



FACULTY OF SCIENCE

COUNCIL OF THE FACULTY OF SCIENCE

Notice of Meeting
Tuesday, March 10, 2020
at 3:00pm – 4:30pm
306 Lumbers

Agenda

1. Call to Order and Approval of Agenda
2. Chair's Remarks
3. Approval of Minutes of February 11, 2020
4. Business Arising
5. Inquiries and Communications
6. Dean's Report to Council
7. Associate Deans' and Head of Bethune College Remarks
8. Reports from Science Representatives on Senate Committees
9. Reports from Standing Committees of Council
 - 9.1 Executive Committee
 - 2020-2021 Vacancies report on Senate and the Standing Committees of FSc Council (item for action)
 - 9.2 Curriculum Committee (Consent agenda items)
10. Other Business
 - 10.1 Feedback from Senate Executive Committee - Graduate Program Committee
 - 10.2 Student Committee Membership - Changes to the rules of Council
<https://science.yorku.ca/files/2020/03/Rules-of-Faculty-Council-UPDATED-February-10-2020.-showing-changesdocx.pdf?x89075>

Motion: Change 2 (e) to

 - i) 20 undergraduate students registered in the Faculty of Science elected by their peers
 - ii) 5 graduate students, with a minimum of one from each graduate program in the Faculty
- 10.3 Draft York University Academic Plan 2020 – 2025
<https://science.yorku.ca/files/2020/03/Draft-UAP-2020-2025-Feb-28.2020.pdf>



FACULTY OF SCIENCE

COUNCIL OF THE FACULTY OF SCIENCE

Tuesday, February 11, 2020
at 3:00pm – 4:30pm 306 Lumbers

Minutes

Attendance: M. H. Armour (Chair), G. Audette, R. Wang, M. Scheid, T. Baumgartner, J. Clark, V. Tsoukanova, M. McCall, R. Metcalfe, M. Scheid, A. Mun, R. Fournier, J. Lavoie, N. Madras, V. Pavri, M. Hough, D. Hossain, J. Amanatides, T. Rajwani, P. Lakin-Thomas, P. Potvin, J. Steeves, M. Bayfield, P. Wilson, R. Tsushima, M. Xu & S. Siyakatshana (Assistant Secretary)

Guests: B. Sheeller & J. Cevallos

1. Call to Order and Approval of Agenda

The Chair of Council, Mary Helen Armour called the meeting to order and a motion was moved, seconded and carried to adopt the agenda as presented.

2. Chair's Remarks

The Chair welcomed Council members to the meeting and she extended a special welcome to Dean Wang who was attending his first full Council.

3. Approval of Minutes of December 10, 2019

A motion was moved, seconded and carried to approve the Minutes.

4. Business Arising

There was no Business Arising.

5. Inquiries and Communications

Council noted the Senate Synopses of meetings held on December 12, 2019 & January 23, 2020.

6. Dean's Report to Council

Dean R. Wang paid his condolence to the Poor Kolor family, who lost their son, Pegah Safar Poor Kolor, a first year Iranian student, studying Biology in the Faculty of Science who died on flight 752. He stated that the Faculty has been actively reaching out to the family to pay our condolence.

The Dean announced that the Bethune College held the first workshop of Let's Talk Mental Health on January 22, 2020. He thanked J. Amanatides for organizing the workshop. Dean Wang reiterated on the Faculty's commitment to provide the necessary support to our students. He stated that the Faculty was committed to students' mental wellbeing in order to ensure a wholesome student experience.

Dean Wang updated the meeting on the Honours and

Awards Evening which was held on January 29, 2020. He noted that the event was well attended with almost 500 registrants and was such a success.

Dean Wang congratulated the following faculty award recipients;

Dean's Special Recognition Award

- Matthew George (Physics and Astronomy)
- Hovig Kouyoumdjian (Chemistry)

Award Celebration

- Christopher Caputo (Chemistry) - 2018 Polanyi Prize

Excellence in Teaching Awards

- Chris Lortie (Biology) - Senior Tenure Stream Faculty
- Nicole Nivillac (Biology) - Junior Tenure Stream Faculty

Richard Jarrell Excellence in Teaching: Teaching Assistants Award

- Nicholas Bragagnolo (Chemistry) & Eleni Fegaras (Biology)

Excellence in Research Awards

- Carol Bucking (Biology) - Early Career Research Award
- Thomas Baumgartner (Chemistry) - Established Research Award
- Kathi Hudak (Biology) - Excellence in Graduate Mentorship Award

Eric Hessels (Physics and Astronomy) - received two grants of \$900,000 each over three years from the Alfred P. Sloan Foundation and the Gordon and Betty Moore Foundation.

Conor Douglas (Science & Technology Studies) - nominated as Principle Investigator and Canadian Team Leader of a three-year internationally collaborative project entitled "Social Pharmaceutical Innovation for Unmet Medical Needs."

Ramón Alain Miranda Quintana, Chemistry postdoc and York Science Fellow, is the 2019 John Charles Polanyi Prize winner in chemistry. C. Caputo also received the same award last year. The Dean noted that this was a major achievement for our university and Faculty to receive the prestigious Polanyi Prize in two consecutive years.

He announced that the call for 2020 NSERC USRAs and DURAs applications were due within the departments on February 21st. He encouraged faculty to spread the word around.

He stated that the academic search was moving along well with two acceptances received. He was pleased that the Faculty had been approved and was looking to fill eleven faculty positions.

Dean Wang informed Council that he had established the Dean's Space Strategy Taskforce (SST) to look into the short term and long term space needs for students,

faculty and staff in our Faculty. The purpose of the taskforce was to strategically and systematically analyze and prioritize the Faculty's space need by students, staff, and faculties. The Taskforce would commence next week. At the end of April or beginning of May, the Taskforce is supposed to come up with a discussion paper which should be solution based and actions should be evidence based. The discussion paper will be shared with Council and departments for feedback and consultation. He reiterated on the need for our Faculty to provide a conducive learning environment for our students.

In concluding his remarks, he announced that in the near future an invitation to have lunch with the Dean would go out to all faculty and staff. He encouraged all to attend.

7. Associate Deans' and Head of Bethune College Remarks

Associate Dean J. Steeves informed Council that we have twenty NSERC USRA and twelve DURAs this year. The USRAs and DURAs applications are due within the departments on February 21st and they will get ranked and will then be forwarded to the Office of the Dean and will be processed the following Friday. She added that the Dean's Office is generously topping up all the stipends for the USRAs by an extra \$2100 for each USRA and each DURA.

Associate Dean G. Audette informed Council that eleven academic searches were underway and we now had two acceptances. He reminded Chairs that they were required to distribute the March 15 teaching load report to their faculty members if they have not already done so.

Associate Dean M. Scheid reminded faculty of the York Summer Student Award (YSSA) scheduled for next week. He informed faculty members who had signed up to either present or interview that he would be reaching out to them to see if they have paired up with student(s). He stated that we had so far received up to 166 applications for the Neuroscience program. The Faculty of Science in conjunction with the Faculty of Health would rank these applications and offers would be sent out. A total of 70 students would be enrolled in the first year (Science 35 & Health 35).

8. Reports from Science Representatives on Senate Committees

There were none.

9. Reports from Standing Committees of Council

M. H. Armour encouraged representatives of the Sub Committees of Senate to provide regular updates to Council.

9.1 Executive Committee

Ratification of nominations and Call for nominations on the Standing Committee of Council

A motion was moved, seconded and carried to approve the nominations. The Chair of Council highlighted the outstanding vacancies.

9.2 Curriculum Committee

The consent agenda items were deemed approved by Council.

