Call to Order and Acting Vice-Dean's Welcome

The meeting was called to order at 9:37 am by the Acting Vice-Dean, Undergraduate & International, Professor Mary Pugh, who welcomed everyone.

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

Vice-Dean Pugh addressed the Committee on two items: the new Strategic Mandate Agreement 2017-2020 signed between the University of Toronto and the Province of Ontario; and the University’s latest enrolment trends. Before proceeding further, she quickly checked with the Committee to determine their level of familiarity with the two items as some members were already exposed to the content in previous council and committee meetings.

Strategic Mandate Agreement 2017-2020:

The new Strategic Mandate Agreement signed between the University and the Ontario Ministry of Advanced Education and Skills Development was published in the first half of this January. This (phase of the) signed Agreement, also referred to as SMA2, contains different goals and priorities for the University, as well as highlights and previews further changes as to how universities are being funded. System-wide and institution-specific metrics and key performance indicators have been identified and agreed upon by both parties. It is anticipated that specific performance criteria of these metrics and targets will be introduced in the next (phase of the) Strategic Mandate Agreement (i.e., SMA3). The province has also introduced a corridor for the University to stay within with respect to enrolment-related funding, which may affect the number of domestic students being admitted.

Vice-Dean Pugh showed Committee members how to locate the Strategic Mandate Agreement via a Google search and explained in more detail the system-wide metrics and institution-specific metrics contained in the Agreement. Currently, there is still some uncertainty as to which of the metrics would be most impactful on the Faculty should
success or failure prevails. She encouraged the Committee to keep track of initiatives and achievements for data purposes in anticipation of specific metrics criteria to be published in SMA3. Vice-Dean Pugh also brought to the attention of the Committee of the existence of a Provost mailing list to which members could subscribe. The announcement of the Strategic Mandate Agreement publication was sent to subscribers of the mailing list (i.e., listserv) back in January 2018.

Arts & Science Self-Study: Applicant, Registrant, and Program Declaration Data:

Vice-Dean Pugh presented to the Committee a sample of the applicant and registrant data to be included in the 55-page Arts & Science self-study report being created by the Dean’s Office. Part of the self-study process involves consulting with as many stakeholders as possible to obtain feedback, comments and other suggestions. The Faculty of Arts & Science undergoes a self-study in the same process as academic units. Following the self-study the next step will be to develop an updated academic plan.

Data on applicants versus registrants by stream indicates that Computer Science has seen its applicant rates quadrupled over the past six years, while the applicant rates for the Mathematical and Physical Sciences category have tripled during the same period. The Humanities has seen its applicant rates drop by a third; and the number of registrants has declined. Various factors could have contributed to these trends, including students’ original belief of who they are, to the discovery of their options after first year, as well as students’ subsequent realization that they might not be best fitted for certain programs/areas of study. Vice-Dean Pugh encouraged the Committee to work with all of the sectors to help students find where they would be the happiest and to identify possible barriers along the way.

Data on program declarations showed a mild increase in the number of students pursuing programs in the Sciences, with Specialist programs being more popular relatively speaking. While the number of students pursuing Humanities programs has been declining, there’s a considerable amount of uptake in the Minor programs. Vice-Dean Pugh cautioned that all of these numbers had to be taken in mind the size of the sectors, and that what was declared by students might not necessarily be the one they graduate with at the end.

Vice-Dean Pugh would like to hear from the Committee about what additional data of interest should be sought and opened the floor for questions. A committee member asked about the existence of any graduation data. The Dean's Office has this data which requires further conversion and is determining the best way to visualize it as there’s a desire to present such cross-sector data as “how common is it for students to complete programs in both Social Sciences and the Sciences,” or “what are the popular combinations of Minor programs” for example. She added that the visualization of both historical and forwarding looking data would be important, especially if we would like our students to see their possibilities and other items that would be within their reach.

Another committee member expressed interest in seeing data on domestic versus international students. Vice-Dean Pugh responded that Dean’s Office has data on this; and it would be discussed in the self-study. She added that international students would often steer towards the Sciences and away from the Humanities. A different committee member expressed interest in seeing data on the number of applications to limited enrolment programs and the corresponding rejection rates. A related question was raised by a member regarding the proportion of students being admitted to the Computer Science programs.

