COUNCIL OF THE FACULTY OF SCIENCE



NOTICE OF MEETING

December 12, 2023 3pm – 4:30pm via Zoom

AGENDA

- 1. Call to Order and Approval of Agenda
- 2. Chair's Remarks
- 3. Approval of November 14, 2023 Minutes
- 4. Business Arising
- 5. Inquiries and Communications
 - > November 23, 2023 Senate Synopsis
- 6. Dean's Remarks
- 7. Associate Dean & Head of Bethune College Remarks
 - a) Associate Dean, Curriculum & Pedagogy
 - b) Associate Dean, Faculty Affairs
 - c) Associate Dean, Research & Partnerships
 - d) Associate Dean, Students
 - e) Head of Bethune College
- 8. Reports from Science Representatives on Senate Committees
- 9. Report from Student Caucus Representative
- 10. Reports from Standing Committees of Council
 - a) Executive Committee:
 - > Vacancies report on the Standing Committees of FSc Council
 - **b)** Undergraduate Curriculum Committee:
 - > Consent agenda items
 - c) Committee on Examinations and Academic Standards
 - > Faculty Level Review of 2022-2023 Departmental Grade Reports Consent agenda item
- 11. Other Business
 - a) York University Strategic Scheduling Evaluation Frances Billingsley,
 Associate Registrar & Director, Student Records & Scheduling

COUNCIL OF THE FACULTY OF SCIENCE



MINUTES

November 14, 2023 3pm – 4:30pm via Zoom

MINUTES

1. Call to Order and Approval of Agenda

N. Kovinich, Chair of Council called the meeting to order and a motion was moved, seconded and carried to approve the Agenda as presented.

2. Chair's Remarks

N. Kovinich, Chair of Council welcomed Council and noted that the Science Student Caucus members have been assigned to standing committees.

3. Approval of October 10, 2023 Minutes

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

4. Business Arising

There was none.

5. Inquiries and Communications

> October 26, 2023 Senate Synopsis

Council members noted the Senate Synopsis of meeting held on October 26, 2023.

6. Dean's Remarks

Dean Wang welcomed Faculty Council members and the elected Science Student Caucus.

Dean Wang spoke of the recent spike of classroom incidents such as pranks and disturbances. He noted that the Interim Vice-President, Equity, People & Culture sent a message to the York community to reinforce York University's measures to create a safe environment for everyone. Dean Wang encouraged everyone to be alert and do not hesitate to share any concerns with him or the leadership team.

Dean Wang emphasized the importance of the University wide Joint APPRC-ASCP Task Force on the Future of Pedagogy initiative which will be presented by Tamara Kelly, Pedagogical Innovation Chair in Science Education. Dean Wang thanked members of the Task Force and everyone who contributed to the report.

Events:

Faculty of Science hosted another successful Science Social on November 30 with 90 people registered and 50 people in attendance.

Faculty of Science Holiday Reception will take place on December 11 at 2pm – 4pm in the Schulich Dining Room.

7. Associate Deans and Head of Bethune College Remarks Associate Dean, Students, M. Scheid:

As a final update for Fall '23 enrolment, Faculty of Science applications were up by 10% and overall enrolment was up by 6.6%. The application cycle for Fall '24 has already begun.

Nona Robinson from Teaching Commons is hosting a "Managing Disruptions in the Classroom" discussion on November 16, 2023.

Reminder that students have 21 days before the start of the examination period to give Course Directors notice of religious accommodation requests.

Frankie Billingsley, Associate Registrar & Director, Student Records & Scheduling will attend the December 12 Faculty Council meeting to discuss the York University Strategic Scheduling Evaluation final report.

Associate Dean, Curriculum and Pedagogy, H. Kouyoumdjian: Upcoming Events:

Fall Campus Day is taking place on November 18, 2023.

Markham Campus Day is taking place on December 2, 2023.

Teaching and Learning Coffee and Connect is on November 15, 2023 at 9am – 11am in the Life Sciences Building lobby.

The second issue of the Teaching & Learning bulletin was released with a focus on SDGs. Faculty is encouraged to take advantage of the resources available.

Associate Dean, Research & Partnerships, V. Saridakis:

The Research Office submitted 56 applications ahead of the November 1 NSERC deadline. Results will be available in April 2024.

Information on the YUFA Minor Research Grant and Junior Faculty Fund Awards will be released by December.

The President's Research Award deadline is Wednesday, November 15, 2023.

Associate Dean, Faculty Affairs, G. Audette:

Reminder that Sabbatical reports were due November 1, 2023.

Reminder of the annual CV exercise deadline of November 13 2023.

Provided an update that the Tenure & Promotion Committee were having difficulties with securing two Senators for adjudication, which was causing a backlog of files. Thanked everyone for their patience.

Hiring cycles have begun for the department of Mathematics & Statistics, Physics & Astronomy and Chemistry.

8. Reports from Science Representatives on Senate Committees

There was none.

9. Report from Student Caucus Representative

There was none.

10. Reports from Standing Committees of Council

a) Executive Committee:

> Ratification and Call for Nominations for Senate and Standing Committee of Council

A motion was moved, seconded and carried to ratify all nominations to the Standing Committees of Council.

> Vacancies report on the Standing Committees of FSc Council

N. Kovinich noted the vacancies that remain, highlighting the Senate Sub-Committee on Honorary Degrees & Ceremonials vacancy.

11. Other Business

a) Joint APPRC-ASCP Task Force on the Future of Pedagogy (Task Force preliminary recommendations) – Tamara Kelly

T. Kelly, Pedagogical Innovation Chair in Science Education gave a presentation on the Task Force on the Future of Pedagogy and Faculty was advised they would receive an online form to provide written commentary / feedback on its report and preliminary recommendations.

Meeting Adjournment

A motion was moved, seconded and carried to adjourn the meeting.

ATTENDANCE
Adriano Tersigni Alex Wiscicka
Anna Burtin
Brad Sheeller (non-voting guest) Carl Wolfe
Claire Del Zotto
Conor Douglas
dasantila golemi-kotra
Derek Jackson
Esaias J. Janse van Rensburg
Eva Hughes
Gerald Audette
Gino Lavoie
Helen McLellan
Hovig Kouyoumdjian
lain Moyles
Jade Atallah
James Elwick
Jennifer van Wijngaarden
Jerusha Lederman
Jihyeon Jessie Yang
Jill Lazenby
John Amanatides
Jonathan Cevallos
Julia Tersigni
Kalpita Wagh
Lomesh Choudhary
Madeline Blanco
Maggie Xu
margaret mroziewicz
Melissa Hughes
Mike Scheid
Natalie Moussa
Neal Madras
Nikola Kovinich
Pat Hall
Patricia Lakin-Thomas
Robert Tsushima
Robin Metcalfe
Rui Wang
Ryan Hili
Sara Jazaeihaghighi
Satyam Verma
Seerat Choudhry
Shon Lazarev

Taline Apelian-Sutor
Tamara Kelly
Tianna McFarlane
Tom Kirchner
Vera Pavri
Violeta Gotcheva
Vivian Saridakis
Wendy Booth
Yashna Manek
Yuna Hwang



The Senate of York University Meeting Synopsis

The 700th Meeting of Senate held on Thursday, 23 November 2023

Remarks

The Chair of Senate, Professor Poonam Puri, welcomed Senators and acknowledged that this is the 700th meeting of the Senate. A slide show containing a historical reflection on the role Senate has played was presented, and the Chair invited members to take a group photo to commemorate the occasion.

President Lenton's comprehensive remarks included the challenging circumstances currently affecting the University, both internal and external factors, and the broad plans to address them to advance the University Academic Plan priorities and achieve financial sustainability. The full text can be found here.

Approvals

Senate approved recommendations of the Executive Committee:

- the election of members to the non-designated Senate Committees of Tenure and Promotions
- the extension of the waiver of required Attending Physician Statements to support requests for petitions, appeals and deferred standing for an additional six months beyond the current waiver, from 31 December 2023 to 30 June 2024.

Senate approved the recommendations of the Academic Standards, Curriculum and Pedagogy Committee to:

- establish a Cross-Disciplinary Certificate in Mechatronics, Department of Earth & Space Science Engineering, Lassonde, effective FW2024.
- add a Co-op Option to Bachelor of Environmental Studies and Bachelor of Arts degree programs, Environmental & Urban Change, effective FW2024.

Reports

Under the auspices of the Academic Policy, Planning and Research Committee, Vice-President Academic and Provost Lisa Philipps reported on Enrolments and Faculty Complement. The report is accessible from the Senate Meeting website.

The Senate of York University Synopsis

Committee Information Items

Executive

The Executive Committee's information items included the following:

- The Vice-Chair reported on the appointments of student senators to Senate committees for the 2022-2023 governance year.
- The Topics of Broad Academic Interest (TBAI) initiative.
- Commencing review of the Senate Disruption Policy by working group.

Academic Policy, Planning and Research (APPRC)

APPRC reported on the following items:

• The Committee's engagement in budget consultations, providing feedback on how to support academic priorities, and upcoming consultation with Faculty councils and the community.

Academic Standards, Curriculum and Pedagogy (ASCP)

ASCP reported on the following items:

• The Committee's review of concerns regarding phone-mounted YU cards, the challenges presented for examinations,

Student Appeals Committee (SAC)

SAC presented its annual report for 2022-2023, which described activities for the past year and presented data on Senate and Faculty-level cases.

Additional Information about this Meeting

Please refer to the full Senate agenda and supplementary material <u>posted online</u> with the **23 November 2023** meeting for details about the items reported.