10. Other Business

Student Committee Membership - Standing Committees of Council

J. Amanatides, the Head of Bethune College informed Council that the current total number of student caucus had some restriction on Council representation. He added that due to conflicting student schedules there had been some challenges in assigning students to Standing Committees of Council.

A proposal was made to expand the student caucus to twenty members comprising of 15 undergraduate students and 5 graduate students (one per graduate program). The Chair and Secretary of Council were to coordinate the student body. The meeting noted that this matter necessitated changes to the rules of Council. The matter to be discussed at the next Council meeting.

Council members recommended that student representatives be provided with letters of reference for participating on the Standing Committees of Council as an incentive.

Furthermore, they agreed that it would be helpful if faculty members announced these student vacancies on their first class and Moodle website. J. Amanatides and A. Mun to work on document/slides that will be sent out to all faculty members.

Third and fourth year students were recommended to fill in these vacancies as they have more experience.

Meeting adjourned.

M. H. Armour, Chair of Council

S. Siyakatshana, Assistant Secretary of Council

2020-2021 FSc Report on vacancies for Senate and FSc Standing Committees

Committee	Rules of Faculty Council - membership	Meeting time / Membership	Term			
			From	To		
Senate	According to the York University Secretariat based on the Senate Rules and Procedures governing the size and composition of Senate, the Faculty of Science shall have twelve members, including a minimum of two Chairs. According to The Rules of Council (Science), Faculty representation shall include the Director of Natural Science, three Department Chairs, and terms shall be for	As per Senate website				
	Dean, Ex officio	R. Wang	Designated			
	Member at large	G. Audette	Designated	2022		
	Member at large	E. Hessels, Physics & Astronomy	2019	2022		
	Member at large	VACANT - 1 yr replacement	2019	2022	J. Lazenby on Sabbatical July 2020-June 2021	
	Member at large	T. Baumgartner, Chemistry	2018	2021		
	Member at large	B. Pietro, Chemistry	2019	2022		
	Member at large	M. H. Armour (Jul 1 - December 31, 2020)	2019	2022	P. Lakin-Thomas, Biology on sabbatical	
	Member at large	VACANT, Chemistry	2020	2023	D. Wilson on Sab. Starting May 2020 - April 30-2021	
	Department Chair	R. Tsushima, Biology	2018	2021		
	Department Chair	R. Fournier, Chemistry	2019	2022		
	Department Chair	P. Szeptycki, Mathematics & Statistics	2019	2022		
	Director of NATS	J. Clark	Designated			
	Student representative	Robert Cheung	2018	2021		
Student representative	Romina Noormohammadi	2019	2022			
FSc Reps on Senate Committees						
Senate Executive	1 member from FSc	VACANT	2018	2021	Paul Szeptycki on Sabbatical leave	
Academic Policy, Planning and Research Committee (APPRC)	1 member from FSc	D. Golemi-Kotra	2020	2023		
Sub-Committee on Honorary Degrees	1 member from FSc	VACANT	2020	2023		
Executive Committee	The Executive Committee shall be chaired by the Chair of Council and include the Vice-Chair of Council, the Secretary of Council, and one member elected from each of Biology, Chemistry, Mathematics & Statistics, Physics & Astronomy, and Science and Technology Studies/Natural Science, the Dean of the Faculty of Science (ex officio), one student member of Council, and one of the staff members elected to Council.	The Executive Committee will normally meet the first Tuesday of each month (September to May) from 3:00pm - 4:30pm in LUM 305B				
	Chair of Council	C. Storry	2020	2021		
	Vice-Chair of Council	VACANT	2020	2022		
	Dean, Ex officio	R. Wang	Designated			
	Asst. Dean - SEM & SEP	A. Mun	Designated			
	Office of the Dean, staff representative	VACANT	2020	2021		
	Undergraduate Student Rep	VACANT	2020	2021		
	Biology	A. Hilliker	2018	2021		
	Chemistry	VACANT - 1 year replacement	2019	2022	Krylov on Sab. starting Jul 1, 2020-June 2021	
	Math & Stats	N. Madras	2019	2022		
	Physics & Astronomy	VACANT	2020			
	STS	R. Metcalfe	2019	2022		
	APPC	The Academic Policy and Planning Committee shall include the Dean or designate (ex officio), the Master of Norman Bethune College and one member elected from each of Biology, Chemistry, Mathematics & Statistics, Physics & Astronomy, and Science and Technology Studies/Natural Science, one student member of Council, and one of the staff members elected to Council.	APPC will normally meet the last Thursday of each month (September to April) from 9:00 am - 10:30 am			
		Associate Dean, Faculty Affairs, Ex officio	G. Audette	Designated		
Head of Bethune College		J. Amanatides	Designated			
Undergraduate Student Rep		VACANT	2020	2021		
Elected staff representative		VACANT	2020	2021		
Biology, also representing STS		J. Clark	2019	2022		
Chemistry		R. McLaren	2019	2022		
Math & Stats		VACANT - 1 year replacement	2019	2022	J. Heffernan on Sabbatical Jul 1, 2020 - Jun 2021	
Physics & Astronomy		J. Zylberberg	2019	2020		
STS		Represented by J. Clark	2019	2022		
Curriculum Committee		The Curriculum Committee shall include the Dean and an Associate Dean (ex officio), the Chair or nominee from each teaching Division or Department, three members elected by Council and two student members of Council.	The Curriculum Committee will normally meet every last Tuesday of each month (September to April) from 1:30 pm - 3:00 pm			
	Member at Large	J. Clark	2019	2022		
	Member at Large	VACANT	2020	2022		
	Dean, Ex officio	R. Wang	Designated			
	Associate Dean - Students, Ex officio	M. Scheid	Designated			
	Undergraduate Student Rep (two vacancies)	2 VACANCIES	2020	2021		
	Biology	S. Connor	2019	2022		
	Chemistry	P. Potvin	2019	2022		
	Math & Stats	J. Grigull (Fall) VACANT (Winter)	2019	2022	M. Chen-Sabbatical Jan 2021-Jun 2021	
	Physics & Astronomy	VACANT	2019	2020		
	STS	E. Hamm	2019	2022		
Member at Large	VACANT	2019	2022			
CEAS	The Committee on Examinations and Academic Standards shall consist of an Associate Dean (ex officio), five members elected by Council from each of Biology, Chemistry, Mathematics & Statistics, Physics & Astronomy and Science and Technology Studies/Natural Science, and one student member of Council.	CEAS will normally meet every alternate Wed / Thurs from 1:00 - 3:00 pm year round.				

