**  
SC/BPHS 2090 2.0; SC/PHYS 2020 3.0; SC/PHYS 2060 3.0.

**To:** BPHS 4080  
**Prerequisites**  
SC/BPHS 2090 3.0 or instructor permission; SC/PHYS 2020 3.0 or equivalent; SC/PHYS 2060 3.0 or equivalent.

#### Rationale:

Currently taken by biophysics stream undergraduates in the W term of third year, BPHS 3090 is designed to be also appropriate for graduate students in both physics and biology. The course is accessible to such a wide range of students because, quoting the course description, “The objective of the course is to help students to … use methods of physics to study biological processes.” Renumbering it to a 4000-level course will enable the course to be cross-listed as a graduate course. This will benefit both graduate students (through expanded course offerings) and the biophysics program (through increased interaction with graduate students and through increased enrollment in the course). We also clarify that the instructor can admit students if they have physics/biophysics backgrounds equivalent, but not identical, to the prerequisites.

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*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.*
Time & Location
Lecture: MWF 9:30-10:30 (Bethune College, BC 225)

Instructor: Christopher Bergevin
Office: Petrie 240
Email: cberge@yorku.ca
Office Hours: Check course website (or email for appt.)

Course Website:

Textbook:

Prerequisites: SC/BPHS 2090 2.00; SC/PHYS 2020 3.00; SC/PHYS 2060 3.00

Course Theme/Topics: This course will generally focus on the topic of cellular transport to examine the interplay between physics and the life sciences. Topics will include (but are not limited to):

- Diffusion
- Osmosis
- Carrier-mediated transport
- Ion channels
- Modeling cell membranes using electric circuit analogs
- Action potentials (e.g., Hodgkin Huxley model)
- Fluid motion at cellular dimensions (laminar flow, low Reynolds number)

*The York U library has a copy. Another text that may be a useful reference for the course (though not necessarily recommended to purchase) is Intermediate Physics for Medicine and Biology, 4th Ed., R. Hbbie & B. Roth (Springer). This book can be downloaded for free as a pdf via the York University library (ask course instructor for details)
Course Policy

Grading

There will be 100 total possible points in the course. Point breakdowns are as follows:

- Homework – 25 points
- Exams – 50 points
- Project – 25 points

Final grades will be no lower than as listed below:

- 90 < points (90%-100%) = A+
- 80 < points (80%-89%) = A
- 75 < points (75%-79%) = B+
- 70 < points (70%-74%) = B
- 65 < points (65%-69%) = C+
- 60 < points (60%-64%) = C
- 55 < points (55%-59%) = D+
- 50 < points (50%-54%) = D
- ∼ 50 points (~50%) = E
- points < 50 (0%-50%) = F

Homework: Assignments will be given on a regular basis (there will be ~7–8 assignments). Each student is expected to turn in his or her own assignment. Points may be deducted for lack of explanation/clarity/completeness. It is crucial for students to spend considerable effort on these problem sets in order to be successful in the class.

Exams: Two exams will be given in class, the first on Friday Feb. 27 and the second during the assigned 3090 final exam time (TBD). Note, as specified in the lateness policy below, there are no makeups.

Project: By the end of BPHS 3090, students will have have learned about a number of topics that will contribute to a deep understanding of the mechanisms underlying neurodynamics. Towards this end, there will be a project component to the course that will consist of two separate parts.

- Critical literature review/discussion (40%) – A current research paper will be chosen and distributed to the class. Everyone will be expected to read the paper and write up a short one-page document that a. summarizes the key theme of the paper, b. identifies key biophysical themes present, and c. poses several probing questions stemming from it. Furthermore, one class session will be dedicated to a critical discussion of that paper and everyone will be required to participate and contribute significantly to the discussion.

- HH Simulations (60%) – Students will use (Matlab-based) software that allows them to simulate the Hodgkin-Huxley model for action potentials. Given the complexity of the HH model and the large number of parameters, a wide array of interesting behavior can be observed from the model. As such, students will be asked to create a testable hypothesis that they will then use the software to address. Students will also be asked to give a short presentation in class on their hypothesis/results.

Lateness: Unfortunately, some deadlines in the real world are quite harsh and allow no room for lateness. Given such, this course will implement two policies:
1. **There will be no makeup exams.** It is very important that you are present in class for the exams and the project presentation (as these determine more than 75% of your final grade!). Exceptions in extreme cases may be granted, but only upon prior approval or for an (excused) emergency.

2. All other due dates (i.e., for HW, lab reports, and project deadlines) will be subject to a severe lateness penalty. The grade for a particular assignment will be multiplied by a lateness factor

   \[ L = 0.3e^{-t/4} + 0.7e^{-t/72} \]

   where \( t \) is the number of hours late. See figure for the lateness factor plotted as a function of time. Notice that the maximum grade for a report that is more than ONE DAY LATE is less than 50%.

