SCIENCE CURRICULUM COMMITTEE MEETING
Thursday, January 31, 2019 at 9:00 am in the Governing Council Chamber, Simcoe Hall

MINUTES

Present

Pamela Klassen (Vice-Dean)  David Dubins  Thierry Mallevaey
Martha Harris  Alex Ensminger  John Marshall
Kevin Mak  Alison Gibbs  Marlene Rong
Mohamed Ali  Cynthia Goh  Nicholas Rule
Michelle Arnot  Jason Harlow  Nathan Taback
Dror Bar-Natan  Tony Harris  Marten van Kerkwijk
Ashley Bruce  Rebecca Jockusch  Ruiqi Wang
Pui Chi Clare Chan  Tamara Jones  Ziquan Wang
Richard Collins  Nohjin Kee  Andrea Williams
Michelle Craig  Hsin-Yu Grace Lo  Thomas Zheng
Asher Cutter  Abdullah Malik

Call to Order and Vice-Dean’s Welcome

The meeting was called to order at 9:07 am by the Vice-Dean, Undergraduate & International, Professor Pamela Klassen, who welcomed everyone. The meeting started with a quick round of introductions.

1. Report from the Vice-Dean, Undergraduate & International

Vice-Dean Klassen addressed the committee on five items.

PCL218H1: Cannabis the Drug:

She informed the committee that she had shared the new course proposal for PCL218H1 with the Social Sciences Curriculum Committee the day before and would do the same at the Humanities Curriculum Committee meeting the next day. Vice-Dean Klassen wanted to bring this course to the committees’ attention as some academic units might be interested in offering courses that explore cannabis from different perspectives.

Consultation re: Curriculum Development:

Vice-Dean Klassen reinforced the value of consultation between academic units when developing curriculum changes, and she cited PCL218H1 as an example in which its course title and description were modified after different rounds of consultation.

Discontinuing Use of CGPA in Course Prerequisites:

Vice-Dean Klassen reminded the committee that the Faculty is discontinuing the use of CGPA as an entry requirement to a course or program of study. The CGPA includes all of the courses taken by students, and some of
those courses are not relevant to the actual course or program in which students are attempting to enrol. She suggested academic units to ask for specific grades in specific courses as opposed to an overarching CGPA when proposing course prerequisites or enrolment requirements to programs.

**Online Courses:**

The Dean’s Office will be undergoing a review of existing online courses to examine their purpose as well as impact on students’ academic career and beyond. Vice-Dean Klassen is asking academic units to hold off on proposing new online courses while the review is underway.

**Grading Schemes in Courses:**

Finally, Vice-Dean Klassen encouraged academic leaders to be mindful when reviewing the course syllabi of their academic unit’s courses. Grading schemes that put too much weight on one test or assignment in the absence of other deliverables tend to create high-stake scenarios for students. It is also important that students are receiving a certain proportion of grades prior to the drop date of a course.

A member asked if it would be appropriate for academic units to include in the course syllabi that safety orientation is mandatory in order to students to continue taking part in labs should labs count for 40% of a student’s grades. Vice-Dean Klassen replied that this would be worth exploring further in April when committee members gather to have more discussion around best practices.

2. **Approval of Minutes of the November 15, 2018 Meeting of Sciences Curriculum Committee**

The meeting minutes were approved.

3. **Course and Program Modifications for Abbreviated/Expedited Review**

No issues were raised.

4. **Major Program Modifications**

Vice-Dean Klassen stated that proposals containing major program modifications would go through a round of consultation and review at the curriculum committee level/stage. Should these proposals be recommended by the relevant/respective committee(s), they would then go for the next round of consultation and approval at the Arts & Science Council, which has a diverse audience, on February 13, 2019.

**Statistical Sciences, Department of:**

Professor Alison Gibbs, Associate Chair, Undergraduate Studies (Statistics), presented the proposals to modify the Statistics Specialist, the Applied Statistics Specialist, and the Statistics Major.