2023-2	024 FSc Report on vacancies for Se	nate and FSc Standing Committees		
Committee	Rules of Faculty Council - membership	Meeting time / Membership	Te	
	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 three years.	As per Senate website	From	То
	Dean, Ex officio Member at large Member at large	R. Wang G. Audette William van Wijngaarden, Physics & Astronomy	Designated Designated 2023	2024
Senate	Member at large	EJ Janse van Rensburg, Mathematics & Statistics T. Baumgartner, Chemistry J. Elwick, Science, Technology & Society T. Kubiseski, Biology V. Saridakis, Biology	2022 2021 2022 2023 2021	2025 2024 2025 2026 2024
	Department Chair Department Chair Department Chair Dierator of NATS Student representative Student representative	V. Pavri, Department of Science, Technology & Society R. Tsushima, Department of Biology M. Haslam, Department of Mathematics & Statistics R. Metcalfe, Dvision of Natural Science Yuna (Aria) Hwang Shon Lazarev	2021 2021 2023 Designated 2023 2023	2024 2024 2026 2025 2025
Faculty Council	Chair of Council Vice-Chair of Council	N. Kovinich M. Yousaf	2023	2024
Staff Representatives	vice-cital of Council	W. Booth D. Hossain W. Xu	2023 2023 2023 2023	2024 2024 2024 2024
FSc Reps on Senate Committees Senate Executive	1 member from FSc	T. Baumgartner	2021	2024
Academic Policy, Planning and Research Committee (APPRC) ASCP (Academic Standards, Curriculum and Pedagogy	1 member from FSc	G. Monette	2023	2026
Committee) Senate Tenure & Promotion	1 member from FSc 1 member from FSc	M. Armour T. Kirchner	2021 2023	2024 2026
Sub-Committee on Honorary Degrees & Ceremonials	1 member from FSc The Executive Committee shall be chaired by the Chair of Council and	VACANT Executive Committee normally meets the first Tuesday of each month (September to May) from	2023	2026
	member elected from each of Biology, Chemistry, Mathematics & Statistics, Physics & Astronomy, and Science, Technology & Society/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.			
Executive Committee	Chair of Council Vice-Chair of Council	N. Kovinich	2023	2024
	Dean, Ex officio	M. Yousaf R. Wang	2023 Designated	2024
	Asst. Dean - SEM & SEP	Eva Hughes	Designated	
	Staff representative	W. Booth	2023	2024
	Undergraduate Student Rep Biology	Taline Apelian-Sutor M. Vicari	2023	2024
	Chemistry	D. Wilson	2023	2025
	Math & Stats	E. J Janse Van Rensburg	2022	2025
	Physics & Astronomy	T. Kirchner	2023	2024
	Science, Technology & Society 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, Technology & Society/Natural Science, one student member of Council, and one of the staff members elected to Council.	C. Douglas APPC will normally meet the last Thursday of each month (September to April) from 9:00 am - 10:30 am	2023	2026
APPC	Associate Dean, Faculty Affairs, Ex officio Head of Bethune College	G. Audette J. Amanatides	Designated Designated	
	Undergraduate Student Representative	Seerat Choudhry	2023	2024
	Elected staff representative	M. Xu	2023	2024
	Biology	R. Schott	2023	2026
	Chemistry	R. Fournier	2023	2026
	Math & Stats Physics & Astronomy	P. Szeptycki E. Hessels	2023	2026 2024
	Science, Technology & Society	S. Domenikos	2022	2025
	The <u>Curriculum Committee</u> 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. Member at Large	The Curriculum Committee will normally meet every last Tuesday of each month (September to April) from 9:00 - 10:30 am VACANT	2023	2026
	Member at Large	VACANT	2023	2026
	Dean, Ex officio	R. Wang	Designated	
Hardware basis for the Committee of the	Assoc Dean, Curriculum & Pedagogy, Ex officio	H. Kouyoumdjian	Designated	2024
Undergraduate Curriculum Committee		Lomesh Choudhary	2023	2024
Undergraduate Curriculum Committee	Undergraduate Student Rep	Satvam Verma	2023	
Undergraduate Curriculum Committee	Undergraduate Student Rep Undergraduate Student Rep	Satyam Verma J. Attalah	2023 2022	2025
Undergraduate Curriculum Committee	Undergraduate Student Rep Undergraduate Student Rep Biology Chemistry	J. Attalah D. Jackson	2022 2022	2025 2025
Undergraduate Curriculum Committee	Undergraduate Student Rep Undergraduate Student Rep Biology Chemistry Math & Stats	J. Attalah D. Jackson M.W. Wong	2022 2022 2023	2025 2025 2026
Undergraduate Curriculum Committee	Undergraduate Student Rep Undergraduate Student Rep Biology Chemistry Math & Stats Physics & Astronomy	J. Attalah D. Jackson M.W. Wong M. George	2022 2022 2023 2021	2025 2025 2026 2024
Undergraduate Curriculum Committee	Undergraduate Student Rep Undergraduate Student Rep Biology Chemistry Math & Stats	J. Attalah D. Jackson M.W. Wong	2022 2022 2023	2025 2025 2026

Felicions Fig. Committee on Excellent on Controllent on Control		024 FSc Report on vacancies for Se			
Petitions	Committee	Rules of Faculty Council - membership	Meeting time / Membership		rm To
we district member from each of the Componence centred above. The second control of the Componence centred above. The second centre of the three second centre of the cent		an Associate Dean (ex officio), five members elected by Council from each of Biology, Chemistry, Mathematics & Statistics, Physics & Astronomy and Science, Technology & Society/Natural Science, and one	CEAS will normally meet every alternate Wed / Thurs from 1:00 - 3:00 pm year round.		
	CEAS	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. Associate Dean - Students, Ex officio		Designated	
Petitions		Undergraduate Student Rep Biology Chemistry Math & Stats Physics & Astronomy	Yashna Manek J. Sapp / ALT, VACANT P. Johnson & T.Zeng / ALT T. Mirkovic I. Moyles, N. Purzitsky / ALT, Y. Gao C. Story & VACANT / ALT. E. Hyde	2023	2025/2
SRC T & P Committee SRC T & P		The Petitions Committee for the purpose of hearing student petitions shall consist of an Associate Dean (ex office), 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. Associate Dean, Ex officio.	M. Scheid	Designated	
Payme & Autocomy S. Service S. Se	Petitions	Undergraduate Student Rep Member at Large Biology	Ruella Ella Ordinaria S. Morin C. Jang	2023 2023 2022	2024 2024 2026 2025 2025
SRC T & P Committee SRC T & S		Physics & Astronomy Math & Stats Science, Technology & Society Member at Large	S. Jerzak D. Liang J. Rogerson A. Mills	2023 2022 2022	2024 2025 2025 2026
Appeals Committee on Research & Awards Associate Dear - Study, Ex officio Associate Dear - Study, Designated Associate Dear - Study, Designated Dear - Study,	SRC T & P Committee	tenured member from each of Biology, Chemistry, Mathematics & Statistics, Physics & Astronomy and Science, Technology & Society/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. 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			
Physics & Astronomy M. H. Forbasch Ald T. C. Bergerin 3023/2025		attendance. Associate Dean - Faculty, Ex officio Undergraduate Student	Madeline Blanco		2024 2026/2
Science Technology & Society E. Hamm / A.T. D. Lungu 2023		Physics & Astronomy	M. Horbatsch /ALT. C. Bergevin		2026/ 2024/ 2024/
CoTL Associate Dean - Curriculum & Fredagogy H. Konyacumqiam Designate Graduate Student Representative J. McPherson 2023		Science, Technology & Society Currently, the Committee on Teaching and Learning shall consist of a minimum of two Faculty members from each department, the Associate Dean – Students, one Liberatian, 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	E. Hamm / ALT. D. Lungu CoTL normally meets every third Thursday of each month (September to May) from 10:00 am -		2026
CoTL Graduate Student Representative Ayea Tajert 2023				Designated Designated	_
State Science Library, Designated M. Wang Designated February February February Control Pebruary Pebr		Graduate Student Representative			2024 2024
Teaching Commons Rep Y. Su Designated:	CoTL			2023 Designated	2024
Staff representative, Elected D. Hossain 2023 Biology S. Kallah 2023 Biology J. Kallah 2023 Biology J. Kallah 2023 Chemistry T. Kally 2023 Chemistry T. Mirkovic 2023 Chemistry T. Mirkovic 2023 Chemistry T. Zeng 2022 Chemistry T. Zeng 2022 Chemistry T. Zeng 2022 Chemistry T. Zeng 2023 Chemistry T. Zeng 2023 Chemistry Thysics & Astronomy C. Bouarde 2023 Chemistry Thysics & Astronomy C. Bouarde 2023 Chemistry The Committee on Research & Astronomy C. Bouarde 2023 Chemistry The Committee on Research & Awards Science, Technology & Society R. Marushia The Research and Astronomy, one student member of Council and an Associate Dean (ex. officio) Chemistry				Designated Designated	
Biology J. Atailah 2023 Chemistry T. Mirkovic 2023 Chemistry T. Mirkovic 2023 Chemistry T. Zeng 2023 2023 Chemistry T. Zeng 2023 2023 Physics & Astronomy Physics & Astronomy C. Boukaré 2023 2023 Math & Stats J. Cao 2022 Math & Stats J. Cao 2022 Math & Stats A. McEachern 2023 Math & Stats A. McEachern 2023 The Committee on Research and Awards shall consist of one member elected by Council from each of Biology, Chemistry, Mathematics and Statistics, Science, Technology & Society/Natural Science, and Physics and Astronomy, one student member of Council and an Associate Dean Research & Partnerships, ex officio V. Saridakis Designated V. Saridakis V.					2024 2026
Chemistry		Biology	J. Atallah	2023	2026
Physics & Astronomy		Chemistry	T. Zeng	2022	2025
Math & Stats Science, Technology & Society The Committee on Research and Awards shall consist of one member elected by Council from each of Biology, Chemistry, Mathematics and Statistics, Science, Technology & Society/Natural Science, and Physics and Astronomy, one student member of Council and an Associate Dean (ex officio) Associate Dean - Research & Partnerships, ex officio V. Saridakis Designated (ex officio) Associate Dean - Research & Partnerships, ex officio V. Saridakis Designated (ex officio) Associate Dean - Research & Partnerships, ex officio V. Saridakis Designated (ex officio) Andrea Angelucci 2023 Andrea Angelucci		Physics & Astronomy	C. Boukaré	2023	2024 2024
The Committee on Research and Awards shall consist of one member elected by Council from each of Biology, Chemistry Committee on Research & Awards Committee on Research & Awards The Research & Awards Committee will meet when grants and awards need to be adjudicated. The Research & Awards Committee will meet when grants and awards need to be adjudicated. The Research & Awards Committee will meet when grants and awards need to be adjudicated. The Research & Awards Committee will meet when grants and awards need to be adjudicated. The Research & Awards Committee will meet when grants and awards need to be adjudicated. The Research & Awards Committee will meet when grants and awards need to be adjudicated. The Research & Awards Committee will meet when grants and awards need to be adjudicated. The Research & Awards Committee will meet when grants and awards need to be adjudicated. The Research & Awards Committee will meet when grants and awards need to be adjudicated. The Research & Awards Committee will meet when grants and awards need to be adjudicated. The Research & Awards Committee will meet when grants and awards need to be adjudicated. The Research & Awards Committee will meet when grants and awards need to be adjudicated. The Research & Awards Committee will meet when grants and awards need to be adjudicated. The Research & Awards The Research and Particular Science will and the Science will and the Science will an August an Agactating the Awards The Research and Particu		Math & Stats	A. McEachern	2023	202
Undergraduate Student Representative		The Committee on Research and Awards shall consist of one member elected by Council from each of Biology, Chemistry, Mathematics and Statistics, Science, Technology & Society/Natural Science, and Physics and Astronomy, one student member of Council and an Associate Dean (ex officio).			
Graduate Student Biology D. Golemi-Kotra D. Go	Committee on Research & Awards	Associate Dean - Research & Partnerships, ex officio		Designated 2023	2024
Chemistry S. Morin 2022 Physics & Astronomy R. K. Kannan 2023 Matin & Stats Stats H. J. Zhu 2023 Matin & Stats Science, Technology & Society H. Mialet 2023 The Appeal Committee for the purpose of hearing student appeals shall consist of four elected faculty members from Science units, an Associate Dean (ex officio) 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. Associate Dean - Faculty, ex officio G. Audette Dean reaction of extra during the faculty members and one student member or (b) three faculty members and one student member or (b) three faculty members. Associate Dean - Faculty, ex officio G. Audette Dean - Faculty, ex officio G. Audette Dean - Faculty one of the faculty members of Council. A quorum shall consist of either (a) two faculty members and one student member or (b) three faculty members and one student member or (b) three faculty members and one student member or (b) three faculty members and one student member or (b) three faculty members and one student member or (b) three faculty members and one student member or (b) three faculty members and one student member or (b) three faculty members and one student member or (b) three faculty members and one student member or (b) three faculty members and one student member or (b) three faculty members and one student member or (b) three faculty members and one student member or (b) three faculty members of Council. A quorum shall consist of either (s) and the consist of the Committee Secretary. Associate Dean - Faculty, ex officio G. Audette Dean - Faculty, ex officio G. Audette Dean - Faculty and times are polled by the Committee Secretary. Associate Dean - Faculty, ex officio G. Audette Dean - Faculty and Associate Dea		Graduate Student	Andrea Angelucci	2023	2024
Matih & Stats Science, Technology & Society H. Zhu The Appeal Committee for the purpose of hearing student appeals shall consist of four elected faculty members from Science units, an Associate Dean (ex officio) 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. Associate Dean - Faculty, ex officio Undergraduate Student Representative Undergraduate Student Representative Undergraduate Student Representative Member at Large VACANT VacANT VacCouncil Deanington M. Hempstead (Fall), L. Hébert (Winter) 2023 VacCouncil M. Hempstead (Fall), L. Hébert (Winter) 2023		Chemistry	S. Morin	2022	2025
The Appeal Committee for the purpose of hearing student appeals shall consist of four elected faculty members from Science units, an Associate Dean (ex officio) 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. Associate Dean - Faculty, ex officio Undergraduate Student Representative Undergraduate Student Representative Undergraduate Student Representative Sathyanarayanan Venkatesan VACANT Weenstry Hember at Large Biology L. Donaidson M. Hempstead (Fall), L. Hébert (Winter) Weeting is held once a month and times are polled by the Committee Secretary. Meeting is held once a month and times are polled by the Committee Secretary.		Math & Stats	H. Zhu	2023	202
Appeals Committee Undergraduate Student Representative Alilya Rizwan 2023 Undergraduate Student Representative Sathyanarayanan Venkatesan 2023 Member at Large VACANT 2023 Biology L. Donaldson 2023 Chemistry M. Hempstead (Fall), L. Hébert (Winter) 2023		The Appeal Committee for the purpose of hearing student appeals shall consist of four elected faculty members from Science units, an Associate Dean (ex officio) 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.		
Member at Large VACANT 2023 Biology L. Donaldson 2023 Chemistry M. Hempstead (Fall), L. Hébert (Winter) 2023	Appeals Committee	Undergraduate Student Representative	Ailiya Rizwan	2023	2024
Chemistry M. Hempstead (Fall), L. Hébert (Winter) 2023		Member at Large	VACANT	2023	2026
Physics & Astronomy S. Tulin 2023		Chemistry	M. Hempstead (Fall), L. Hébert (Winter)	2023	2026
Math & Stats M.W. Wong 2023			IC Toba		2024