**Course Computing**

As this is a 3rd year physics course, one objective will be that by the end of the semester students are comfortable using a computer in a variety of fashions. Towards this end, you will be encouraged to use Matlab\(^1\) in a number of different ways. Two specific themes towards this end will be woven into the course:

1. **SoftCell** – A program developed at MIT that is freely available (we will provided a semi-updated version via the 3090 course website), which allows for a wide variety of simulations to be run that are relevant to the course topics. Exercises using this software will be woven into the HW assignments.

2. **Programming** – To avoid computers becoming black boxes, you may be asked to write some simple codes to perform tasks relevant to course topics (e.g., write a code to numerically solve a differential equation). Exercises along these lines will be woven into the HW assignments.

   The course instructors will be happy to help out with any difficulties along either of these lines. So don’t be afraid to ask for help!

**Academic Honesty and University Attendance Policies**

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\(^1\)Matlab is accessible via the York library computers and can also be downloaded for use on PCs. A free version of the software also exists and is called Octave.
Students are responsible to be informed of University policies:

http://www.yorku.ca/secretariat/policies/index-policies.html

Regarding the Academic Honesty, students found to be in violation of the Code are subject to sanctions that will be determined by the severity of the infraction. The Code of Academic Integrity will be enforced in all areas of the course, including projects, tests, and homework. For assignments (e.g., HW, labs), students can (and are encouraged to) work together in groups. However, each student will be expected to turn in their own individual assignments and (reasonably) acknowledge contributions made by others.

Students are expected to attend every scheduled class and be familiar with the University Class Attendance policy. It is the student’s responsibility to keep informed of any announcements, syllabus adjustments, or policy changes made during scheduled classes. Students may be administratively dropped if they miss more than three classes and/or the first class.

Classroom Conduct

Students at York University are expected to conform to the standards of conduct established in the Code of Student Rights and Responsibilities. Prohibited conduct includes:

1. All forms of student academic dishonesty, including cheating, fabrication, facilitating academic dishonesty, and plagiarism.

2. Interfering with University or University-sponsored activities, including but not limited to classroom related activities, studying, teaching, research, intellectual or creative endeavor, administration, service or the provision of communication, computing or emergency services.

3. Endangering, threatening, or causing physical harm to any member of the University community or to oneself or causing reasonable apprehension of such harm.

4. Engaging in harassment or unlawful discriminatory activities on the basis of age, ethnicity, gender, handicapping condition, national origin, race, religion, sexual orientation, or veteran status, or violating University rules governing harassment or discrimination.

→ Students found to be in violation of the Code are subject to disciplinary action.

Students Who Require Reasonable Accommodations Based on Disability

Students planning to use accommodations for this course should privately identify themselves to their instructor within the first few days of class.

2015 Important Dates
First Day of Class .................................................. Jan. 5, 2015
Reading Week .................................................. Feb. 14-20 (no classes)
*First Exam* ....................................................... Feb. 28
Student HH presentations ................................. Mar. 25 (tentative)
In-class paper discussion ................................. Mar. 30 (tentative)
Good Friday ....................................................... Apr. 3 (no class)
Last Day of Class ............................................... Apr. 6
The Senate of York University

Synopsis

Special Meeting of Senate held on
Thursday, March 16, 2015

The 612th Meeting of the Senate of York University

Remarks by the Chair of Senate

The Chair of Senate welcomed Senators to a special meeting called, in accordance with Senate’s Policy on the Academic Implications of Disruptions or Cessations of University Business Due to Labour Disputes or Other Causes, on the fourteenth day of the academic disruption that began on March 3 with a strike by CUPE 3903. She confirmed that Senate Executive has received numerous communications from members of the community expressing a wide range of views about the disruption.

Senate Executive Report

Senate Executive provided Senate with a record of its meetings and decisions prior to and during the disruption of academic activities that began on March 3. The report generated a discussion encompassing perspectives on matters including the following:

- the Executive Committee’s mandate, role and means of deliberation
- the meaning and application of the Disruptions Policy’s principles of academic integrity and fairness to students
- changes authorized by Senate Executive regarding the last day to withdraw from a course without receiving a grade, reduction in the length of term for certain programs and adjustments to class and examination schedules
- the rationale for, and impact of, decisions to resume classes in additional Faculties
- remediation planning at the University and Faculty level, the accommodations and options available to faculty members and students to complete courses
- the status and contents of the Provost’s Institutional Remediation Guidelines Framework and the Faculty-specific plans that are aligned with it
- concerns about, and efforts made to enhance, community safety

For information on these items please refer to the full Senate agenda posted online.