Modifications proposed this time around would see the reorganization of third- and fourth-year course requirements to ensure students’ exposure to computationally intensive courses. In addition, the Statistics Specialist would be renamed to the Specialist in Statistical Science: Theory and Methods, while the Applied Statistics Specialist would be renamed to the Specialist in Statistical Science: Methods and Practice. The creation of a new disciplinary focus in Pharmacology and Biomedical Toxicology within the Specialist in Statistical Science: Methods and Practice is meant
to enable students to develop a better understanding of how statistical science integrates in the area of pharmacology and toxicology. With the creation of STA492H1 (Seminar in Statistical Science), students enrolled in either of the Specialist programs in Statistical Science will now have the option of taking a fourth-year capstone course or pursuing an internship opportunity being coordinated by the department to acquire high-impact integrative, inquiry-based experience.

For the Statistics Major, a program enrolment restriction was proposed in response to rising student enrolment in programs offered by the department. Currently, approximately 4,500 students are enrolled in the department’s statistics programs, not counting Actuarial Science and Data Science. Last year, the department had started implementing specific enrolment requirements for its Specialist programs in Statistics and Applied Statistics. Effective the 2020 enrolment period, admission from first year to the Statistics Major would be based not only on students completing specific first-year courses in Mathematics and Statistics but also on obtaining a minimum average grade across those courses.

Some questions were raised about the first-year course, STA130H1 (An Introduction to Statistical Reasoning and Data Science). Professor Gibbs responded that enrolment is at 1,000 students this year and that enrolment controls are in place to ensure certain students can gain access to the course first.

A member asked about the procedure for students wanting to switch from one of the Specialist in Statistical Science programs to the Statistics Major. Professor Gibbs replied that these students would be asked to meet with the department’s student advisor to discuss options prior to proceeding to next steps.

Professor Nathan Taback, Director of Data Science Programs in Statistical Sciences presented the proposals to create two new JSC courses and modify the existing Data Science Specialist. The creation of JSC370H1 (Data Science II) and JSC470H1 (Data Science III) would allow students currently enrolled in the Data Science Specialist to continue moving through the program.

A member asked if the department would consider loosening up the enrolment restriction for JSC370H1 and JSC470H1 down the road. Professor Taback replied that the department is being cognizant with respect to resource allocation but that it would be great to open up this course to more students at some point in the future.

A member commented that their unit would like to eliminate the word “cutoff” from its enrolment requirement listings, as this term might lead students to perceive that they would be able to enrol in this academic unit’s programs simply by achieving this “cutoff” grade.

A member commented that the mention of “historical data” reference tends to scare students off.

Another member felt that it might make things worse should students not know what marks to aim for.

A member commented that students would still talk about “cutoff” grades regardless of whether that term is used or not. The member felt that specifying the number of spots to be offered in a program would be beneficial and important to students.

A member inquired about the possibility of imposing/setting a time limit on when programs could be classified as “limited enrolment” so that academic units could have some time to increase capacity. Vice-Dean Klassen responded that the Faculty could consider reviewing these conditions every three to five years.

Overall, there was no consensus on the appropriateness of academic units publishing a “cutoff” grade requirement. However, there was a general desire to review trends and criteria especially in the longer term. Vice-Dean Klassen indicated that it would be worth exploring how we could better help students find their way should they be attracted to studies in quantitative or computational sciences.
5. Minor Program Modifications and Course Proposals for Full Review

University College:

Professor John Marshall, Vice-Principal, presented the proposals to modify four existing programs and one existing course.

For COG401H1 (Seminar in Cognitive Science), he clarified that the rationale behind the proposed prerequisite and exclusion changes was to ensure more students can enrol in a 400-level COG seminar. Changes to the Health Studies Major and Specialist stemmed from the College’s plan to convert its existing full-credit UC One courses to half-credit courses, the consultation with the Human Biology Program regarding the Epidemiology course requirement, as well as the recent approval of a new course on Global Migration and Health.

In response to the modification proposals for the Health Studies programs, a member suggested adding PCL200H1 and PCL218H1 to the existing list of lower-year course choices that are acceptable for program completion. No further action was carried out based on that suggestion.