2023-2024 FSc Report on vacancies for Senate and FSc Standing Committees					
Committee	Rules of Faculty Council - membership	Meeting time / Membership	Term		
	•		From	To	
Graduate Curriculum Committee	To provide broad review and commendation to Council via the Academic Policy and Planning Committee of all proposals received from Graduate Programs with respect to: New Course Proposals, Course Change Proposals, Minor Changes to Program/Graduate Diploma Academic Requirements, Major Modifications to Program/Graduate Diploma Academic Requirements, New Graduate Fields, New Graduate Diploma Academic Requirements, New Graduate Fields, New Graduate Diplomas, New Graduate Degree Programs The Graduate Education Committee shall consist of: - Associate Dean – Research & Graduate Education (ex officio) - Graduate Program Director (or designate who must be a member of the graduate program) of each Graduate Program in the Faculty of Science -one graduate student member from any Graduate Program within the Faculty of Science -one full-time faculty member from the Faculty of Health or Lassonde School of Engineering who is appointed to teach in any FSc graduate program - A member at large with knowledge of graduate programming, and experience with curriculum approvals at the Faculty-level. The Chair of the Committee is selected by the voting members of the Committee is selected by the voting members of the	Meeting is held based on availability.			
	Associate Dean – Associate Dean Students (ex officio)	M. Scheid	Designated		
	Biology	J. Paluzzi	2023	2026	
	Chemistry	R. Hili	2023	2026	
	Physics & Astronomy	A. Muzzin	2023	2026	
	Math & Stats	P. Ingram	2023	2026	
	Science, Technology & Society	VACANT	2023	2026	
	Member from Faculty of Health OR Lassonde	VACANT	2023	2026	
	Member at Large	D. Golemi-Kotra	2023	2026	
	Graduate student	Farnaz Mansouri-Noori	2022	2024	
Committee on Equity, Diversity & Inclusion	The purpose of the Committee on Equity, Diversity & Inclusivity is to provide broad review and leadership to Council on matters of Equity, Diversity and Inclusivity issues with respect to: **Tenure and Promotions** **Hiring and Retention of members form EDI groups** **Approaches to addressing gender bias in the workplace **Research engaging equity recognized groups** **Workload and service contributions of EDI members* **EDI experiences in Teaching and Learning** The Equity, Diversity and Inclusivity committee shall consist of: **Associate Dean, Research and Partnerships (ex officio)** **Associate Dean, Research and Partnerships (ex officio)** **One primary and one alternate member from each of Biology, Chemistry, Mathematics & Statistics, Physics & Astronomy and Science, Technology & Society. **Two graduate students or postdoctoral fellow/visitors (one primary and one alternate) from any graduate program within the Faculty of Science **One undergraduate student*	Meeting is held the last Wednesday of every month.			
	One undergraduate student Associate Dean - Faculty, ex officio	G. Audette	Designated		
	Associate Dean, Research & Partnerships (ex officio)	V. Saridakis	Designated		
	Undergraduate Student Representative	Adriano Tersigni	2023	2024	
	Graduate Student	Aishwarya Subramanian	2023	2024	
	Graduate Student	Thomas Vacheresse	2023	2024	
	Biology	T. Kelly	2023	2024	
		C. Young			
İ	Chemistry Dhysics & Astronomy		2023	2026	
İ	Physics & Astronomy	P. Scholz	2023	2026	
İ	Math & Stats	A. Woldegerima ALT A. Lumley	2022	2025	
	Science, Technology & Society	V. Pavri	2023	2024	

CURRICULUM COMMITTEE REPORT



DECEMBER 2023

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 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 November 28, 2023, 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 scicurri@yorku.ca

1.1 Science and Technology Studies

- **1.1.1** Changes to existing course: STS 2411 3.0 Exploring Science, Technology and Society
- **1.1.2** Changes to existing course: STS 3750 6.0 Genetics, Evolution and Society
- **1.1.3** Changes to existing course: STS 3770 6.0 Issues in the Modern Physical Sciences

1.2 Biology

- **1.2.1** Changes to existing course: BIOL 1000 3.0 Biology I Cells, Molecular Biology and Genetics
- **1.2.2** Changes to existing course: BIOL 1001 3.0 Biology II Evolution, Ecology, Biodiversity and Conservation Biology
- **1.2.3** Changes to existing course: BIOL 2040 3.0 Genetics
- **1.2.4** Changes to existing course: BIOL 4005 3.0 The Scientific Method: Applications and Controversies
- 1.2.5 Changes to existing course: BIOL 4270 3.0 Integrative Reproduction: Questions & Concepts

1.3 Markham

- **1.3.1** New Course proposal: Being a Digital Citizen
- **1.3.2** New Course proposal: Mobilizing Digital Citizenship

Changes to Existing Course

Faculty: Science			
Department:	Science, Technology and Society	Date of Submission:	November 22, 2023
Course Number:	STS 2411 3.0	Effective Session:	Summer 2025
Course Title:	Exploring Science, Technology	and Society	
Type of Change:			
x in pre-requisite(s	s)/co-requisite(s)	in cross-listing	
in course numbe	r/level	in degree credit exclus	ion(s)
in credit value		regularize course (from	n Special Topics)
in title (max. 40 char	racters for short title)	in course format/mode	of delivery *
in Calendar description (max. 40 words or 200 characters)		retire/expire course	
other (please specify):			
Change From:		То:	
Prerequisites: SC/STS	1411 3.00	Prerequisites: any 3.0-credit S	TS course

Rationale:

STS 1411 was originally designed as a prerequisite to STS 2411 and is the program's only first-year offering. STS 1411 has experiential learning outcomes that prepare students for some of the theoretical approaches introduced in STS 2411.

STS 1411 functions well as a prerequisite for STS 2411 within the STS undergraduate program, particularly when students enter the major or minor in first year. However, most students taking STS courses are not in the undergraduate program. The STS 1411 requirement for STS 2411 is likely discouraging students who are not in the undergraduate program from taking STS 2411. Enrolments have dropped since the STS 1411 prerequisite was adopted.

STS courses typically do not have prerequisites. The year of the course is indicative of the academic skills and experience expected in the course, rather than the level of STS experience students should have. The STS Curriculum Committee has determined that if a student has taken any 3.0-credit STS course, they will have enough experience with STS concepts to be adequately prepared for STS 2411.

Note: For course proposals involving cross-listings, integrations and degree credit exclusions, approval from all of the relevant Faculties/department is required.

Note: Since one change (such as a change in year level or credit value) may result in several other changes (e.g., to the course description, evaluation, instruction, bibliography, etc.), please submit as many details as possible. If there are several changes, please feel free to use a New Course Proposal Form in order to ensure that all the required information is included.

^{*} Note: If there is a technology component to the course, a statement is required from ATS indicating whether resources are adequate to support the course. Courses converted from face-to-face to an on-line delivery mode should follow the instructions provided on page 4 of the New Course Proposal Form to provide revised 'Course Design' and 'Method of Instruction" information.