2020-2021 FSc Report on vacancies for Senate and FSc Standing Committees

Committee	Rules of Faculty Council - membership	Meeting time / Membership	Term				
			From	To			
	<p>In addition to the above membership of the committee, Council shall elect an alternate member from each of the Departments specified above. The alternate member shall be the person polling the next highest number of votes to those elected to the committee from each Department. The alternate for the student member will be selected by the Science Student Caucus from one of its Members at Large. An alternate can only vote in the event that first elected members are not in attendance.</p>						
		Associate Dean - Students, Ex officio	M. Scheid	Designated			
		Undergraduate Student Rep	VACANT	2020	2021		
		Undergraduate Student Rep	VACANT	2020	2021		
		Biology	C. Jang/ALT B. Schwartz	2019	2022		
		Chemistry	VACANT / R. McLaren	2020/2018	2023/2021		
		Math & Stats	VACANT - Winter replacement /ALT. Y. Fu	2019	2022		
		Physics & Astronomy	VACANT	2019			
		STS	VACANT-1 Year replacement /VACANT	2019/2020	2022/2023		
						M. Chen-Sabbatical Jan 2021-Jun 2021	
Petitions	<p>The Petitions Committee for the purpose of hearing student petitions shall consist of an Associate Dean (ex officio), six members of Council, and two student members of Council. The Committee may divide the workload by splitting the Committee membership into two panels of four people each. A quorum shall consist of either (a) two faculty voting faculty members and one student member or (b) three voting faculty members.</p>	<p>Each panel meets once a month on Wednesday or Thursday from 2:30 pm - 4:00 pm</p>					
			Associate Dean, Ex officio	M. Scheid	Designated		
			Undergraduate Student Rep	VACANT	2020	2021	
			Undergraduate Student Rep	VACANT	2020	2021	
			Member at Large	I. Raguimov	2019	2022	
			Biology	VACANT	2020	2023	
			Chemistry	W. J. Pietro	2019	2022	
			Physics & Astronomy	2 VACANCIES Member/Alternate	2020		
			Math & Stats	Y. Gao	2019	2022	
			STS	S. P. Domenikos	2019	2022	
	Member at Large	VACANT	2020	2023			
				J. Lazenby on Sabbatical July 2020-June 2021			
SRC T & P Committee	<p>The Committee on Tenure and Promotions shall consist of one currently tenured member from each of Biology, Chemistry, Mathematics & Statistics, Physics & Astronomy and Science and Technology Studies/Natural Science elected by Council, and one student member of Council. No member of the Committee shall be a member of another Tenure and Promotions Committee at any time during their tenure on this committee.</p> <p>In addition to the above membership of the committee, Council shall elect an alternate member from each of the Units mandated above. The alternate member shall be the person polling the next highest number of votes to those elected to the committee from each Department. The alternate for the student member shall be selected by the Science Student Caucus from one of its Members-at-Large on an annual basis. An alternate can only vote in the event that existing members are not in attendance.</p>	<p>SRC T & P Committee will normally meet the last Friday of each month (September to May) from 9:00 am - 11:00 am in LUM 305B</p>					
			Associate Dean - Faculty, Ex officio	J. Steeves	Designated		
			Undergraduate Student Rep	VACANT	2020	2021	
			Biology	K. Hudak / ALT - VACANT	2020/2020	2023/2023	
			Chemistry	VACANT/ALT - V. Tsoukanova	2019/2022	2019/2022	
			Physics & Astronomy	2 VACANCIES, Member & Alternate member	2020		
			Math & Stats	A. Wong (Fall) S. Wang (Winter) ALT VACANT	2019	2022	
			STS	D. Lungu/ALT Vacancy	2018	2021	
							Derek serves until start of sab. May 2020
							Liang on Sab. Jan. 1, 2021-June 2021
CoTL	<p>Currently, the Committee on Teaching and Learning shall consist of a minimum of two Faculty members from each department, the Associate Dean – Students, one Librarian, one staff member, one undergraduate student, and two graduate students, in addition to other members invited as provided for by the Rules. Graduate students and staff nominees will indicate their interest in serving on the committee in writing to the committee, who will then approve by majority vote.</p>	<p>CoTL normally meets every third Thursday of each month (September to May) from 10:00 am - 11:30 am</p>					
			Associate Dean - Students, Ex officio	M. Scheid	Designated		
			Graduate Student Representative	VACANT	2020	2022	
			Graduate Student Representative	VACANT	2020	2022	
			Undergraduate Student Rep	VACANT	2020	2021	
			Steacie Librarian	Ilo-Katryn Maimets	Designated		
			IT Representative	V. Gotcheva	Designated		
			Teaching Commons Rep	Y. Su	Designated		
			Staff representative, Elected	VACANT	2020	2021	
			Biology	D. Golemi-Kotra	2020	2023	
			Biology	S. Connor	2019	2022	
			Chemistry	VACANT	2020	2023	
			Chemistry	C. Caputo	2018	2021	
			Physics & Astronomy	VACANT	2020		
			Physics & Astronomy	VACANT	2020		
			Math & Stats	VACANT	2020	2023	
			Math & Stats	VACANT - 6 months replacement	2018	2021	
			STS	R. Marushia	2019	2022	
							W. Liu on Sabbatical - July 2020- Dec 2020

2020-2021 FSc Report on vacancies for Senate and FSc Standing Committees

Committee	Rules of Faculty Council - membership	Meeting time / Membership	Term	
			From	To
Committee on Research & Awards	The <u>Committee on Research and Awards</u> shall consist of one member elected by Council from each of Biology, Chemistry, Mathematics and Statistics, Science and Technology Studies/Natural Science, and Physics and Astronomy, one student member of Council and an Associate Dean (<i>ex officio</i>) who will serve as the Chair.	The Research & Awards Committee will meet when grants and awards need to be adjudicated.		
	Associate Dean - Research & Graduate Education, ex officio	J. Steeves	Designated	
	Undergraduate Student Rep	VACANT	2020	2021
	Biology	VACANT	2020	2023
	Chemistry	VACANT - 1 year replacement needed	2019	2022
	Physics & Astronomy	VACANT	2020	2023
	Math & Stats	VACANT - Fall replacement needed	2019	2022
	STS	VACANT	2020	2023
Appeals	The <u>Appeals Committee</u> for the purpose of hearing student appeals shall consist of four elected faculty members from Science units, an Associate Dean (<i>ex officio</i>) and two student members of Council. A quorum shall consist of either (a) two faculty members and one student member or (b) three faculty members.	Meeting is held once a month and times are polled by the Committee Secretary.		
	Associate Dean - Research & Graduate Education, ex officio	J. Steeves	Designated	
	Undergraduate Student Rep	VACANT	2020	2021
	Undergraduate Student Rep	VACANT	2020	2021
	Member at Large	R. Fournier	2019	2022
	Biology	VACANT	2020	2023
	Chemistry	VACANT	2020	2023
	Physics & Astronomy	VACANT	2020	
	Math & Stats	A. Pietrowski	2018	2021
	STS	M.H. Armour	2018	2021
Graduate Program Committee	The Graduate Education Committee shall consist of the Associate Dean – Research & Graduate Education (<i>ex officio</i>), Graduate Program Director (or designate who must be a member of the graduate program) of each Graduate Program in the Faculty of Science and two graduate student members from any Graduate Program within the Faculty of Science. The Chair of the Committee is selected by the voting members of the Committee for a one-year term.			
		Membership of this Committee is yet to be confirmed		
	Associate Dean – Research & Graduate Education (<i>ex officio</i>)	J. Steeves	Designated	
	Biology	B. Stutchbury	2020	
	Chemistry	R. McLaren	2020	
	Physics & Astronomy	T. Kirchner	2020	
	Math & Stats	A. Kuznetsov	2020	
	STS	K. Birch	2020	
	Graduate students	2 VACANCIES	2020	

S. Morin on Sab. Starting July 1, 2020-2021

Huaiping Zhu on Sabbatical Jul 1, 2020-Dec 31, 2020.

on Sabbatical Jan. 2021-Dec. 31 2021

on Sabbatical 20-21

York University

COUNCIL OF THE FACULTY OF SCIENCE

Report of the Science Curriculum Committee

February 2020

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 February 25, 2020, 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 tinar@yorku.ca

Agenda

1. Department of Mathematics & Statistics

1.1 New course: SC/MATH 1506 3.0 "Mathematics I for the Biological and Health Science"

1.2 New course: SC/MATH 1507 3.0 "Mathematics II for the Biological and Health Sciences"

COMMITTEE ON ACADEMIC STANDARDS, CURRICULUM AND PEDAGOGY TEMPLATE

NEW COURSE PROPOSAL FORM

Faculty:

Indicate all relevant
Faculty(ies)

Science

Department:

Indicate department and
course prefix (e.g.
Languages, GER)

Math

Date of Submission:

Dec 5, 2019

Course Number:

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

1506

Var:**Academic Credit Weight:**

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

3.0

Course Title:

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

Mathematics I for the Biological and Health Sciences
--

Short Title:

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

Math I for Biological/Health Sciences

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

Brief Course Description:

Maximum 2000 characters

(approximately 300 words including spaces and punctuation).