There was also a brief discussion among committee members around best practices in student communications when it came to the promotion of research/internship opportunities. Vice-Dean Pugh thanked the Committee for the valuable input.
2. Approval of Minutes of the November 17, 2017 Meeting of Sciences Curriculum Committee

Vice-Dean Pugh solicited feedback on the minutes from the previous Sciences Curriculum Committee meeting. The meeting minutes were approved.

3. Program and Course Modifications for Abbreviated/Expedited Review: Questions/Discussions

Vice-Dean Pugh solicited feedback from the Committee regarding course and program proposals containing changes that were viewed as benign from the lens of the Dean’s Office. No issues were raised.

4. Major Program Modifications

Woodsworth College:

Professor Brock MacDonald, Vice-Principal of Woodsworth College presented the proposal to create a new freestanding Digital Humanities Minor. Digital Humanities is an emergent field that looks at the impact and effects of the usage of digital platforms, tools, methods and techniques in the humanistic perspective. While there’s no plan to expand this program beyond a Minor due to its roots in humanities research and expertise, Professor MacDonald envisions students from all three areas (i.e., Humanities, Social Sciences, and Sciences) being attracted to this program due to its potential to complement or supplement their current programs or work. The pilot offering of 200-level introductory courses in Digital Humanities had an equal split of students from all three areas enrolled. The 400-level seminar offerings and research project opportunities with grad students and faculty members in the Humanities would contribute to the Faculty of Arts & Science’s priority to maximizing the number of research opportunities available. It is hoped that the skills and knowledge gained by students in this program would contribute to their job readiness. The success of this program would depend on close collaboration with other department to ensure alignment of student needs. Woodsworth College is open to the idea of cross-listing courses with other departments.

In response to this program proposal, Vice-Dean Pugh mentioned that the Department of English had created a 100-level course specifically for students in the sciences. She encouraged academic units to publicize this to students. This new program proposal was recommended by the Humanities Curriculum Committee for approval at the February 14, 2018 Arts & Science Council meeting.

Statistical Sciences, Department of:

Professor Vicki Zhang, Associate Chair for Undergraduate Studies (Actuarial Science) presented proposals to modify the Actuarial Science Specialist and Major programs.

The rationale behind the proposed modifications to the two Actuarial Science programs was twofold. The Department’s Industry Advisory Board had noticed a shift in employer demand towards graduates with proficiency in statistical methods and data science as opposed to the old traditional actuarial fields and methods. In addition, both the Society of Actuaries and the Casualty Actuarial Society had updated their respective curriculum requirements (to be effective later this year) to reflect the growing importance and emphasis of data science.

The changes in the upper-year course requirements (i.e., elective courses for students enrolled in the Actuarial Science Specialist and mandatory courses for students enrolled in the Actuarial Science Major) were proposed to better prepare students for the growing diversity/branches of the profession.

Vice-Dean Pugh stated her appreciation for the connection and logic established between courses and specific professional areas in the program proposals for guidance purposes. A comment was made by a representative from
Rotman Commerce with respect to MGT201H1, a service course currently offered by that department. As students enrolled in the Actuarial Science Major would no longer need to take this course under the proposed program changes, Rotman Commerce would need to decide whether to continue offering this course. She stated that she could sort out this issue with Actuarial Science offline. Vice-Dean Pugh asked the Committee members if they would be comfortable letting Rotman Commerce and the Department of Statistical Sciences to work out these issues. The Committee was comfortable with this plan and recommended these two program modification proposals to go for approval at the February 14, 2018 Arts & Science Council.

5. Minor Program Modifications and Course Proposals for Full Review

Vice-Dean Pugh indicated that the order of presentation was randomized but she found a cluster of departments that should follow one after the other due to the nature and impact of the modifications.

**Economics, Department of:**

Professor Gillian Hamilton, Associate Chair, Undergraduate Affairs of the Department of Economics presented its program and course modification proposals. The addition of a first-year Computer Science course and the removal of courses in differential equations (i.e., MAT244H1/MAT267H1) as part of the program requirements were proposed for the Economics and Mathematics Specialist. In addition, the Department would also like to update its Economics Major program requirements as well as prerequisites for 45 of its third- and fourth-year courses to replace the acceptable combination of STA courses from STA220H1 and STA255H1 to the new STA237H1 and STA238H1 instead. Mutual exclusions were proposed to be dropped between its two quantitative methods courses (i.e., ECO220Y1 and ECO227Y1) and between its two econometrics courses (i.e., ECO374H1 and ECO375H1) as the respective content would be different and have no overlapping.