Changes to Existing Course

Faculty: Science				
Department:	Science and Technology Studies	ı	Date of Submission:	November 15, 2023
Course Number:	STS 3750 6.0		Effective Session:	Summer 2025
Course Title:	Genetics, Evolution and Socie	ty		
Type of Change:				
in pre-requisite(s	s)/co-requisite(s)		in cross-listing	
in course numbe	er/level		in degree credit exclus	ion(s)
in credit value			regularize course (from	Special Topics)
in title (max. 40 char	racters for short title)		in course format/mode	of delivery *
in Calendar desc	cription (max. 40 words or 200 characters)	X	retire/expire course	
other (please specify):				
Change From:		To:		

Rationale:	This course was changed to STS 3750 3.0 Genomics and Society starting FW 2022-23. STS 3750 6.0 Genetics, Evolution and Society will not be taught in the future as it has been replaced by STS 3750 3.0 Genomics and Society in the STS curriculum. The evolution component of the curriculum is now exclusively taught in STS 3740 How Darwinism Developed: A History of Evolutionary Biology.

Note: For course proposals involving cross-listings, integrations and degree credit exclusions, approval from all of the relevant Faculties/department is required.

Note: Since one change (such as a change in year level or credit value) may result in several other changes (e.g., to the course description, evaluation, instruction, bibliography, etc.), please submit as many details as possible. If there are several changes, please feel free to use a New Course Proposal Form in order to ensure that all the required information is included.

^{*} Note: If there is a technology component to the course, a statement is required from ATS indicating whether resources are adequate to support the course. Courses converted from face-to-face to an on-line delivery mode should follow the instructions provided on page 4 of the New Course Proposal Form to provide revised 'Course Design' and 'Method of Instruction" information.

Changes to Existing Course

Faculty: Science				
Department:	Science, Technology and Society		Date of Submission:	November 15, 2023
Course Number:	STS 3770 6.0		Effective Session:	Summer 2025
Course Title: Issues in the Modern Physical		Science	ces	
Type of Change:				
in pre-requisite(s	s)/co-requisite(s)		in cross-listing	
in course number	er/level		in degree credit exclusion	ion(s)
in credit value			regularize course (from	Special Topics)
in title (max. 40 char	racters for short title)		in course format/mode	of delivery *
in Calendar description (max. 40 words or 200 characters)		х	retire/expire course	
other (please specify):				
Change From:		To:		

Rationale:	This course was changed to a 3-credit course, STS 3770 3.0 Issues in the Modern Physical Sciences, starting FW 2022-23. This 6.0-credit version is a CCE for STS 3770 3.0, and will not be taught in the future.

Note: For course proposals involving cross-listings, integrations and degree credit exclusions, approval from all of the relevant Faculties/department is required.

Note: Since one change (such as a change in year level or credit value) may result in several other changes (e.g., to the course description, evaluation, instruction, bibliography, etc.), please submit as many details as possible. If there are several changes, please feel free to use a New Course Proposal Form in order to ensure that all the required information is included.

^{*} Note: If there is a technology component to the course, a statement is required from ATS indicating whether resources are adequate to support the course. Courses converted from face-to-face to an on-line delivery mode should follow the instructions provided on page 4 of the New Course Proposal Form to provide revised 'Course Design' and 'Method of Instruction" information.

Changes to Existing Course

Faculty:				
Department:	Biology		Date of Submission:	October 19, 2023
Course Number:	1000	Effective Session:		Summer 2025
Course Title: Biology I – Cells, Molecular B		logy a	and Genetics	
Type of Change:				
in pre-requisite(s	s)/co-requisite(s)		in cross-listing	
in course numbe	er/level		in degree credit exclusi	on(s)
in credit value			regularize course (from	Special Topics)
in title (max. 40 char	racters for short title)	X	in course format/mode	of delivery *
in Calendar desc	cription (max. 40 words or 200 characters)		retire/expire course	
other (please sp	ecify):			
Change From:		To:		
SC/BIOL1000 3.0 The course is currently F and W	offered as only a LECT course in S1,	The or r	/BIOL1000 3.0 BLEN . e Department of Biology will more sections as BLEN in a CT sections.	

Rationale:

The Department of Biology offers the extra-large first-year course, BIOL1000, for biology, biomedical science, biotechnology, and environmental biology students, and for many other students particularly those in Science, Health, and Lassonde programs. The total enrollment capacity of the 4 fall term sections alone is 1726 students with a combined capacity of over 1000 students in the Winter and summer terms. The department offers no online courses and has only one 4th-year blended course.

One positive outcome of the pandemic was that the Biology faculty were able to deliver teaching and learning effectively using the online platform. Some students benefited from the online teaching platform due to improved accessibility, balance of life commitments, and better flexibility.

A goal of the Faculty of Science Strategic Plan 2021-2025 is to "optimize online and blended inperson/online courses and programs to diversify learning." BIOL1000 BLEN will contribute to achieving the Faculty's mission to enhance teaching and learning using different modes of course delivery.

Note: For course proposals involving cross-listings, integrations and degree credit exclusions, approval from all of the relevant Faculties/department is required.

Note: Since one change (such as a change in year level or credit value) may result in several other changes (e.g., to the course description, evaluation, instruction, bibliography, etc.), please submit as many details as possible. If there are several changes, please feel free to use a New Course Proposal Form in order to ensure that all the required information is included.

* Note: If there is a technology component to the course, a statement is required from ATS indicating whether resources are adequate to support the course. Courses converted from face-to-face to an on-line delivery mode should follow the instructions provided on page 4 of the New Course Proposal Form to provide revised 'Course Design' and 'Method of Instruction" information.

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 oncampus attendance. BIOL1000 LECT utilizes a broad range of teaching modalities and assessments to engage the students in their learning. These include pre-class readings, videos to and supplemental worksheets to prepare the students for the in-person classes. Online pre-class quizzes encourage students to come prepared to class and provide feedback to the students so they can gauge their understanding of basic course concepts. During class, students engage in an active learning environment (e.g., iClicker questions and facilitated discussions), allowing them to put their knowledge into practice and receive feedback on their understanding. In-person midterm tests and an in-person final exam are included to assess the students' cumulative understanding of course concepts. BIOL1000 is supplemented with mandatory in-person labs to provide the students with practical experimental skills such as hypothesis testing, experimental design, data collection, and critical thinking.

BIOL1000 BLEN will continue to use the current teaching modalities and assessments in online synchronous lectures. Students will be required to prepare ahead of class and complete the online pre-class quizzes prior to the synchronous lectures. In the online lectures, students will actively participate (e.g., in facilitated discussions, peer discussions, and/or by completing practice questions). Mandatory in-person labs will ensure the students receive knowledge in hypothesis-based research and practical skills in conducting scientific experiments. Midterm tests and a final exam will be scheduled in-person and on campus and will assess students' cumulative understanding of course concepts.

Instruction:

- Planned frequency of offering and number of sections anticipated (every year, alternate years, etc.).
- 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. There will be at least one offering of BIOL1000 BLEN per year. The first offering is planned for the fall term and will be complemented by the 4 in-person sections of the course. Based on the instructors' and students' feedback, the Department of Biology will consider offering BIOL1000 BLEN in the winter and/or summer terms.
- 2. There are 6 Biology faculty who are competent to teach the course; Nicole Nivillac, Julie Clark, Paula Wilson, Yi Sheng, Lisa Robertson, Jade Atallah.
- 3. Julie Clark, Paula Wilson, Yi Sheng and Nicole Nivillac will likely teach the course in the coming year.
- 4. The number of contact hours for BIOL1000 LECT is as follows:
 - 36 hours in-person lectures (3 hours x 12 weeks)
 - 15 hours of labs (5 x 3 hours).

The number of contact hours will remain the same for BIOL1000 BLEN.

- 36 hours of synchronous online lectures (3 hours x 12 weeks)
- 15 hours of in-person labs (5 x 3 hours).

Changes to Existing Course

Faculty:				
Department:	Biology] [Date of Submission:	October 15, 2023
Course Number:	1001]	Effective Session:	Summer 2025
Course Title: Biology II – Evolution, Eco		Biodi	versity and Conservation	on Biology
Type of Change:				
in pre-requisite(s	s)/co-requisite(s)		in cross-listing	
in course numbe	er/level		in degree credit exclusion(s)	
in credit value			regularize course (from	Special Topics)
in title (max. 40 char	racters for short title)	X	in course format/mode	of delivery *
in Calendar desc	cription (max. 40 words or 200 characters)		retire/expire course	
other (please sp	ecify):			
Change From:		To:		
SC/BIOL1001 3.0 The course is currently F and W	offered as only a LECT course in S2,	The or r	/BIOL1001 3.0 BLEN. Properties Department of Biology will more sections as BLEN in a CT sections.	

Rationale:

The Department of Biology offers the extra-large first-year course, BIOL1001, for biology, biomedical science, biotechnology, and environmental biology students, and for many other students particularly those in Science, Health, and Lassonde programs. The total enrolment capacity of the 4 winter term sections alone is 1726 students with a combined capacity of over 500 students in the fall and summer terms. The department offers no online courses and has only one 4th-year blended course.

One positive outcome of the pandemic was that the Biology faculty were able to deliver teaching and learning effectively using the online platform. Some students benefited from the online teaching platform due to improved accessibility, balance of life commitments, and better flexibility.

A goal of the Faculty of Science Strategic Plan 2021-2025 is to "optimize online and blended inperson/online courses and programs to diversify learning." BIOL1001 BLEN will contribute to achieving the Faculty's mission to enhance teaching and learning using different modes of course delivery.

Note: For course proposals involving cross-listings, integrations and degree credit exclusions, approval from all of the relevant Faculties/department is required.

Note: Since one change (such as a change in year level or credit value) may result in several other changes (e.g., to the course description, evaluation, instruction, bibliography, etc.), please submit as many details as possible. If there are several changes, please feel free to use a New Course Proposal Form in order to ensure that all the required information is included.

* Note: If there is a technology component to the course, a statement is required from ATS indicating whether resources are adequate to support the course. Courses converted from face-to-face to an on-line delivery mode should follow the instructions provided on page 4 of the New Course Proposal Form to provide revised 'Course Design' and 'Method of Instruction" information.

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 oncampus attendance. BIOL1001 LECT utilizes a broad range of teaching modalities and assessments to engage the students in their learning. These include pre-class readings, podcasts, and/or videos to prepare the students for the in-person classes. Online pre-class quizzes encourage students to come prepared to class and provide feedback to the students so they can gauge their understanding of basic course concepts. During class, students engage in an active learning environment (e.g., iClicker questions and facilitated discussions), allowing them to put their knowledge into practice and receive feedback on their understanding. Every other week, the Question of the Fortnight requires students to apply, analyze, evaluate, and create responses to short-answer scenario-based questions. In-person midterm tests and in-person final exam are included to assess the students' cumulative understanding of course concepts. BIOL1001 is supplemented with mandatory in-person labs to provide the students with practical experimental skills such as hypothesis testing, data collection, and critical thinking.