Vice-Dean Klassen acknowledged the variation in the phrasing of enrolment requirements by academic units to inform students about the competitive nature of their respective programs. She indicated that there would be further discussion on the notion of standardizing the enrolment requirement language.

A member inquired about the possibility of automating the course/curriculum changes process so that academic units would be notified immediately of such changes and the resulting impact. Vice-Dean Klassen replied that she is aware of the benefits of automation, and she reiterated the importance of curriculum committee meetings as means of consultation.

All of the proposals were approved.

Impact Centre:

As a result of the unit representative’s early departure from the meeting, there was no one from the unit to speak to the proposals to modify three existing courses.

Physics, Department of:

Professor Jason Harlow, Associate Chair, Undergraduate Studies presented the proposals to modify five existing programs. Modifications to the Physics and Philosophy Specialist were meant to streamline the philosophy requirements to focus more on philosophy of science and metaphysics, as well as to streamline the physics requirements to focus more on relativity and quantum physics. Changes to other Physics programs involved updating the list of courses that could be taken by students to fulfill the Ethics and Social Responsibility Requirement. All of the proposals were approved.

Pharmacology and Toxicology, Department of:

Professor Michelle Arnot, Associate Chair, Undergraduate Education presented the proposals to create three new courses, revise five programs that were approved at the previous Sciences Curriculum Committee meeting in November 2018, as well as retire one course.

PCL218H1 (Cannabis the Drug) is intended to be offered as a breadth course that aims to increase students’ knowledge base about cannabis and its effects and implications. A member asked if there would be a lab component
to accompany this course. Professor Arnot responded that the department would like students taking this course to engage in an education/awareness component.

In response to the splitting of the full-credit course in Neuropsychopharmacology from PCL475Y1 to PCL475H1 (Neuropsychopharmacology 1) and PCL476H1 (Neuropsychopharmacology 2), Professor Arnot confirmed that students could enrol in PCL476H1 without having completed PCL475H1 as the two new half-credit courses would be different. All of the proposals were approved.

**Environment, School of the:**

Professor Michelle Arnot from the Department of Pharmacology and Toxicology spoke to the proposed modifications for the Environment & Toxicology Specialist. The majority of the changes involved adding new PCL and JPM courses that had been approved at the previous Sciences Curriculum Committee meeting in November 2018. This program modification proposal was approved.

Remaining proposals were held for the next Sciences Curriculum Committee meeting to be taking place in April 2019.

**Biochemistry, Department of:**

Professor Alex Ensminger, Undergraduate Coordinator, presented the proposals to modify ten existing courses as well as retire one course. Seven of the ten proposed course modifications involved removing CGPA requirements and replacing them with specific courses and minimum grades instead as prerequisites. Professor Ensminger stated that these prerequisite changes were proposed in consultation with course coordinators as well as the department’s undergraduate committee.

A question was raised about the existence of a capstone course requirement for the Biochemistry Specialist. Professor Ensminger replied that students tend to do more of a literature project as it can be challenging for them to find supervisors. Currently, students can gain lab or research experience by partaking in the Faculty of Arts & Science’s Research Opportunity Program (ROP) or the University’s Alternative Reading Week (ARW) activities.

A considerable amount of discussion ensued with respect to the modification proposal for BCH370H1 (Laboratory Course in Biochemical Techniques). Concerns were raised about the inclusion of the line, “no enrolment will be permitted after the start of class” in the course description, as well as the proposed minimum grade for a prerequisite course only applicable to non-Biochemistry students.

Professor Ensminger explained that an across-the-board cutoff grade for a prerequisite course would result in some program students not being able to enrol in the BCH370H1. He also felt that students might perceive the phrase “permission of the instructor” differently when it is stated as a course prerequisite. A member asked if the Faculty could recommend some best practices with respect to specifying prerequisite requirements for limited-enrolment courses. Dr. Martha Harris, Manager of Governance & Curriculum Services at the Faculty of Arts & Science, replied that grades for specific prerequisite courses would be the best indicator.