In response to the proposals presented, Vice-Dean Pugh commented on the domino effect a course or program change could have on other departments/academic units. A question was raised inquiring the number of Economics students who would no longer take MAT244H1. Professor Hamilton indicated that the number of students would be close to ten. In response to the ECO463H1 (Financial Market Microstructure) course proposal, the Department of Computer Science informed the Committee that CSC321H1 would most likely be renumbered to CSC421H1 next year, suggesting the need for the Department of Economics to update the course prerequisites again next year. Professor Hamilton expressed interest in consulting with the Department of Computer Science offline regarding priority enrolment. All of the course and program proposals were approved.

**Management, Joseph L. Rotman School of:**

Ms. Lesley Mak, Associate Director, Academic Program Services from Rotman Commerce presented its four program modification proposals. As the Department of Economics would no longer accept STA220H1 and STA255H1 for its Major program and for fulfilling prerequisites for its third- and fourth-year courses, a note was added to the Completion Requirements for all four Rotman Commerce programs to inform students of this change. Rotman Commerce would however keep STA220H1 and STA255H1 as acceptable courses for their program requirements and would advise students accordingly should they decide to pursue programs and courses that are more quantitative in nature. All of the program proposals were approved.

**Forestry, Faculty of:**

As there was no one from the Faculty of Forestry to speak to the three program modification proposals, these were held for the next Sciences Curriculum Committee meeting, scheduled to take place on Friday, April 6, 2018.
Professor Alison Gibbs, Associate Chair for Undergraduate Studies (Statistics) presented the remainder of the STA proposals to modify four of its programs, three of its existing courses and to create two new courses. There was a dramatic increase in the number of students enrolled in the department’s programs over the years, from 400 ten years ago to 4,000 today. In addition, a large scale curriculum renewal project was undertaken in which data on students and their performance in prerequisite courses was collected and analyzed. These two elements led to the proposed program changes which would see the Department implementing specific enrolment requirements for its Specialist programs.

In response to the program proposals, Vice-Dean inquired about the extent to which progression requirements were proposed. Professor Gibbs responded that the requirements would be applicable for its Specialist program(s?). She added that students would need to meet the progression requirements in order to gain access to fourth-year courses; and the changes to the enrolment requirements were meant to better align with current practices at UTM and UTSC. The proposed changes were approved at the Committee on Admissions earlier in the year.

In response to the course modification proposal for STA130H1 (An Introduction to Statistical Reasoning and Data Science), a question was raised by a student committee member regarding flexibility and possible implications for students taking STA130H1 in their second year. Professor Gibbs indicated that there would always be flexibility considering that the enrolment requirements of which STA130H1 would be a part would not be in effect until 2019. However, students would be encouraged to start early by taking it in their first year.

A committee member asked whether the increase in enrolment in Statistics programs had contributed to the majority of increase in enrolment numbers in the Mathematics/Physical Sciences category as highlighted by the Vice-Dean’s Report. Vice-Dean Pugh pointed out that Computer Science, Economics, and Actuarial Science all have programs that are of limited enrolment. With Mathematics and Statistics being the type 1 (i.e., open) programs, students looking for program to enroll would often find their way to these two areas. STA130H1 would provide an opportunity for students to explore if they would like to pursue further studies in statistics.

The proposed new STA237H1 and STA238H1 courses were designed to match the learning outcomes that were established as part of the curriculum renewal project. While these two courses would have less mathematical rigour compared to STA257H1 and STA261H1, they would enable students to develop a stronger connection to the practice of statistics.

All of the course and program proposals were approved, with Professor Gibbs indicating that there would be more to come next year.

Professor Robert Lewis, Associate Chair, Undergraduate of the Department of Geography and Planning presented proposals to modify two of its existing programs, create one new course, and to retire three of its existing courses. The enrolment requirements for both the Physical and Environmental Geography Major and Specialist were lowered to bring enrolment requirements in line with other programs in the Social Sciences. The creation of GGR388H1 (Special Topics in Physical & Environmental Geography), along with four other similar courses already approved back in November 2017, sought to mitigate administrative problems and student confusion associated with GGR300H1, the sole third-year special topics course, which was proposed to be retired.