BIOL1001 BLEN will continue to use the current teaching modalities and assessments in online synchronous lectures. Students will be required to prepare ahead of class and complete the online pre-class quizzes prior to the synchronous lectures. In the online lectures, students will actively participate (e.g., in facilitated discussions, peer discussions, and/or by completing practice questions). Mandatory in-person labs will ensure the students receive knowledge in hypothesis-based research and practical skills in conducting scientific experiments. Midterm tests and a final exam will be scheduled in-person and on campus and will assess students' cumulative understanding of course concepts.

Instruction:

- Planned frequency of offering and number of sections anticipated (every year, alternate years, etc.).
- 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. There will be at least one offering of BIOL1001 BLEN per year. The first offering is planned for the winter term and will be complemented by the 4 in-person sections of the course. Based on the instructors' and students' feedback, the Department of Biology will consider offering BIOL1001 BLEN in the fall and/or summer terms.
- 2. There are 7 Biology faculty who are competent to teach the course; Beth Clare, Tamara Kelly, Eryn McFarlane, Birgit Schwarz, Mark Vicari, Alex Mills, and Jade Atallah.
- 3. Beth Clare will likely teach the course in the coming year.
- 4. The number of contact hours for BIOL1001 LECT is as follows:
 - 36 hours in-person lectures (3 hours x 12 weeks)
 - 15 hours of labs (5 x 3 hours).

The number of contact hours will remain the same for BIOL1001 BLEN.

- 36 hours of synchronous online lectures (3 hours x 12 weeks)
- 15 hours of in-person labs (5 x 3 hours).

Changes to Existing Course

Faculty:					
Department:	Biology	Date of Submission:	October 15, 2023		
Course Number:	4005	Effective Session:	Summer 2025		
Course Title:	The Scientific Method: Applica	ations and Controversies			
Type of Change:					
in pre-requisite(s)/co-requisite(s)		in cross-listing			
in course numbe	er/level	in degree credit exclusion(s)			
in credit value		regularize course (from Special Topics)			
in title (max. 40 characters for short title)		in course format/mode of delivery *			
in Calendar description (max. 40 words or 200 characters)		retire/expire course			
other (please specify):					
Changa Erami		То:			
Change From:		10.			
SC/BIOL4005 3.0	offered as only a LECT course in	SC/4005 3.0 LECT, SC/BIOL4 SC/BIOL 4005 3.0 ONCA . Rationale: In additional to the L	LECT format, we would		
SC/BIOL4005 3.0 The course is currently	offered as only a LECT course in	SC/4005 3.0 LECT, SC/BIOL4 SC/BIOL 4005 3.0 ONCA .	LECT format, we would		
SC/BIOL4005 3.0 The course is currently	offered as only a LECT course in	SC/4005 3.0 LECT, SC/BIOL4 SC/BIOL 4005 3.0 ONCA . Rationale: In additional to the L	LECT format, we would		
SC/BIOL4005 3.0 The course is currently	offered as only a LECT course in	SC/4005 3.0 LECT, SC/BIOL4 SC/BIOL 4005 3.0 ONCA . Rationale: In additional to the L	LECT format, we would		
SC/BIOL4005 3.0 The course is currently	offered as only a LECT course in	SC/4005 3.0 LECT, SC/BIOL4 SC/BIOL 4005 3.0 ONCA . Rationale: In additional to the L	LECT format, we would		
SC/BIOL4005 3.0 The course is currently	offered as only a LECT course in	SC/4005 3.0 LECT, SC/BIOL4 SC/BIOL 4005 3.0 ONCA . Rationale: In additional to the L	LECT format, we would		
SC/BIOL4005 3.0 The course is currently	offered as only a LECT course in	SC/4005 3.0 LECT, SC/BIOL4 SC/BIOL 4005 3.0 ONCA . Rationale: In additional to the L	LECT format, we would		
SC/BIOL4005 3.0 The course is currently	offered as only a LECT course in	SC/4005 3.0 LECT, SC/BIOL4 SC/BIOL 4005 3.0 ONCA . Rationale: In additional to the L	LECT format, we would		
SC/BIOL4005 3.0 The course is currently	offered as only a LECT course in	SC/4005 3.0 LECT, SC/BIOL4 SC/BIOL 4005 3.0 ONCA . Rationale: In additional to the L	LECT format, we would		

Rationale:

The Department of Biology offers BIOL 4005 for biology, biomedical science, biotechnology, and environmental biology students. Numbers of Biology students are continually increasing and having different modes of the course offer flexibility of teaching and learning, particularly in offering more sections of the course. The department offers no online courses and has only one 4th-year blended course.

A goal of the Faculty of Science Strategic Plan 2021-2025 is to "optimize online and blended inperson/online courses and programs to diversify learning." BIOL4005 BLEN and BIOL4005 ONCA will contribute to achieving the faculty's mission to enhance teaching and learning using different modes of course delivery.

Note: For course proposals involving cross-listings, integrations and degree credit exclusions, approval from all of the relevant Faculties/department is required.

Note: Since one change (such as a change in year level or credit value) may result in several other changes (e.g., to the course description, evaluation, instruction, bibliography, etc.), please submit as many details as possible. If there are several changes, please feel free to use a New Course Proposal Form in order to ensure that all the required information is included.

* Note: If there is a technology component to the course, a statement is required from ATS indicating whether resources are adequate to support the course. Courses converted from face-to-face to an on-line delivery mode should follow the instructions provided on page 4 of the New Course Proposal Form to provide revised 'Course Design' and 'Method of Instruction" information.

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, noncampus attendance or experiential education components.

Alternatively, explain how the course design encourages student engagement and supports student learning in the absence of substantial oncampus attendance. BIOL4005 LECT is a student-centred format in which class time is used to engage students in their learning. Students prepare for class (e.g., watching online lectures, reading articles) and much time in class is spent engaging in small groups and then whole class discussion, focusing on critical evaluation. Three major projects (case studies and a research code of conduct), which include both written analyses and presentations are complemented by an oral final exam. Periodic reflections help students to consider their progress and development of skills such as presenting, critical thinking, and teamwork.

In BIOL4005 BLEN and BIOL4005 ONCA, the same approaches and assessments will be used. In both, students will be required to prepare for class using readings and lecture recordings and complete pre-class assignments. Both courses will require synchronous meetings (BLEN, in-person; ONCA, online) during which students will engage in critical thinking and small group and whole class discussions of case studies. The final oral exam will be in-person for all course formats.

Instruction:

- Planned frequency of offering and number of sections anticipated (every year, alternate years, etc.).
- 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. 1 or more sections each year.
- 2. Any Biology faculty member is competent to teach this course in any modality.
- 3. Carol Bucking and Tamara Kelly will likely teach the course in the coming year.
- 4. The number of contact hours for BIOL4005 LECT is as follows:
 - 36 hours in-person lectures (3 hours x 12 weeks)

The number of contact hours will remain the same for BIOL 4005 BLEN.

- 24 hours of in-person classes (2 hours x 12 weeks)
- 12 hours of online preparatory or experiential activities (1 x 12 weeks)

The number of contact hours will remain the same for BIOL4005 ONCA.

- 24 hours of synchronous online classes (2 hours x 12 weeks)
- 12 hours of online preparatory or experiential activities (1 x 12 weeks).

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)	Science, Technology and Society	Date of	Submission:	November 29, 2	023
Course Number: Special Topics courses Include variance (e.g. HUMA 3000C 6.0, Variance is "C")	STS 1511 3.0	Var:	Indicate bo	Credit Weight: oth the fee, and ght if different from weight (e.g. AC=6, ET=6	
Course Title: The official name of the course as it will appear in the Undergraduate Calendar and on the Repository	Being a Digital Citizen				
Short Title: Appears on any documents where space is limited - e.g. transcripts and lecture schedules - maximum 40 characters	Being a Digital Citizen				

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 corequisites, 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...")

In this course, students are critically introduced to the digital world they inhabit. Students identify, discuss, and apply concepts of digital ethics to questions and the search for answers in the digital world, with a focus on communicating the development and effects these tools and technologies have on our lives.

Driving this course is the question: "What do we need to know and do in relation to the past and present of digital technologies to be active, ethical, and literate digital citizens?"

This course is cross-listed with the following courses: Lassonde (DIGT1171), AMPD (CRTE2000), and LA&PS (CMDS1001)

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. N/A

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

Expanded Course Description:

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

The objective of this course is for students to be introduced to the histories of, controversies with, and potential of digital technologies and, through personal and collaborative exploration, develop a keen sense of digital ethics and digital literacy for working in and out of academic settings. Students will meet the objectives of this course by being introduced to topics related to the rise of the digital, controversies with digital technologies (specifically privacy and surveillance, technologically-mediated addictions, and misinformation), and building socially just digital worlds. Through case studies, interdisciplinary explorations, and collaboration with classmates from other programs, students will develop responses, reflections, and strategies for addressing topics and issues under discussion.

A key element of this course is being familiar with the ways these topics and ethical issues manifest in the actions and skills they will develop throughout their time as a student. To support this more fully, collaboration with the Libraries has already been initiated for greater support on intersecting topics on open access, copyright, and effective research strategies.

Objectives

In this course, students will be:

- 1. Introduced to histories of and cultures within the digital world
- 2. Invited to explore the controversies and problems associated with the rise of the digital
- 3. Engage in discovering the possibilities of the digital for ethical creativity and growth
- 4. Introduced to and engage in research and communication strategies that are ethical and take copyright and access into consideration
- 5. Understand both the personal and social implications of pressing ethical issues related to the digital world

Outcomes

By the end of the course, students will:

- Identify and explain the significance of historical, political, economic, and/or socio-cultural trends and issues related to the contemporary use of digital tools, information sources, and technologies
- 2. Create and reflect on a research question related to the digital world, and identify and articulate research strategies that critically and ethically assesses different sources of information
- Explore and reflect on ethical issues facing digital citizens, and identify and communicate salient issues for themselves and others
- Critically analyze and develop a response related to online content, recognizing how resources differ based on authorship, research methodology, and information purpose

- 5. Identify possibilities and potential for creative, ethical, and interdisciplinary exploration in digital worlds
- 6. Define, develop, and demonstrate a sense of personal academic integrity, recognizing the significance and implications of being academically honest in and out of school, along with the obligations we all hold to others' dignity and privacy in online spaces or when creating media

Weekly Breakdown

Because of the rapid developments in digital technologies, course materials have to be responsive and reflective of pressing technological and digital concerns of the day. The expanded course description has been organized by three overarching themes with topics identified under each. Three central themes, and aligned topics, have been designed to be flexible and responsive to changes in the digital and technological landscape.