With the exception of BCH370H1 and BCH446H1 (Membrane Dynamics of the Cell Surface), all of the course proposals were approved. The course modification proposals for BCH370H1 and BCH446H1 were held for further review and advisement.

**Chemistry, Department of:**

Professor Rebecca Jockusch, Associate Chair, Undergraduate Studies, presented the proposals to create one new course, modify four existing programs and one existing course.
In response to the new course proposal for CHM211H1 (Chemicals in the Environment: The Good, the Bad, and the Ugly), a member suggested adding ESS463H1 (Earth System Chemistry 3: Contaminants) as an exclusion of this course. No further action was carried out based on the suggestion.

With the Department of Chemistry expected to take over the administration of the Pharmaceutical Chemistry Specialist program later this spring, the department had proposed adding PHC489H1 as a course choice for students enrolled in the Biological Chemistry Specialist, the Chemistry Specialist, the Environmental Chemistry Specialist, and the Synthetic & Catalytic Chemistry Specialist. All of these proposals were approved.

**Physiology, Department of:**

Professor Nohjin Kee, Undergraduate Coordinator, presented the proposal to modify the Physiology Specialist. This program modification proposal was approved.

- Physiology
  - Nohjin presented
  - PK sought clarification re: JPM300H1 and JPM400Y1

**Ecology and Evolutionary Biology, Department of:**

Professor Asher Cutter, Associate Chair, Undergraduate presented the proposals to modify two existing programs. Both of these proposals were approved.

**Immunology, Department of:**

Professor Thierry Mallevaey, Associate Chair, Undergraduate Studies presented the proposals to create two new courses, modify two existing programs and one existing course.

The introduction of IMM385Y1 (Special Research Project in Immunology) is meant to provide students with an earlier exposure to research in Immunology. The new IMM431H1 (Immunotherapy) course will feature group presentations and discussions of relevant literature.

For IMM340H1 (Fundamental Immunology), the department plans to pilot a hybrid delivery format consisting of online lectures and in-class tutorials during the summer session. Professor Mallevaey indicated that the department intends to monitor students’ performance in this course offered under the hybrid format versus the traditional in-class format and their progression to and performance in 400-level courses. Questions were raised on issues surrounding tutorial attendance, guarantee contact with the course instructor, and in-class participation alternatives. Professor Mallevaey responded that while tutorial attendance will be optional, it is expected that the vast majority of students will attend. The tutorials will be run by the course instructor, and students can ask questions during tutorials should they decide to opt out of the Top Hat platform. All of the proposals were approved.

**Molecular Genetics, Department of:**

Professor Richard Collins, Associate Chair and Undergraduate Coordinator, presented the proposals to create two new courses, modify three existing programs and one existing course, as well as retire one course.
Modifications were made to the prerequisites for MGY480Y1 (Special Research Project) to ensure that students have completed at least one third-year MGY lab course and one third-year molecular biology course prior to enrolling in this course.

A member commented on the inconsistent use of pluses and commas commonly found in requirement listings in the Arts & Science Calendar. Dr. Martha Harris from the Faculty of Arts & Science replied that the Faculty has been engaging on a project to establish best practices regarding Calendar style and conventions and that this is one of many items being addressed.

All of the proposals were approved.

Computer Science, Department of:

Professor Michelle Craig, Associate Chair, Undergraduate Studies presented four additional proposals to modify three existing programs and one existing course.

Modifications to the Computer Science Specialist, Major, and Minor involved limiting the number of transfer credits allowed to be used by students to count towards the respective programs, as well as rephrasing the enrolment requirement language to emphasize the fact that “it is difficult to predict the minimum average required for admission in any given year.”

All of the proposals were approved.

6. Other Business

Vice-Dean Klassen stated that she would see some of the committee members again at the upcoming First-Year Foundations Curriculum meetings on February 4 and 11, 2019.

7. Adjournment

Meeting was adjourned at 10:51 am.

Minutes prepared by Kevin Mak, Curriculum and Governance Assistant, Faculty of Arts & Science