In response to the program modifications for the Physical and Environmental Geography Major and Specialist, the Department of Earth Sciences (ESS) expressed interest in having further discussions with the Department of Geography and Planning on matters ranging from the impact on enrolment numbers for the ESS programs to faculty involvement, to possible overlapping in content covered in first- and second-year courses.
Two comments were raised regarding the GGR388H1 course proposal due to the lack of information provided on prerequisites and the specific competencies to be gained by students after completing this course. Professor Lewis responded that this was due to the Department not knowing what those special topics would be. Vice-Dean Pugh suggested perhaps establishing a minimum threshold to provide initial guidance. All of the course and program proposals were approved.

*Earth Sciences, Department of:*

Professor Ulrich Wortmann, Associate Chair of the Department of Earth Sciences presented proposals to modify five of its existing programs and one of its existing courses, as well as to create four new courses and retire four existing courses. Since the Arts & Science Calendar now has a program search function that would allow students to conduct keyword search, keywords and in some cases full program description were added to the Department’s programs to ease program search. Course renumbering was proposed for four of the Department’s Geological Field Methods in hopes of providing clarity to students with respect to the appropriate time to take these courses.

A question was raised regarding the difference between the “H0” and “H1” course suffixes. Dr. Martha Harris, Manager, Governance & Curriculum Services at the Faculty of Arts and Science responded that courses with the “H0” suffix would be offered offsite; and courses with the “H1” suffix would be offered at the St. George campus.

In response to the Department of Earth Sciences’ program modification proposals, the Department of Chemistry offered suggestions to have the existing and previous sets of 100-level Chemistry courses presented more clearly.

*Environment, School of the:*

Professor Karen Ing, Associate Director of the School of the Environment presented proposals to modify two of its programs, three of its existing courses and to create one new course. With the retirement of ENV233H1, a course previously offered jointly by the Departments of Chemistry and Earth Sciences, completion requirements for the Environmental Science Major and Minor as well as prerequisites for ENV316H1 (Laboratory and Field Methods in Environmental Science) and ENV337H1 (Human Interactions with the Environment) were modified to reflect the new arrangement of students taking one course from Chemistry and/or one course from Earth Sciences. The creation of ENV396H0 was a result of reduced content of the existing full-credit Summer Abroad course offered in Australia. All of the course and program proposals were approved.

*Biochemistry, Department of:*

Professor Stavroula Andreopoulos, Undergraduate Coordinator of the Department of Chemistry presented the course modification proposal for BCH428H1 (Genomics of microbial communities in human health and beyond). This course modification proposal was approved.

*Anthropology, Department of:*

Professor Bence Viola from the Department of Anthropology presented a new course proposal for ANT431H1 (The Real Planet of the Apes). Vice-Dean Pugh expressed interest in learning more about the practicum arrangement as a result of the instructional hours stated in the course proposal. Professor Viola responded that the course instructor would be running the practicum as there would be no teaching assistants for this course and that the labs would be focused on studying casts and fossils. Vice-Dean Pugh wanted to make sure that the course instructor would spend at least 24 instructional hours with students during the course. This course proposal was approved.
Computer Science, Department of:

Professor François Pitt, Associate Chair, Undergraduate Studies from the Department of Computer Science presented proposals to modify four of its programs, one of its existing courses and to create two new courses. The major change proposed for the Computer Science Minor, Major and Specialist was the removal of second-year alternatives such as CSC207H1 and CSC236H1 from the existing list of courses students could use to satisfy the enrolment requirements to get into any of these three programs. It is hoped that this would convey the message to students about the importance of developing alternate plans given the competitive nature of the admissions process. The changes to the enrolment requirements were previously brought to and approved by the Committee on Admissions. All of the course and program proposals were approved.

Physiology, Department of:

Professor Nohjin Kee, Undergraduate Coordinator of the Department of Physiology presented proposals to modify two of its existing programs and five of its existing courses. In response to the proposal to modify PSL304H1 (Topics in Cellular, Molecular and Organismic Physiology I), Vice-Dean Pugh inquired about the rationale to have 100-series Physics removed from the course prerequisites. The Department responded that the removal of the Physics prerequisite was to make the course more accessible to students not enrolled in the Physiology Specialist program. All of the course and program proposals were approved.