Course themes include the histories and cultures of the digital world, the controversies and problems associated with the rise of the digital, and possibilities of the digital for ethical creativity and growth. Course topics will reflect the everchanging nature of digital technologies and social media and will be explored thorough a blend of direct instruction and supported student research.

Theme 1: The Rise of the Digital (Five weeks, including course introduction)

- Introduction to Ethics, Digital Literacies, and Digital Citizenship, Parts I and II
- Examining the Rise of the Digital History, Cultures, and Practices Parts I and II

Theme 2: Controversies with Digital Technologies (Three weeks)

- Understanding Privacy and Surveillance
- Technologically-Mediated Addictions
- Exploring Misinformation, Disinformation and Propaganda in a Digital World

Theme 3: Building Socially Just Digital Worlds (Four weeks, including final course conclusion)

- Community Building and Designing Ethical Frameworks
- Fostering Creativity, Play and Possibilities in Digital Worlds
- Rebuilding Trust in Broken Systems

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, noncampus attendance or experiential education components.

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

This course is one in a pair of literacy, inquiry, and communication courses that set Markham students up with transferable knowledge and skills that prepare them for life as a 21st century digital citizen. This course has a focus on communication and research skills (both traditional and emergent), as well as knowledge about the histories, impacts, and possibilities of digital technologies. This course was envisioned for lecture/seminar instruction for all of its contact hours, with taught content further developed through class discussions and activities.

Main course assignments (*Case study response, Research strategies, and Personal statement*) were developed to be a blend of personal reflection and collaborative exploration to enhance students' opportunities to understand and explore how topics and histories can be contingent on things like disciplinary field, geography, access, and other personal differentiators. These assignments are designed to affirm knowledge and skills that can be transferable to academic and professional situations outside of this class, which will be emphasized in lectures and discussions as well. A further 30% of students' grades supports students' active attention and presence to course materials each week; with a mix of quizzes, in-class exercises, reading comprehension tasks, and other activities designed for frequent comprehension check in.

Like its sister course, "Mobilizing Digital Citizenship," this course has been developed by faculty in AMPD, LAPS, Lassonde, and Science to be a vehicle for trans- and inter-disciplinary collaboration so that students will be able to actively communicate and converse across disciplines and programs. Because York currently lacks a mechanism to offer a course outside of a specific Faculty, this course (and "Mobilizing Digital Citizenship"), will be offered (with course credit exclusion) by four faculties – AMPD, LAPS, Lassonde, and Science – and open to students across Markham. As a result, within the design of this course, there may be opportunities for teaching faculty to explore possible team teaching models, a blend of instruction styles, and different assessment/grading workload across all sections of the course. Collaboration with the Libraries has also already been initiated for greater support on topics such as effective research strategies, open access, and copyright.

While this course was designed to be face-to-face, the needs of Markham students may result in this course being offered online, and at least one section will need to be offered as online asynchronous (which section will be a decision made by Faculties and the Deputy Provost for Markham). With an online course, course themes will be turned into course modules with requisite course content uploaded on a posted schedule, and discussion boards and quizzes used to monitor attendance and comprehension.

Note that this course and "Mobilizing Digital Citizenship" were designed to work in tandem, and for the sections offered by different Faculties to be interchangeable and noted by course credit exclusion. This course is

a prerequisite of "Mobilizing Digital Citizenship" and it is recommended that both courses are taken in the first four semesters of study.

Delivery modes: LECT, BLEN, ONCA, ONLN

While this course was designed to be face-to-face (LECT), the needs of Markham students may result in sections of this course being offered in either online (ONLN or ONCA) or blended (BLEN) formats (which section will be a decision made by Faculties and the Deputy Provost for Markham). With formats involving an online component (BLEN, ONLN or ONCA), course themes will be turned into course modules with requisite course content uploaded on a posted schedule, and discussion boards and quizzes used to monitor attendance and comprehension. In the BLEN format, lecture material will be delivered online and asynchronously, while participation and testing assessments will be completed during in-person sessions held approximately 50% as frequently as in the LECT format. In the entirely online format (ONLN), in person exams will be replaced with fully online assessments including tests, personal reflection assignments and online group activities.

Instruction:

- Planned frequency of offering and number of sections anticipated (every year, alternate years, etc.).
- Number of department members currently competent to teach the course.
- 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.

Course will be offered every year and have 36 contact hours.

Course can be taught by STS faculty who have a disciplinary focus on digital information and communication technologies

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 "onsite" examinations be required, etc.)

Class Participation and Quizzes 30%

E.g. Blend of quizzes, in class exercises, reading comprehension, inclass exams, discussions, library workshop

Case Study Response: 30%

Either solo or in a team, develop a video or written response to one case study, referencing additional readings or resources (ie videos)

Research Strategies: 20%

Create and reflect on a question for a digital research project, name and articulate the rationale for utilizing specific ethical research strategies to answer question

Personal Statement: 20%

Identify, reflect upon, and make a personal statement as to the top five ethical issues students understand digital citizens face today. This personal statement should be shared as personal video, written report, or other approved creative communication (ie infographic etc.) and make reference to lecture material, discussions, and students' own interests / field of study

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.

Required Reading List

Benjamin, Ruha. 2019. "CH. 1 Engineered Inequity" and "CH. 2 Default Discrimination". p. 49-96. Race after Technology: Abolitionist Tools for the New Jim Code. Newark: Polity Press.

Benkler, Yochai, Robert Faris, and Hal Roberts. 2018. "CH. 2 The Architecture of Our Discontent" and "CH. 7 The Propaganda Pipeline". p. 45-74 and p. 225-234. Network Propaganda: Manipulation, Disinformation, and Radicalization in American Politics. New York, NY: Oxford University Press.

Bon, Anna, Francis Dittoh, Gossa Lô, Mónica Pini, Robert Bwana, Cheah WaiShiang, Narayanan Kulathuramaiyer, and André Baart. 2022. "Decolonizing Technology and Society: A Perspective from the Global South." In Perspectives on Digital Humanism, edited by Hannes Werthner, Erich Prem, Edward A Lee, and Carlo Ghezzi, 61–68. Bunch, Mary and Dolleen Manning. 2024 (in press). Thinking across Worlds: Pluriversal Potentialities. Public Magazine.

Chang, Chingching. 2009. "'Being Hooked' By Editorial Content: The Implications for Processing Narrative Advertising." Journal of Advertising 38 (1): 21–34. https://doi.org/10.2753/JOA0091-3367380102.

Chang, Emily. 2019. "Introduction", "CH. 1 From Nerd to Bro" and "CH. 8 Escape from Trolltopia". p. 1-40 and p. 225-248. Brotopia: Breaking Up the Boys' Club of Silicon Valley. Reprint edition. New York: Portfolio.

Cushman, Ellen. 2013. "Wampum, Sequoyan, and Story: Decolonizing the Digital Archive." College English 76 (2): 115–35.

Eubanks, Virginia. 2018. "Introduction", "CH. 1 From Poorhouse to Database" and "CH. 5 The Digital Poorhouse". p. 1-38 and p. 174-200. Automating Inequality: How High-Tech Tools Profile, Police, and Punish the Poor. New York, NY: St. Martin's Press. Gehl, Robert W., and Sean T. Lawson. 2022. "CH. 1 The Rise and Fall of Mass Social Engineering" and "CH. 5 Deception Friendliness and Accuracy". p. 27-48 and p. 115-

LIBRARY SUPPORT STATEMENT MUST BE INCLUDED.

138. Social Engineering: How Crowdmasters, Phreaks, Hackers, and Trolls Created a New Form of Manipulative Communication. Cambridge, Massachusetts London, England: The MIT Press.

Jr, André Brock. 2020. "Introduction" and "CH. 3 Black Twitter as Black Technoculture". p. 1-16 and p. 79-124. Distributed Blackness: African American Cybercultures. New York: NYU Press.

Juhasz, Alexandra, Ganaele Langlois, and Nishant Shah. 2021. Really Fake. Minneapolis, Minnesota: Meson Press.

Kukutai, Tahu, and John Taylor, eds. 2016. "CH. 1 Data sovereignty for indigenous peoples" and "CH. 2 Data and the United Nations Declaration on the Rights of Indigenous Peoples". p. 1-38. Indigenous Data Sovereignty: Toward an Agenda. ANU Press. https://doi.org/10.22459/CAEPR38.11.2016.

Monea, Alexander, and Violet Blue. 2023. "Introduction", "CH. 1 Unlikely Bedfellows" and "CH. 2 Straight Code". p.1-60. The Digital Closet: How the Internet Became Straight. The MIT Press.

Noble, Safiya Umoja. 2018. "CH. 2 A Society Searching" and "CH. 3 Searching for Black Girls". p. 52-109. Algorithms of Oppression: How Search Engines Reinforce Racism. New York: NYU Press.

O'Byrne, W. Ian. 2019. "The Case for Anonymity Online | Dr. Ian O'Byrne." Dr. Ian O'Byrne (blog). January 9, 2019. https://wiobyrne.com/the-case-for-anonymity-online/.

O'Neil, Cathy. 2017. "Introduction", "CH. 1 What is a Model?" and "CH. 4 Online Advertising". p. 1-31 and p. 68-83. Weapons of Math Destruction: How Big Data Increases Inequality and Threatens Democracy. Reprint edition. New York: Crown. Reddy, Pritika, Bibhya Sharma, and Kaylash Chaudhary. 2020. "Digital Literacy: A Review of Literature." International Journal of Technoethics 11 (2): 65–94. https://doi.org/10.4018/IJT.20200701.oa1.

Schrier, Karen. 2014. "Designing and Using Games to Teach Ethics and Ethical Thinking." In Learning, Education and Games, 141–58. Pittsburgh, PA, USA: ETC Press. Steele, Catherine Knight. 2021. "Introduction" and "CH. 1 A History of Black Women and Technology". p. 1-40. Digital Black Feminism. New York: NYU Press. Véliz, Carissa. 2024. "CH. 1 The History of Digital Ethics" and "CH. 8 The Moral Risks of Online Shaming". Oxford Handbook of Digital Ethics. Oxford University Press.

Suggested Reading List

Benjamin, Ruha. 2019. "Introduction". p. 1-48. Race after Technology: Abolitionist Tools for the New Jim Code. Newark: Polity Press.

Benkler, Yochai, Robert Faris, and Hal Roberts. 2018. "CH. 3 The Propaganda Feedback Loop" and "CH. 9 Mammon's Algorithm". p. 75-99 and p. 269-288. Network Propaganda: Manipulation, Disinformation, and Radicalization in American Politics. New York, NY: Oxford University Press.