The course description should be carefully written to convey what the course is about. It should be followed by a statement of prerequisites and co-requisites, if applicable.

This description appears in the calendar.

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

A presentation of functions, systems of linear equations, and an in-depth presentation of single variable differential calculus. Emphasis is placed on basic mathematical skills and their applications.

Prerequisites: 12U Advanced Functions (MHF4U) or equivalent, or SC/MATH 1510

Course Credit exclusions: SC/MATH 1013 3.00, SC/MATH 1300 3.00, SC/MATH 1530 3.00, SC/MATH 1550 6.00, GL/MATH/MODR 1930 3.00, AP/ECON 1530 3.00, SC/ISCI 1401 3.00, SC/ISCI 1410 6.00, SC/MATH 1505 6.00

Generic Course Description:

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

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

Not applicable

Expanded Course**Description:**

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

List of topics:

1. Systems of linear equations
2. Definition of functions, their domain, range and graphs. Functions to be covered include: polynomials, power functions, exponential functions, piecewise-defined functions, trig functions, and rational functions.
3. Transforming, composing and inverting functions.
4. Limits of functions
5. Derivatives of functions
6. Continuity of functions
7. Differentiation Rules
8. Applications of derivatives including optimization, rates of change, extrema, L'hospital's Rule, exponential growth and decay, average value, related rates, linearization.

Course Learning Outcomes:

Solve systems of linear equations.

Recognize and classify functions (eg. polynomials, rational, trigonometric, exponential, logarithm, absolute value, root functions), identify their domain, range and graphs.

Reflect, translate and invert polynomials, rational, trigonometric, exponential, logarithm, absolute value, and root functions.

Define and calculate the limit of a function.

Define continuity and differentiation using limits.

Compute the derivative of functions.

Solve examples involving rates of decay and rates of growth; this requires knowledge of differentiation.

Apply differentiation for the following applications: linear approximations, L'hospital's rule and optimization.

Qualitatively sketch the graphs of functions and their derivatives.

Mathematically interpret the graphs of functions and their derivatives.

Communicate in written form and in a mathematically precise way the concept of limits and differentiation.

Course Design:

Indicate how the course design supports students

This course and Math 1507 (both 3 credits) are to replace Math 1505 (6 credits). Most students enrolled in Math 1505 are from Kinesiology,

in achieving the learning objectives. For example, in the absence of scheduled contact hours what role does student-to-student and/or student-to-instructor communication play, and how is it encouraged? Detail any aspects of the content, delivery, or learning goals that involve "face-to-face" communication, non-campus attendance or experiential education components. Alternatively, explain how the course design encourages student engagement and supports student learning in the absence of substantial on-campus attendance.

psychology and biology; and this is a required course for their program and will satisfy their six credit math requirement.

All three units were consulted about splitting Math 1505 into two three credits and all three units approved this. More details can be found in the "course rationale" section below.

Currently math 1505 is a six-credit course and we are finding students are struggling with this course. By splitting Math 1505 as two three credit courses (namely, Math 1506 and Math 1507), this will give students more flexibility in choosing their math courses. Students are to take Math 1506 before Math 1507. If a student struggles with Math 1506 they will then be able to take a remedial math course (such as Math 1510) before re-attempting Math 1506 or taking Math 1507.

There will be 3 hours of lecture, plus an additional hour of tutorial per week. In addition, math help for this course outside of lecture and tutorial time is offered through the following free services:

1. There will be weekly assigned exercise problems provided to students to help keep them on pace and connected to the lectures outside of class time.
2. Math Background Tutorials offered through Bethune College, <https://bethune.yorku.ca/math/>
3. Peer Assisted Study Session (PASS) offered through Bethune College, <https://bethune.yorku.ca/sos/pass/>; PASS is lead by a former student who successfully completed the course and did well. They share their knowledge of study tools to current students and create mock tests that help students prepare for their actual tests.
4. Study groups formed via the course discussion forum or the class rep. Bethune college coordinates class reps.
5. Instructor office hours
6. Students are able to submit questions for tests on the course website.
7. A study guide specifically for learning mathematics is provided to students as many students enrolled in this course will be first year university students.

Instruction:

1. Planned frequency of offering and number of sections anticipated (every year, alternate years, etc.).
 2. Number of department members currently competent to teach the course.
 3. Instructor(s) likely to teach the course in the coming year.
 4. An indication of the number of contact hours (defined in terms of hours, weeks, etc.) involved, in order to indicate whether an effective length of term is being maintained **OR** in the absence of scheduled contact hours a detailed breakdown of the estimated time students are likely to spend engaged in learning activities required by the course.
1. In the fall semester, approximately 6 sections with each section of approximately 250 students enrolled. In the winter and summer semesters, one to two sections will be offered. One of the section instructors will be designated as the course coordinator. The responsibility of the course coordinator will be to organize/ chair instructor meetings and ensure consistent teaching and evaluation amongst sections. There will also a faculty member appointed as the tutorial coordinator.
 2. As this is a first year mathematics course, all department members are capable of teaching this course.
 3. Andrew McEachern, Norm Purzitsky, Stephen Watson, Andrew Skelton, Pam Sargent, Jude Kong.
 4. 3 hours of lectures, plus one hour of tutorial, per week over 12 weeks; for every one hour of lecture time in the classroom, students are expected (on average) to be studying one hour outside of lectures either on their own or in study groups.

Evaluation:

A detailed percentage breakdown of the basis of evaluation in the proposed course must be provided.

If the course is to be integrated, the additional requirements for graduate students are to be listed. If the course is amenable to technologically mediated forms of delivery please identify how the integrity of learning evaluation will be maintained. (e.g. will "on-site" examinations be required, etc.)

Online Assessment Quiz,* 1%

Test 1, 20%

Test 2, 20%

Tutorial Quizzes, 9%

Final Exam, 50%

*this quiz determines whether the student is mathematically prepared for Math 1506, and will test their knowledge of arithmetic, exponents, trigonometry, geometry, inequalities and algebraic equations. If students do poorly on the quiz, they will be strongly encouraged to take Math1510 first.

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

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

Also please list any online resources.

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

LIBRARY SUPPORT STATEMENT MUST BE INCLUDED.

This is not a new course, but is Math 1505 split into two three credit courses, and this course is the first half of Math1505. The textbook used in Math 1505 is "Biocalculus: calculus, probability and statistics for the life sciences" by Troy Day and James Stewart, which can also be used for Math 1506.

Students may need to purchase an online interactive set of exercise problems related to the course. An online copy of the textbook is usually included with this purchase. There maybe a cost associated to this.

Other Resources:

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

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

Once several iterations of this course has been taught, we hope to develop a set of course notes for this course that will act as the textbook. This will require a faculty member familiar with the course to put together a manuscript of the course notes.

Course Rationale:

The following points should be addressed in the rationale:

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

This course and Math 1507 (both 3 credits) are to replace Math 1505 (6 credits). Most students enrolled in Math 1505 are from Kinesiology, psychology and biology. All three units were consulted about splitting Math 1505 into two three credits and all three units approved this. Attached is more details on this consultation.

Currently math 1505 is a six-credit course and we are finding students are struggling with this course. Math 1505 has high withdrawal and high failure rates. About half the students are withdrawing from the course before the final exam, and about 1/3 of those that finish the course fail. The Math department is doing many things to remedy this. One such example is splitting Math 1505 as two three credit courses, namely, Math 1506 and Math 1507. The hope is that this will give these students more flexibility in choosing their math courses. Students are to take Math 1506 before Math 1507. If students struggle with Math 1506 they will then be able to take a remedial math course (such as Math 1510) before re-attempting Math 1506 or taking Math 1507.