University Secretariat: extension 55310
Senate’s 613th meeting is scheduled for 3:00 p.m.
on Thursday, March 26, 2015
in the Senate Chamber, Ross Building, Keele Campus.
The Senate of York University

Synopsis

Special Meeting of Senate held on
Thursday, March 19, 2015

The 613th Meeting of the Senate of York University

Remarks

The special meeting of Senate was called by the Chair pursuant to a petition submitted by Senators under rule IV 8 b. The Chair, Professor Roxanne Mykitiuk, welcomed Senators and announced that proceedings would be streamed for viewing by members of the community in Vari Hall B. She emphasized the need for Senators to help maintain an open, respectful and collegial space for deliberations.

Senate Executive Report

Senate Executive provided Senate with a record of its meetings and decisions prior to and during the disruption of academic activities that began on March 3. Aided by a presentation, the Chair drew special attention to

• the core principles of Senate’s Policy on the Academic Implications of Disruptions or Cessations of University Business Due to Labour Disputes or Other Causes – academic integrity, fairness to students, and timely information
• principles articulated in an Institutional Remediation Guidelines document prepared by the Provost to which Faculty remediation frameworks align
• Senate Executive decision-making criteria and the contextual factors that have informed the Committee’s decisions as the disruption has evolved
• a request from Senate Executive that the Faculty of Environment Studies and Liberal Arts and Professional Studies provide lists of courses that can proceed on March 23 with academic integrity (which are due by 4:00 pm on March 20, with a posting on the University Website of the courses shortly thereafter)
• Senate Executive’s ongoing monitoring role and commitments

Motion Concerning the Cancellation of Classes

Senate debated a motion “that Senate call upon Senate Executive Committee to continue the suspension of all classes that have not yet resumed until the end of the labour disruption.” The motion was defeated with 33 voting in favour and 84 opposed.

For information on these items please refer to the full Senate agenda posted online.

University Secretariat: extension 55310

Senate’s 614th meeting is scheduled for 3:00 p.m.
on Thursday, March 26, 2015
in the Senate Chamber, Ross Building, Keele Campus.
The Senate of York University

Synopsis

Meeting of Senate held on
Thursday, March 26, 2015

The 614th Meeting of the Senate of York University

Remarks

The Chair of Senate, Professor Roxanne Mykitiuk, stressed the need for continued decorum and collegiality as Senators conducted their important work.

Acknowledging the difficulties caused by the strike, President Shoukri expressed full confidence that the community will come together quickly and positively when it ends. He and Vice-President Finance and Administration Gary Brewer described the steps taken to enhance the safety of picket lines.

Approvals

Senate approved recommendations of the Academic Policy, Planning and Research Committee to

- amend the Senate- Board of Governors Policy Endowed Chairs and Professorships (re-named the Policy on the Establishment and Designation of Research and Teaching Chairs and Professorships and Distinguished Fellowships)
- establish a Policy on Externally Funded Regular Named Chairs

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

- the establishment of MASc and PhD Programs in Civil Engineering, Department of Civil Engineering, Lassonde School of Engineering / Faculty of Graduate Studies
- changes to the degree requirements of the International Bachelor of Business Administration Program (iBBA), Schulich School of Business
- changes to the degree requirements of the BA and iBA Specialized Honours Programs in Economics, Economics Department, Glendon

Committee Information Reports

Senate Executive provided Senate with a record of its meetings and decisions prior to and during the disruption of academic activities that began on March 3. The Vice-Chair, Professor George Comninel, highlighted options set out in the Committee’s March 26 document on “Completion of Courses: Principles for Remediation and Accommodation.” One provision of the document – on assessed grades -- drew special attention, and the Committee agreed to review the text of this and other elements to ensure clarity. The Committee also reported that it had approved the membership of Professor Michael Longford, School of the Arts, Media, Performance and Design on Senate Executive, and had postponed an informal gathering with members of the Board of Governors’ Executive Committee earlier in March.

Academic Policy, Planning and Research announced that a planning forum scheduled for April 23 has been postponed to the autumn. Documents related to recent planning discussions with the Deans, Principal and University Librarian will be transmitted to Senate in April.

Academic Standards, Curriculum and Pedagogy advised that it had approved minor modifications to degree requirements for the following:

Glendon

- BA programs in Business Economics
- BA programs in International Studies
• BA and BSc programs in Psychology

Faculty of Science

• 90-credit BSc program in Physics and Astronomy, Physics Stream
• Specialized Honours BSc program in Physics & Astronomy (each of the Applied Physics, Astronomy and Physics Streams)

Schulich School of Business

• BBA / iBBA program (degree requirements and an academic regulation)

For information on these items please refer to the full Senate agenda posted online.

University Secretariat: extension 55310

Senate’s 615th meeting is scheduled for 3:00 p.m. on Thursday, April 23, 2015 in the Senate Chamber, Ross Building, Keele Campus.