Chang, Emily. 2019. "CH. 4 The Tipping Point" and "CH. 6 Sex and the Valley". p. 105-134 and p. 177-206. Brotopia: Breaking Up the Boys' Club of Silicon Valley. Reprint edition. New York: Portfolio.

Crawford, Kate. 2022. "Introduction" and "CH. 1 Earth". p. 1-52. Atlas of Al: Power, Politics, and the Planetary Costs of Artificial Intelligence. New Haven London: Yale University Press.

Eubanks, Virginia. 2018. "CH. 3 High-Tech Homelessness" and "Conclusion". p. 84-126 and p. 201-218. Automating Inequality: How High-Tech Tools Profile, Police, and Punish the Poor. New York, NY: St. Martin's Press.

Gehl, Robert W., and Sean T. Lawson. 2022. "CH. 7 Contemporary mass personal social engineering" and "CH. 8 Ameliorating Mass personal Social". p. 165-226. Social Engineering: How Crowdmasters, Phreaks, Hackers, and Trolls Created a New Form of Manipulative Communication. Cambridge, Massachusetts London, England: The MIT Press.

Jr, André Brock. 2020. "CH. 4 Black Online Discourse, Part 1" and "CH. 5 Black Online Discourse, Part 2". p. 125-209. Distributed Blackness: African American Cybercultures. New York: NYU Press.

Kukutai, Tahu, and John Taylor, eds. 2016. "CH. 4 Colonialism's and postcolonialism's fellow traveler" and "CH. 8 Pathways to First Nations' data and information sovereignty". p. 57-78 and p. 139-156. Data and the United Nations Declaration on the Rights of Indigenous Peoples". p. 1-38. Indigenous Data Sovereignty: Toward an Agenda. ANU Press. https://doi.org/10.22459/CAEPR38.11.2016.

Manning, Dolleen, Tisawiiashii, and Mary Bunch. 2023 (in press). "Decolonial Reworlding: Potential Ecologies of the Virtual," in Life in Art, Phenomenology, Aesthetics and Identity, edited by Helen Fielding and Mariana Ortega.

O'Neil, Cathy. 2017. "CH. 5 Justice in the Age of Big Data", "CH. 6 Getting a Job" and "CH. 10 Civic Life". p. 84-122 and p. 179-198. Weapons of Math Destruction: How Big Data Increases Inequality and Threatens Democracy. Reprint edition. New York: Crown.

Perez, Caroline Criado. 2021. "Introduction" and "CH. 4 The Myth of Meritocracy". Invisible Women: Data Bias in a World Designed for Men. New York, NY: Harry N. Abrams.

Steele, Catherine Knight. 2021. "CH. 3 Principles for a Digital Black Feminism" and "Conclusion". p. 65-94 and p. 149-158. Digital Black Feminism. New York: NYU Press. Turkle, Sherry. 2021. "CH. 9 Things for Thinking", "CH. 15 The Xerox Room", "CH. 19 The Last Experiment" and "CH. 20 The Assault on Empathy". p. 175-184, p. 245-262 and p. 319-338. The Empathy Diaries: A Memoir. New York: Penguin Press. Véliz, Carissa. 2024. Oxford Handbook of Digital Ethics. Oxford University Press. Zuboff, Shoshana. 2020. "CH. 1 Home or Exile in the Digital Future", CH. 2 "Setting the Stage for Surveillance Capitalism" and "CH. 3 "The Discovery of Behavioral Surplus". p. 3-97. The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power. Illustrated edition. New York: Public Affairs.

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. Courses run in person will require a standard classroom. No extra resources or lab equipment is needed to run the course.

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.

Beginning in 2019, academic planning for the Markham Centre Campus included discussions about courses that serve to create community across academic programs, support the transition to university, and provide opportunity to explore topics with interdisciplinary lenses. The small size of the campus, at least in the early years, and the participation of several Faculties has led to agreement that two 3-credit courses would be required of many students in 4-year programs, with the option for students enrolled in first-year Science and Engineering students.

A small pan-Faculty working group was convened in 2020 and reconvened in 2021-2022 to develop these courses. This working group was led by Michael Darroch (Associate Dean Academic AMPD), with participants from AMPD, Lassonde, LAPS, Science, and Libraries and was supported by Samantha Cutrara (Office of the Vice Provost Academic).

In summer 2023, a different working group was assembled (also with participants from AMPD, Lassonde, LAPS, Science, and Libraries), to refine and develop the course outlines developed by the previous working group with the aim of proposing these courses to their Faculty Councils. While the overall goal of these courses was for them to be run in a centralized manner (using the still-in-development pan-university framework, for example), our solution was to ensure the same course could be offered in each faculty (with the necessary course exclusions in place) for ease of enrolment and requirement for students in different programs. These courses are intended to speak to the campus identity as an interdisciplinary, technology- and entrepreneurial-focused learning environment with space for innovation and support within and amongst the campus programs.

Faculty and Department Approval for Crosslistings:

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 crosslist. All relevant signatures must be obtained prior to submission to the Faculty curriculum committee.

Dept: Signature (Authorizing cross-listing)	AMPD Nov 27, 2023 Department Date
Dept: Signature (Authorizing cross-listing)	LAPSNov. 27, 2023 Department Date
Dept: Signature (Authorizing pross-listing)	Lassonde29 Nov 2023DepartmentDate

Accessible format can be provided upon request.



MEMORANDUM

York University Libraries

To: Samantha Cutrara

From: Leigh Jackson, Content Development Librarian, Content Development and Analysis Department

Date: September 25th, 2023

Subject: Library Statement of Support – Being a Digital Citizen

Summary

York University Libraries (YUL) are well positioned to support the proposed course. Faculty and students can make use of an array of library resources and services to meet their research and learning needs. This statement highlights offerings related to the major themes of the course. It also brings attention to collections of interest from connected fields such as history, communications, computer engineering, etc.

Collections

The Libraries' collections echo the curricular and research priorities of students and faculty. Care is given to select materials that reflect new courses taught at York, as well as research and publishing trends. Library personnel review reading lists supplied for proposed courses to address any potential gaps. Tailored purchasing profiles ensure new materials are regularly purchased on subjects such as:

 Digital media, social media, popular culture, representation, artificial intelligence, social inequality, surveillance, social interaction, social networks, ethics, digital literacy, information literacy, information society, copyright, critical thinking, reflection, fake news, digital citizenship, etc.

Historically, textbook publishers have not made their electronic content available for purchase by libraries. This remains an ongoing challenge. Library personnel can assist with locating Open Access alternatives. Furthermore, the Libraries' Open Scholarship department offers <u>support to researchers on digital publishing</u>, open repositories, and creative commons licensing.

The Omni single-search interface provides students with access to a wide range of materials, including books, book chapters, articles, dissertations, streaming media, etc. Library users may also request items from partner libraries through Omni. A selection of electronic collections of interest are highlighted below. The <u>A-Z list</u> on the Libraries' website provides a complete register of electronic offerings.

eBook Platforms:

- De Gruyter eBooks
- Elgar Online
- Oxford Scholarship Online
- Cambridge Core
- Taylor & Francis eBooks
- ProQuest eBook Central
- Scholars Portal Books
- Springer eBooks

Subject Databases:

- Worldwide Political Science Abstracts
- Communication Source
- Sociological Abstracts
- Applied Science and Technology Index
- History of Science, Technology and Medicine
- Library and Information Science Abstracts
- ABI (Abstracted Business Information) Inform Trade and Industry
- ACM (Association for Computing Machinery) Digital Library
- IEEE (Institute of Electrical and Electronics Engineers) Xplore
- Engineering Village
- JSTOR
- Web of Science

Canadian Content:

- Canadian Periodicals Index Quarterly (CPI.Q)
- Canadian Business and Current Affairs Complete (CBCA)
- America: History & Life
- Érudit

Legal Resources:

- Legal Trac
- Hein Online
- Lexis Advance Quick Law
- Westlaw Canada

Reference Resources:

- eHRAF (Human Relations Area Files) World Cultures
- Britannica Online
- Universalis
- Oxford Bibliographies Online
- Oxford Reference Online

Very Short Introductions (Oxford University Press)

Newspaper/ Magazine Collections:

- Alternative Press Index
- Press Reader
- Factiva
- Eureka.cc
- Nexis Uni
- National Geographic Magazine Archive
- Gale Academic One File

Images/ Primary Sources:

- Art Stor
- Ad Access
- American History in Video
- Entertainment Industry Magazine Archive

Streaming Media:

- Kanopy
- National Film Board
- Curio.ca
- Audio Ciné
- Criterion on Demand
- PBS (Public Broadcasting Service) Video Collection
- Sage Research Methods

Services

Library Instruction

Librarians and archivists help students build research skills and digital fluencies through <u>workshops</u>, online <u>research guides</u>, and individual research assistance. Instructors can <u>arrange a research skills workshop</u> (or seminar) geared to a specific assignment, course, or competency.

Research Guides of Interest:

- Social Sciences Guide
- Communications and Culture Guide
- Legal Research for Non-Law Students Guide
- Artificial Intelligence Guide
- Digital Scholarship and Digital Humanities Guide
- Arts and Media Administration Guide
- Communications Guide (Bilingual FR/EN)

Research Help

Online <u>research assistance</u> is available in both French and English via chat, text, and email. In addition, students and faculty can book <u>one-hour research consultations</u> with a specialist librarian. The Libraries also offer a virtual drop-in service hosted through Zoom for help in real-time.

Accessibility Services

Located on the first floor of the Scott Library (Keele Campus), <u>Library Accessibility Services</u> (LAS) provides alternative content formats, as well as adaptive technologies and spaces. With a referral, York University faculty and students can request transcription services or reserve an accessibility lab workstation.

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)	Science, Technology and Society	Date of Submission:		November 29, 2023		
Course Number: Special Topics courses Include variance (e.g. HUMA 3000C 6.0, Variance is "C")	STS 1522 3.0	Var:	Indicate bo	Credit Weight: oth the fee, and ght if different from weight (e.g. AC=6, ET=6		
Course Title: The official name of the course as it will appear in the Undergraduate Calendar and on the Repository	Mobilizing Digital Citizen	ship				
r						
Short Title: Appears on any documents where space is limited - e.g. transcripts and lecture schedules - maximum 40 characters	Mobilizing Digital Citizen	ship				

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 corequisites, 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...")

In this course, students build on the foundation laid by the prerequisite "Being a Digital Citizen" to collaboratively develop and share a digital prototype that takes into account questions of ethics and equity for the present and the future.

Driving this course is the question: "How do we understand and choose the tools and technologies to communicate/advocate for ideas/organizations/resources online?"