Enrolment: 6 sections with each section having approximately 250 students enrolled.

Faculty and Department Approval for Cross-listings:

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

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

Accessible format can be provided upon request.

COMMITTEE ON ACADEMIC STANDARDS, CURRICULUM AND PEDAGOGY TEMPLATE

NEW COURSE PROPOSAL FORM

Faculty:
Indicate all relevant
Faculty(ies)

Science

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

Math

Date of Submission:

Dec 5, 2019

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

1507

Var:

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

3.0

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

Mathematics II for the Biological and Health Sciences

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

Math II for Biological/Health Sciences

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

Brief Course Description:

Maximum 2000 characters

(approximately 300 words including spaces and punctuation).

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

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

An introduction to single variable integral, probability and statistics. This course is designed to provide a comprehensive mathematical background for students of the biological and social sciences. Students continue to develop basic mathematical skills and applications from SC/MATH 1506.

Prerequisites: SC/MATH 1506

Course Credit exclusions: SC/MATH 1014 3.00, SC/MATH 1310 3.00, SC/MATH 1540 3.00, SC/MATH 1550 6.00, GL/MATH/MODR 1940 3.00, AP/ECON 1540, SC/ISCI 1402 3.00, SC/ISCI 1410 6.00, SC/MATH 1505 6.00.

Generic Course Description:

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

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

Not applicable.

Expanded Course**Description:**

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

List of topics taught.

1. Riemann sums and area
2. Definite integral, Indefinite integral
3. Fundamental Theorem of Calculus
4. Substitution rule
5. Integration by parts
6. Descriptive Statistics (mean, median, mode, sample, population, etc.)
7. Principles of counting
8. Probability
9. Discrete random variables
10. Continuous random variables
11. Sampling distributions (if time permits)
12. Confidence intervals (if time permits)
13. Hypothesis testing (if time permits)

Course learning outcomes:

Apply techniques of integration to integrals.

Classify different types of integrals (antiderivatives, definite integrals, indefinite integrals, improper integrals).

Use the Riemann sum to approximate the area between curves.

Apply integration to find the area between curves and average value of a function.

Connect the relationship between differentiation and integration via the Fundamental Theorem of Calculus.

Qualitatively sketch the graphs of Riemann Sums.

Communicate in written form and in a mathematically precise way the concept of integration.

Computing mean, mode, median, variance, standard deviation, and knowing what they measure.

Comparing samples versus populations.

Represent probability scenarios via sketches of Venn Diagrams.

Apply probability rules and concepts, such as conditional probability, dependence, multiplication rule, law of total probability and Bayes Rule, to solve probability scenarios.

Classify random variables and compute their mean and variance.

Qualitatively sketch the graphs of Venn diagrams, histograms, probability density functions (for continuous random variables) and cumulative probability functions.

Mathematically interpret the graphs of Venn diagrams, histograms, probability density functions (for continuous random variables) and cumulative probability functions.

Communicate in written form and in a mathematically precise way the concepts of functions, matrices, probability and random variables.

Course Design:

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

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

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

This course and Math 1506 (both 3 credits) are to replace Math 1505 (6 credits). Most students enrolled in Math 1505 are from Kinesiology, psychology and biology; and this is a required course for their program and will satisfy their six credit math requirement.

All three units were consulted about splitting Math 1505 into two three credits and all three units approved this. More details can be found in the "course rationale" section below.

Currently math 1505 is a six-credit course and we are finding students are struggling with this course. By splitting Math 1505 as two three credit courses (namely, Math 1506 and Math 1507), this will give students more flexibility in choosing their math courses. We recommend students take Math 1506 before Math 1507. If a student struggles with Math 1506 they will then be able to take a remedial math course (such as Math 1510) before re-attempting Math 1506 or taking Math 1507.

There will be 3 hours of lectures per week, but in addition, math help for this course outside of lecture time is offered through the following free services:

1. There will be weekly assigned exercise problems provided to students to help keep them on pace and connected to the lectures outside of class time.
2. Math Background Tutorials offered through Bethune College, <https://bethune.yorku.ca/math/>
3. Peer Assisted Study Session (PASS) offered through Bethune College, <https://bethune.yorku.ca/sos/pass/>; PASS is lead by a former student who successfully completed the course and did well. They share their knowledge of study tools to current students and create mock tests that help students prepare for their actual tests.
4. Study groups formed via the course discussion forum or the class rep. Bethune college coordinates class reps.
5. Instructor office hours

6. Students are able to submit questions for tests on the course website.

A study guide specifically for learning mathematics is provided to students as many students enrolled into this course will be first year university students.

Instruction:

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

1. In the winter semester, approximately 6 sections with each section of approximately 250 students enrolled. In the summer and fall semesters, one to two sections will be offered. One of the section instructors will be designated as the course coordinator. The responsibility of the course coordinator will be to organize/chair instructor meetings and ensure consistent teaching and evaluation amongst sections.
2. As this is a first year mathematics course, all department members are capable of teaching this course.
3. Andrew McEachern, Norm Purzitsky, Stephen Watson, Andrew Skelton, Pam Sargent, Jude Kong.
4. 3 hours of lectures per week over 12 weeks; for every one hour of lecture time in the classroom, students are expected (on average) to be studying one hour outside of lectures either on their own or in study groups.

Evaluation:

A detailed percentage breakdown of the basis of evaluation in the proposed course must be provided.

If the course is to be integrated, the additional requirements for graduate students are to be listed. If the course is amenable to technologically mediated forms of delivery please identify how the integrity of learning evaluation will be maintained. (e.g. will "on-site" examinations be required, etc.)

Test 1, 25%
Test 2, 25%
Final Exam, 50%

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

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

Also please list any online resources.

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LIBRARY SUPPORT STATEMENT MUST BE INCLUDED.

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Other Resources:

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

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

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Course Rationale:

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

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

The expected enrolment in the course.

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Enrolment: 6 sections with each section having approximately 250 students enrolled.

Faculty and Department Approval for Cross-listings:

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

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

Accessible format can be provided upon request.

From: [Cheryl Underhill](#)
To: [Sibonile Siyakatshana](#)
Cc: [Almira Mun](#); [Pascal Robichaud](#); [Amanda R Wassermuhl](#)
Subject: Proposed changes to Faculty of Science Council Rules
Date: February 25, 2020 9:18:02 AM

Dear Sibonile and Almira,

Following a discussion with the Dean of the Faculty of Graduate Studies at its meeting on February 11, 2019, the Senate Executive Committee began to hone its thoughts on Faculty Councils' adoption of graduate studies curriculum and standards approval structures. At that same meeting, the Executive Committee reviewed changes to the Faculty Council Rules and procedures for the Faculty of Science. Several suggestions / questions emerged about the proposed Graduate Education Committee. Accordingly and to aid its ongoing review of the new standing Committee of Council, the Executive Committee requests additional information be provided from the Faculty as follows:

- A rationale for the proposed composition of the Graduate Education committee, which includes the process undertaken to design the Committee structure
- Thoughts on broadening the composition of the committee beyond just Graduate Program Directors to add members at large with Knowledge of graduate programming, and experience with curriculum approvals at the Faculty-level.
- Thoughts on adding a minimum of one graduate student member to the Committee.
- Thoughts on having members of a Faculty of Science graduate program who are not members of the anchor Faculty be eligible to serve on the Committee (i.e., a faculty member in a cognate program at Glendon).

Upon receiving the additional information, the Executive Committee will resume its review of the changes to Council Rules. Please do not hesitate to be in touch if you wish to discuss further any of the above.