Chemistry, Department of:

Professor Rebecca Jockusch, Associate Chair, Undergraduate Studies from the Department of Chemistry presented proposals to modify six of its existing programs. The proposed changes to the Materials Science Specialist were in response to student concerns about the scheduling of courses between Faculty of Arts and Science and the Faculty of Applied Science and Engineering. It is hoped that these changes would provide third- and fourth-year students with more course choices as well as opportunities for specialization. All of the program proposals were approved.

Mathematics, Department of:

Professor Dror Bar-Natan, Associate Chair, Undergraduate from the Department of Mathematics presented proposals to modify two of its programs, three of its existing courses and to create one new course. With the exception of the new course proposal for MAT377H1 (Mathematical Probability and Random Variables), all of the course and program proposals were approved.

University College:

Mr. Khamla Sengthavy, Academic Liaison and Assistant to Vice Principal of University College presented proposals to create two new courses and modify one of its existing courses. All of the course proposals were approved.

Astronomy and Astrophysics, Department of:

Professor Yanqin Wu, Associate Chair of the Department of Astronomy and Astrophysics presented proposals to modify one of its existing programs and three of its existing courses. Professor Wu acknowledged that the Department relies on other departments for upper year courses used to populate/generate completion requirements for its programs. She was curious to know if there would be a way to automate the process of removing courses that are no longer offered from program listings(?). With respect to the Planetary Science Specialist, the Department felt that the program had not been too popular with students. This elicited a response from the
Department of Earth Sciences suggesting that it was not aware of the existence of this program. The Department of Astronomy and Astrophysics also expressed interest in offering a combined program with the Department of Statistical Sciences. All of the course modification proposals were approved.

Ecology and Evolutionary Biology, Department of:

Professor Asher Cutter, Associate Chair, Undergraduate from the Department of Ecology and Evolutionary Biology presented proposals to modify five of its programs and one of its existing courses as well as to create one new course. Changes were made to programs including the Ecology and Evolutionary Biology Major to better guide students. In response to the new EEB313H1 (Quantitative Methods in R for Biology) course proposal, the Department of Psychology expressed interest in adding this course to one of its course groups due to the course’s relevance/connection to psychological data analysis. An agreement was also made to have mutual exclusions in place for EEB313H1 and PSY305H1 (The Treatment of Psychological Data). All of the course and program proposals were approved.

Psychology, Department of:

Professor Elizabeth Page-Gould, Acting Associate Chair, Undergraduate Studies from the Department of Psychology presented proposals to modify four of its programs and one of its existing courses. Under the proposed changes, a Grade 12 Biology credit would be required for students looking to enroll in the Psychology Minor, Major or Specialist or the Psychology Research Specialist program. This would not take effect until program entry in Spring 2020 to allow for a transition period. All of the course and program proposals were approved.

Laboratory Medicine and Pathobiology, Department of:

Professor Douglas Templeton, Program Coordinator from the Department of Laboratory Medicine and Pathobiology presented proposals to modify two of its existing courses. Both course proposals were approved.

Physics, Department of:

Ms. Teresa Baptista, Undergraduate Coordinator from the Department of Physics presented proposals to modify three of its programs. In response to the Physics Minor, Vice-Dean Pugh asked the Department of Mathematics if they would be comfortable with the proposed removal of APM346H1, MAT334H1 and MAT354H1 from the program requirements. Professor Bar-Natan indicated no opposition. All of the program proposals were approved.

Human Biology Program:

Professor Ron Wilson, Acting Director of the Human Biology Program presented proposals to modify six of its existing programs. All of the program modification proposals were approved.

6. Other Business

Vice-Dean Pugh acknowledged and apologized for the length of this meeting. She reiterated that it was necessary to have everyone come together and discuss proposals as items had gone awry in the past. A committee member asked if there would be a way to move certain procedures offline. Another member inquired about the existence of a mechanism that would automatically notify departments of certain curricular changes. Vice-Dean Pugh responded that it would be ideal if certain procedures/steps could be automated given the current scheduling of a Life Sciences
Planning Committee meeting prior to the actual Sciences Curriculum Committee meeting in both fall and winter. Another member suggested minimizing the discussion surrounding “housekeeping” items during these meetings.

7. Adjournment

Meeting was adjourned at 11:54 am.