Cheryl Underhill
Senior Assistant Secretary of the University
University Secretariat
York University
1050 Kaneff Tower
416 736-2100 Extension 30335

Building a Better Future: York University Academic Plan 2020-2025

The new University Academic Plan (UAP) 2020-2025 is about coming together to make positive change for our students, our campuses, and our local and global communities.

Where We Are

After a decade of rapid development York has arrived as a fully comprehensive, research-intensive, multi-campus, urban University. We combine groundbreaking scholarship, discovery, and artistic creation with renowned strengths in community engaged and industry partnered research for maximum social and economic impact.

We are a full spectrum University, increasingly recognized for excellence in health, engineering, and sciences, while we continue to lead in liberal arts, creative and performing arts, and professional studies. The comprehensive strengths of our Keele campus are enhanced by our bilingual Glendon campus, our downtown professional learning sites devoted to law and business, and our international campuses in Hyderabad, India and Las Nubes, Costa Rica.

York boasts one of the largest and most diverse undergraduate and graduate student bodies in Canada, almost 18% of whom are now international students. Through the ingenuity of our faculty, we have dramatically grown the opportunities for students to learn experientially through community placements, capstone projects, and research internships, whether at home or abroad, and to access online courses and content. Students are embracing new programs in emerging areas like Global Health, Indigenous Studies, Digital Media, and Management of Artificial Intelligence. Our School of Continuing Studies has quickly become one of North America's largest and most successful, offering cutting-edge and flexible pathways to education for adult learners looking to retool their careers. Our academic mandate and programming express values of Equity, Diversity, and Inclusion ever more clearly.

Through the growth of Innovation York, we have emerged as a thriving regional hub for entrepreneurship and knowledge mobilization. We value our deep connections to local and global partners, who work with us to contribute to the wellbeing of both people and communities.

Where We Are Going

In the short term, we will see a further dynamic expansion of our capacity with the launch of a new campus in Markham centred on technology and entrepreneurship. We will develop an integrated health precinct with partners in Vaughan. We will undertake significant renewal of our research and teaching infrastructure across the entire University, and will elevate our international partnerships and profile.

York has scaled up its health-related teaching, research, and innovation based on a vision of keeping more people healthier, longer. We are well placed over time to establish a medical school that is designed in a manner consistent with this vision, to serve one of Canada's fastest growing and most diverse regions through a community-based care model that integrates physicians into broader health and wellbeing promotion teams.

Focusing on the next five years, this Plan charts a path to positive change in relation to six Priorities that are foundational to York University's mission, vision, and identity. For each Priority the Plan explains the reasons why action is imperative and the key aims that will guide us. Permeating all six Priorities is a theme of *coming together* as both a precondition and an outcome of fulfilling the Plan. A better future must be rooted in strong relationships – among the members of our own institution, across our multiple campuses, with our closest neighbours and Indigenous communities, and with our burgeoning network of partners near and far.

In the spirit of coming together, the people of YorkU have also expressed a strong desire to bring our unique capacities to bear on some of the most urgent issues facing the planet, from climate change to inequality to truth and reconciliation to forced migration, among others. Over the next five years, we will challenge ourselves as a University to deepen our collective contributions to the United Nations' Sustainable Development Goals (SDGs). The York University SDG Challenge will transect all of our Priority areas and will be open to all interested members of our community. York is already recognized globally for our excellence in SDG-relevant research, education, innovation, and civic action. The SDG Challenge will further elevate our engagement and project our distinctive ethos as a community of changemakers.

York University's Planning Ecosystem

The UAP 2020-2025 marks a new beginning. At the same time, it builds on the transformational work already underway across the institution. This Plan is designed to function as a meta-document that links our existing academic plans and initiatives into a coherent whole. It embeds and affirms the University's Strategic Research Plan, Indigenous Framework, and a new Internationalization & Global Engagement Strategy, among others. These focused strategies are embraced as vital elements that infuse the UAP as an overarching statement of our direction over the next five years.

The UAP also informs our operational and budget plans. York is known as a leader in Integrated Resource Planning (IRP) to ensure that high-level strategies do not sit on a shelf but are translated into concrete implementation plans. Every faculty and administrative unit has an IRP that lays out the specific actions it is taking to implement the UAP with timelines and regular progress reports, so that human and financial resources are continually aligned to support our stated academic priorities and goals.



Six Priorities for Action

York University has an enduring commitment to critical inquiry and the pursuit of knowledge that comes from many perspectives and ways of knowing. As a learning community, we believe in the power of research, scholarship, creativity, education, and dialogue to transform ourselves and the world around us for the better. We share a collective belief in the university as a public trust.

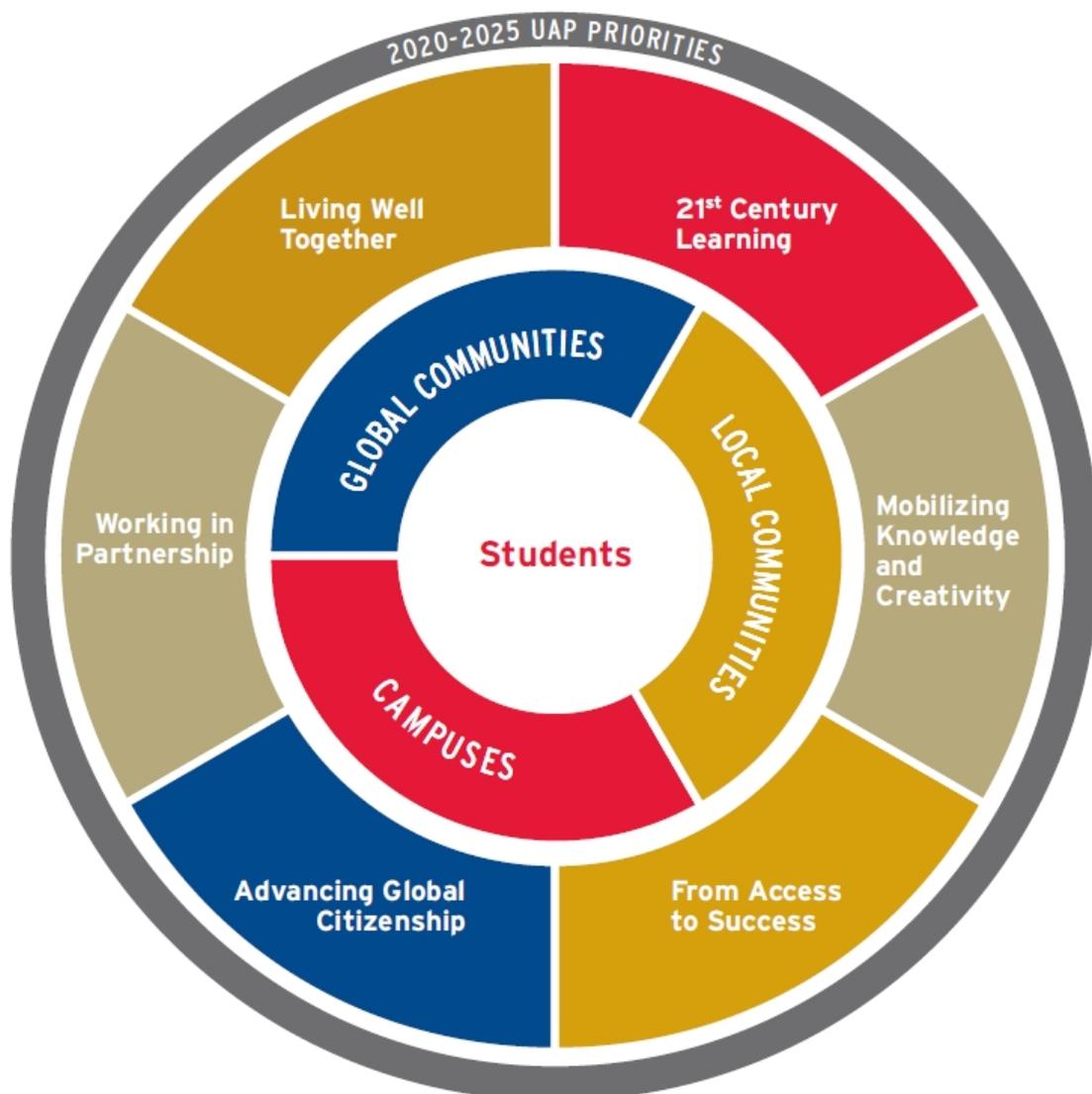
This Plan is designed to uphold the fundamental values of the University, even as we evolve its role and reach to ensure our graduates are equipped for a future that will be defined by dramatic change.

- Climate and environmental change raise urgent questions for virtually every field of endeavour and a need to come up with innovative solutions.

- Global power shifts translate into local tensions and inequities, and give rise to the need for meaningful strategies to enhance economic inclusion and social cohesion.
- People are ever more connected through digital networks and physical mobility, generating complexity as well as immense possibilities to accelerate collaboration and problem solving.
- Technology is both disrupting and enhancing every sphere of life and work, as well as revolutionizing how people learn, think, and create.

York University brings distinctive capabilities to the table to meet these challenges and find the opportunities that lie within them. This UAP positions York clearly as an agent of positive change for our students, for higher education, for society at large, and for the planet. We believe that at this juncture, to make a better future, the world needs more of York University.

Each of the six Priorities focuses on a key dimension of positive change that York University will pursue over the life of the Plan. The Priorities are conceptualized as a wheel to reflect their fluidity and interdependence. Each Priority depends upon the others to fully realize the UAP, just as the people of YorkU depend upon each other to thrive as a whole community.



21st Century Learning: Diversifying Whom, What, and How We Teach

Why: At York University we are determined to equip every student, regardless of background or field of study, with the knowledge, transferable skills, and values to navigate a 21st century world in which change is the only constant.

This Priority speaks to the unparalleled diversity of our student body as a source of pride and a comparative advantage that differentiates York University as an institution. York has become a global magnet for talented people drawn by our academic excellence, cosmopolitan character, and commitment to making a positive difference. The next five years will see:

- continued efforts to make York an attractive destination for more Indigenous students, in line with our Indigenous Framework
- additional growth and diversification of our international student body, reaching our goal of 20-25% of our students being international

This Priority also highlights the value we place on diversity of thought. To prepare our students to live, work, and act meaningfully in the world, we will:

- continually reinvent our programs to address emerging issues and labour market needs that call for new pedagogical approaches and cross-disciplinary thinking
- pursue inclusive excellence by decolonizing curriculum and ensuring our graduates are known for their global mindset, ethical judgment, and superior ability to integrate diverse ideas and worldviews
- build essential 21st century skills into our programs, including digital and information literacies, critical thinking, and the ability to ask good questions, marshal evidence, and communicate effectively in a variety of media

Finally, this Priority speaks to diversifying how we teach in an era of perpetual learning. Rather than acquiring static knowledge, the hallmark of a quality education is now intellectual agility, adaptability, and knowing how to learn in any context. To meet this challenge we will:

- attain our goal of providing every student with an experiential learning opportunity, regardless of program
- offer more microcredentials and flexible delivery options, in person and online, to serve the needs of diverse learners with complex lives at multiple career stages
- create more spaces for active and collaborative learning, so that students gain skills in working with others along with the joy of belonging to a learning community
- encourage students to become lifelong learners with the curiosity, research and creative skills, and habits of mind to continually question and update their own knowledge
- enhance teaching supports for all instructors, including tenure-stream and contract faculty as well as teaching assistants

Mobilizing Knowledge and Creativity

Why: As change accelerates around us, we aim to be more responsive to our communities by generating critical knowledge and works of art, ideas that engage multiple perspectives, and innovations that propel Ontario as a global knowledge-economy leader.

We have laid out an ambitious agenda for the continued growth and application of our research, scholarship, and creative activity in our Strategic Research Plan (SRP) 2018-2023: Towards New Heights. We remain committed to this agenda, including in particular:

- increasing the research participation of faculty and trainees at all levels across the institution
- accelerating growth in the number and diversity of our scholarly and artistic outputs and research funding base
- expanding the influence of our work through broadening and deepening our external partnerships and engagement in the generation and sharing of knowledge and creative works
- maximizing our impact by building on the success of Innovation York to expand student, faculty, and community access to entrepreneurship programming and to increase our innovation activities
- implementing our Open Access Policy (2019)

Based on a thorough scan of activity across the University, the SRP mapped our established research and creative strengths across six intersecting themes, in which we are demonstrating national and international leadership:

Advancing Fundamental Inquiry and Critical Knowledge	Analyzing Cultures and Mobilizing Creativity
Building Healthy Lives, Communities and Environments	Exploring and Interrogating the Frontiers of Science and Technology
Forging a Just and Sustainable World	Integrating Entrepreneurial Innovation and the Public Good

We expect to continue to grow and excel in these areas, with the help of investments that are already underway in enhanced infrastructure and in supports for our faculty. These include maintaining consistent high quality supports for individual investigators across the institution, as well as more focused investments in large-scale, collaborative research programs that cross disciplines and often borders with an array of partners. York University enters this UAP with an expanded cohort of graduate students and post-doctoral fellows from Canada and around the world, who will both participate in and accelerate this agenda.

The continued growth of our research and creative activities also demands that we support scholarly communities in keeping with the theme of *coming together*. York's excellence in inter- and transdisciplinary research is renowned and positions us for leadership in addressing the most complex and pressing issues of the day, such as those highlighted by the UN's SDGs. During this Plan, we will further cultivate this way of thinking across disciplines by means of our Organized Research Units and beyond, and find ways to infuse it deeply in student learning as well as in our research and creative activities and output.

The SRP 2018-2023 identified five areas where York has a clear opportunity to achieve new levels of research success in ways that bring a distinctively York perspective to addressing compelling challenges of our time:



Exciting initiatives are already underway, which include a new Institute for Indigenous Languages and Cultures [confirm name] and an AI Taskforce, which is examining how York can become a distinctive leader in research and teaching that engages critically and humanistically with the development of technologies including artificial intelligence and machine learning.

Over the life of this UAP, we will continue to resource these efforts in particular by implementing our Faculty Complement Renewal Strategy, which calls for continued steady growth, renewal, and diversification of our tenure-stream faculty complement, including the use of cluster hiring to advance strategic priorities. This will also require focused efforts to meet current and future research infrastructure needs, to provide mentorship for an incoming generation of scholars, and to ensure that our faculty's research and creative output are disseminated ever more widely and recognized both internally and externally.

From Access to Success: Next Gen Student Supports

Why: With many of our students facing life challenges that affect their studies, York will devote additional attention to supporting students of all backgrounds and circumstances to complete their studies successfully and to realize their full potential.

A core value of York University since its inception has been to provide access to all eligible students so that no talent is left behind. We serve large numbers of students who are new Canadians, Black, Indigenous, racialized, from lower income backgrounds, or who are among the first generation in their families to attend university. We are proud that our campuses teem with students of diverse sexualities, abilities, nationalities, religions, political beliefs, and linguistic backgrounds. Indeed, it is this vibrancy and promise that attract many people to come to York or to support our work.

We also recognize that many of our students may have substantial work and family commitments, or face systemic barriers as part of the experience of belonging to a minority in society or at university. As a large institution that has grown quickly, York also recognizes that we must reduce the complexity of navigating our University in order to improve the experience of all students, graduate and undergraduate.

With progress already happening in many areas, we will redouble our efforts over the course of this UAP to achieve positive change for our students in the following areas:

- more seamless, timely, and reliable access to excellent academic and career advising, as well as accessibility and other supports, through a combination of in-person service and digital systems, including our recently launched Student Virtual Advisor
- earlier feedback to students on their academic standing, and the use of data analytics to enable proactive, early interventions with students who are struggling
- more robust resources to assist international students with their distinctive needs
- achievement of our Faculty Complement Renewal Strategy to diversify our faculty to better reflect the makeup of our student body
- increased opportunities to practice relationship-building across differences
- more chances to learn about Indigenous worldviews and the history of Canada vis-à-vis Indigenous peoples
- new systems to track our progress on improving outcomes for all of our students and especially those from underrepresented groups

Advancing Global Citizenship

Why: York University draws people from around the world who seek to learn from each other and to gain the global fluencies needed to work locally and across borders toward a better future.

More than ever, universities have a responsibility to contribute to positive change through global cooperation and borderless education. York is already wellknown for its strengths in global languages and internationally engaged research and teaching, with alumni and partners around the world. Our Glendon campus provides a unique environment for cross-linguistic and cross-cultural teaching, research, and dialogue. We have an eco-campus in Las Nubes, Costa Rica and offer global management education at our campus in Hyderabad, India. In addition,

we are embedded in one of Canada's most multicultural and economically vibrant urban regions, where many employers seek highly qualified personnel with a global orientation.

York University has launched an Internationalization and Global Engagement Strategy (2020), which sets the stage for a new phase of development that will bring greater resources and coordination to our efforts in this area and will reinforce our commitment to ethical internationalization. The pan-university consultation informing this Strategy has underlined the importance of promoting values of integrity, reciprocity, reflexivity, inclusivity, and sustainability in our international programs and activities. It sets an agenda for action in four areas:

- global outlook and fluency – informing curricula and global learning, while leveraging our own diversity
- global nature of research – attracting international scholars and supporting international collaborative research
- international students – robust recruitment from a broader sweep of countries, creating a supportive and inclusive environment, and supporting transitions to careers or further study
- global reach and profile – communicating more actively, enhancing global reputation, expanding partnerships, and fostering alumni connectivity

York is committed to supporting this agenda with enhanced resources and activities in each of these areas. We will work with Universities Canada and other partners to ensure that York can fully leverage new public investments such as the federally funded Outbound Student Mobility Program.

Working in Partnership

Why: York University understands that by partnering with other entities and sectors we can maximize positive impact on our students, our campuses, and our broader communities.

York has always embraced the view that its role extends beyond the academy to the communities we serve. We are a longtime leader in community-engaged research, teaching, and civic action. Our interactions with entrepreneurs and industry have grown exponentially in recent years with the launch of Innovation York, YSpace in Markham, and several Faculty-based innovation hubs. Through our Indigenous Framework, we are committed to engaging and supporting Indigenous communities and recognizing the support they provide to York. We know from experience, that by working with other kinds of organizations we gain insight and increase our collective problem-solving capacities, while bringing our students into contact with valuable learning and career opportunities.

Over the course of this Plan, we will continue to build cross-sector and inter-community partnerships that can serve as vital catalysts for positive change. As a university, we will model

new and deeper forms of collaboration with industry, government, and community partners, engaging all of our campuses and orienting students to both career paths and social responsibilities. Signature activities will include the following:

- developing with partners in Vaughan an integrated, interdisciplinary healthcare precinct that will serve the needs of a growing region, while creating synergies for health-related research, teaching, and innovation
- establishing a UN-sponsored CIFAL¹ centre, located at our new Markham campus, to provide cross-sectoral training and development programs that will advance the UN SDGs
- implementing York University's social procurement policy, one of the first among Canadian academic institutions, as part of our broader commitment to being an anchor institution for the region
- attracting community partners to co-develop our Keele campus Lands for Learning in ways that support both our academic mission and our social and environmental responsibilities
- continuing to work with York's Indigenous Council to strengthen the Indigenous presence on campus
- connecting our entrepreneurship and innovation activities to the broader innovation ecosystem of Ontario

Living Well Together

Why: Making positive change requires that all members of our diverse community feel welcomed into a sense of belonging, common purpose, and shared responsibility to support and enrich each other's work.

Given the scale and breadth of York University, with many people commuting some distance to our campuses and with alumni living and working around the world, we must make a conscious effort to know each other and to build community. Anishnaabe teachings refer to the gift of Mino Bimaaddiziwin or the Good Life. Our students, staff, and faculty have let us know that a stronger sense of connection, inclusion, and wellbeing are among the key changes they are seeking in their daily experience of life at the University. Our alumni are seeking more opportunities to remain engaged with the University. In support of this Priority, we will pursue the following over the course of this Plan:

- renewing our physical environment with inspiring and humane natural and built spaces, including an expanded Art Gallery of York University within a revitalized Harry Arthurs Common

¹ CIFAL stands for Centre international de formation des autorités et leaders' (in English: International Training Centres for Authorities and Leaders). The CIFAL Global Network aims to strengthen capacities of government officials and civil society leaders to advance sustainable development: <https://unitar.org/about/offices-training-centres-around-world/cifal-global-network>.

- purposeful efforts to foster dialogue, respect, and open-mindedness to diverse points of view
- drawing upon our strengths in the creative and performing arts to create social connection and community pride
- continued actions to support reconciliation through our Indigenous Framework, including additional Indigenous spaces and art works
- systematic efforts to embed human rights, equity, diversity, and inclusion training across the University
- enhanced efforts to engage and support our vibrant network of alumni
- committing to a culture of service excellence in which we all are responsible to support each other's success
- continuing to implement mental health and wellbeing strategies, policies, and collective actions that create supportive and empowering environments for all members of the community

Answering the Call: A University-Wide Challenge to Contribute to the UN Sustainable Development Goals

In addition to the six foundational Priorities above, the members of the York University community have expressed a strong desire to make a difference on some of the most compelling issues of the day. Community members have pointed to a range of complex societal issues to which York is ideally placed to contribute, given our commitment to social responsibility, our extensive network of partnerships, and our excellence in thinking across disciplines. It is striking that most of the issues that surfaced in these conversations are referenced in the United Nations Sustainable Development Goals (SDGs), a framework that calls on member countries to take urgent action in 17 areas that are critical to ensure peace and prosperity for people and the planet.

SUSTAINABLE DEVELOPMENT GOALS



York University is already recognized as an international leader in SDG-relevant research, teaching, partnerships, and campus practices. By challenging ourselves to deepen this work over the next five years, and to track and report on our contributions, we reaffirm longstanding York values of social justice, equity, sustainability, and excellence in all that we do. This SDG Challenge will galvanize our community in coming together to engage critically with the SDGs, and to take meaningful steps, both small and large, toward a more just and sustainable future.

Beginning in this 75th anniversary year of the United Nations, York's SDG Challenge will be a pan-University exercise to support and recognize a wide range of grassroots activities that may touch on any of the Priorities in the Plan. These activities may be purely internal or they may engage others from our nearest neighbourhoods to the farthest corners of the world. They may involve fundamental inquiry and artistic creation, or seek immediate changes in skills, policies, aesthetic practices, or behaviours. They may emanate from any academic discipline or administrative unit, or spark new collaborations across different areas of the University. They might even involve some friendly competition for a good cause. By supporting students, faculty, contract instructors, staff, alumni, and volunteers to come together for SDG-related learning and initiatives, we will create leadership opportunities for our people and forge stronger relationships along the way. By telling the story of our SDG-related work, we will build community pride and put a spotlight on the qualities that make York University a truly unique and special place.

By furthering SDG-related work that intersects with the Priorities, this Plan will highlight the distinctive ethos of York as a University committed to making a positive impact on our students, our communities, and the world around us.