This course is cross-listed with the following courses: Lassonde (DIGT1172), AMPD (CRTE2001), and LA&PS (CMDS1002)

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. N/A

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

Expanded Course Description:

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

The objective of this course is for students to apply their knowledge from "Being a Digital Citizen" to a specific problem, topic, or social issue and then collaboratively propose the most effective tool for addressing this in the digital realm. This tool could be a code, an app, a product, an archive, a blog, or a social media strategy; with the emphasis less on the development of this tool and more on the ethically informed reasoning for determining why this tool is more functional/ideal than another. The goal of this course is for students to practice being ethical digital citizens and to recognize the ways digital tools and technologies can be designed and used in the service of justice and equity. Students will meet the objectives of this course by being introduced to topics related to understanding and mapping digital inequalities, identifying and mobilizing digital interventions, and creating digital campaigns. Through case studies, interdisciplinary explorations, and collaboration with classmates from other programs, students will be active in this course in choosing one problem/topic/issue, exploring tools that may address it, and presenting the reasoning, reflection, and ethics behind one specific tool that can respond to the problem/topic/issue.

To support the overall goals of the course more fully, collaboration with the Libraries has already been initiated for greater support for things like tool and technology exploration and topics such as copyright, creative commons, and licensing and privacy.

Objectives

In this course, students will be:

- 1. Introduced to and develop an understanding of digital inequalities across the globe
- 2. Introduced to a wide variety of digital tools/techniques/technologies
- 3. Develop and utilize criteria for determining the best tools/techniques/technologies for different situations
- 4. Work on and communicate the reasoning behind an interdisciplinary prototype for a tool/technique/technology that speaks to the needs of a topic of focus

Outcomes

By the end of the course, students will:

- 1. Recognize, summarize, and reflect on how issues related to sustainability, antiracism (especially anti-Black and anti-Asian racism), gender and sexuality, Indigeneity, and location manifest in digital tools, techniques, and technologies, including the one prototyped for the course
- Summarize the value and deficits of different communication tool(s) and techniques for presenting information to audiences across multiple disciplines and media

- 3. Describe the most effective tool(s), technique(s), and technology(ies) for communicating information for/with/to a specific online issue or community
- 4. Explore one topic/issue/problem related to the digital work and collaboratively design a prototype of an interdisciplinary solution or campaign for to this digital issue by drawing on the evaluation of different tool(s), technique(s), and technology(ies)
- 5. Examine the importance of copyright, open scholarship, Creative Commons, and privacy to work in the digital sphere, and apply appropriate to different knowledge and design solutions in real and simulated academic, professional, and personal contexts
- 6. Define, develop, and demonstrate a sense of personal academic integrity, recognizing the significance and implications of being academically honest in and out of school, along with the obligations we all hold to others' dignity and privacy in online spaces or when creating media

Weekly Breakdown

The course has been organized by three overarching themes with topics identified under each. These three central themes move students though the course for being more deeply introduced to key social issues, choosing an issue, exploring tools and technologies related to different issues, and then collaboratively choosing and presenting on a tool that can respond to the issue of their choice. Course topics will reflect the everchanging nature of digital technologies and social media and will be explored thorough a blend of direct instruction and supported student research.

Theme 1: Understanding and Mapping Digital Inequalities (Three weeks, including course introduction)

Digital Oppressions – Case Studies

Digital Exploitations – Case Studies

Theme 2: Identifying and Mobilizing Digital Interventions (Four weeks)

Digital interventions: Advocacy, Art, Activism and Beyond, Parts I and II Overview of Tools and Strategies for Information Campaigns Choosing appropriate Tools and Strategies

Theme 3: Creating Digital Campaigns (Five weeks, including course conclusion)

Prototype Development – Design Justice Perspectives

Prototype Development – Designing Tools

Campaign Strategies - Copyright Considerations

Campaign Strategies – Multimedia Approaches

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 oncampus attendance.

This course is the second of a pair of literacy, inquiry, and communication courses that set Markham students up with transferable knowledge and skills that prepare them for life as a 21st century digital citizen. Students are required to take the first course, "Being a Digital Citizen," before taking this one.

This course has a focus on the intersection of equality and justice with digital tools and technologies, with students actively, collaboratively, and interdisciplinarily exploring the ethical decision making behind digital tools, technologies, and campaigns. This course was envisioned for seminar instruction for all of its contact hours, with case studies, active class discussions, and hands on activities complementing taught content.

Main course assignments (Campaign Pitch, Digital Tool Exploration, and Final Poster Presentation) were designed to work together to bring students through the exploration and final presentation of a tool/technology that best speaks to a social issue of their choosing. These assignments were designed to affirm knowledge and skills that were introduced in course 1, "Being a Digital Citizen," and further enhance the transfer to other academic and professional situations. A further 20% of students' grades supports students' active attention and presence to course materials; with a mix of quizzes, in-class exercises, reading comprehension tasks, and other activities designed for frequent comprehension check in.

Like its sister course, "Being a Digital Citizen," this course has been developed by faculty in AMPD, LAPS, Lassonde, and Science to be a vehicle for trans- and inter-disciplinary collaboration so that students will be able to actively communicate and converse across disciplines and programs. Because York currently lacks a mechanism to offer a course outside of a specific Faculty, this course (and "Being a Digital Citizen"), will be offered (with course credit exclusion) by four faculties – AMPD, LAPS, Lassonde, and Science – and open to students across Markham. As a result, within the design of this course, there may be opportunities for teaching faculty to explore possible team teaching models, a blend of instruction styles, and different assessment/grading workload across all sections of the course. Collaboration with the Libraries has also already been initiated for greater support on topics such copyright, creative commons, and licensing and privacy..

While this course was designed to be face-to-face, the needs of Markham students may result in this course being offered online. With an online course, course themes will be turned into course modules with requisite course content uploaded on a posted schedule, and discussion boards and quizzes used to monitor attendance and comprehension, and online groups assigned early on for team building and communication.

Delivery modes: LECT, BLEN. ONCA., ONLN

While this course was designed to be face-to-face (LECT), the needs of Markham students may result in sections of this course being offered in either online (ONLN or ONCA) or blended (BLEN) formats (which section will be a decision made by Faculties and the Deputy Provost for Markham). With formats involving an online component (BLEN, ONLN or ONCA), course themes will be turned into course modules with requisite course content uploaded on a posted schedule, and discussion boards and quizzes used to monitor attendance and comprehension. In the BLEN format, lecture material will be delivered online and asynchronously, while participation and testing assessments will be completed during in-person sessions held approximately 50% as frequently as in the LECT format. In the entirely online format (ONLN), in person exams will be replaced with fully online assessments including tests, personal reflection assignments and online group activities.

Instruction:

- Planned frequency of offering and number of sections anticipated (every year, alternate years, etc.).
- Number of department members currently competent to teach the course.
- 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.

Course will be offered every year and have 36 contact hours.

Course can be taught by STS faculty who have a disciplinary focus on digital information and communication technologies.

Evaluation:

A detailed percentage breakdown of the basis of

Class Participation and Quizzes: 20%

E.g. Blend of quizzes, in class exercises, reading comprehension, inclass exams, discussions, library workshop

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 "onsite" examinations be required, etc.)

Bias Identification Quiz: 30%

Identify areas of bias as they appear in specific media items

Campaign Pitch: 15%

In groups, identify, reflect upon, and communicate (for example, with an infographic and presentation) a case study representative of key social issues studied in the first part of the course and propose/pitch a range of tools that can address this issue as a digital campaign

Digital Tool Exploration: 20%

Explore one digital tool that is most appropriate for a proposed digital campaign and communicate and reflect upon its attributes and appropriateness for use

Final Poster Presentation: 15%

In groups, design and present a prototype of a campaign for a digital tool that responds to and reflects the needs of a particular social issue. Campaign and tool should reflect on and respond to different biases and perspectives explored throughout the course, demonstrating students' familiarity with working ethically in digital spaces

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.

Required Reading List

Arguelles, Paolo, and Isabelle Ortiz-Luis. 2021. "Bars Behind Bars: Digital Technology in the Prison System." SSRN Scholarly Paper. Rochester, NY.

https://doi.org/10.2139/ssrn.3812046.

Balsamo, Anne. 2011. "Introduction". p.1-26. Designing Culture: The Technological Imagination at Work. Durham NC: Duke University Press.

Bottici, Chiara. 2019. "Imagination, Imaginary, Imaginal: Towards a New Social Ontology?" Social Epistemology 33 (5): 433–41.

https://doi.org/10.1080/02691728.2019.1652861.

Breuer, Johannes, Libby Bishop, and Katharina Kinder-Kurlanda. 2020. "The Practical and Ethical Challenges in Acquiring and Sharing Digital Trace Data: Negotiating Public-Private Partnerships." New Media & Society 22 (11): 2058–80.

https://doi.org/10.1177/1461444820924622.

Collins, Patricia Hill. 2019. "CH. 1 Intersectionality as Critical Inquiry" and "CH. 5 Intersectionality, Experience, and Community". Intersectionality as Critical Social Theory. Durham, N. C: Duke University Press.

Costanza-Chock, Sasha. 2020. "Introduction" and "CH. 2 Design Practices". p. 1-30 and p. 69-102. Design Justice: Community-Led Practices to Build the Worlds We Need. Cambridge, Massachusetts: The MIT Press.

Elmer, Greg, and Stephen J. Neville. 2024. "CH. 2 Media Scarcity in Apartheid South Africa" and "CH. 3 Retracking Incarceration". The Politics of Media Scarcity. Routledge. https://www.routledge.com/The-Politics-of-Media-Scarcity/Elmer-Neville/p/book/9781032504681.

Eubanks, Virginia E. 2007. "Trapped in the Digital Divide: The Distributive Paradigm in Community Informatics." The Journal of Community Informatics 3 (2). https://openjournals.uwaterloo.ca/index.php/JoCl/article/view/2373.

LIBRARY SUPPORT STATEMENT MUST BE INCLUDED.

GovLab, The. 2020. "How Data Can Map and Make Racial Inequality More Visible (If Done Responsibly)." Data Stewards Network (blog). June 10, 2020.

https://medium.com/data-stewards-network/how-data-can-map-and-make-racial-inequality-more-visible-if-done-responsibly-9074ed84e2bf.

Gray, Jonathan, Lucy Chambers, and Liliana Bounegru. 2012. "CH. 4 Getting Data", "CH. 5 Understanding Data" and "CH. 6 Delivering Data". P. 109-218. The Data Journalism Handbook: How Journalists Can Use Data to Improve the News. 1st edition. O'Reilly Media.

Kordzadeh, Nima, and Maryam Ghasemaghaei. 2022. "Algorithmic Bias: Review, Synthesis, and Future Research Directions." European Journal of Information Systems 31 (3): 388–409. https://doi.org/10.1080/0960085X.2021.1927212.

Lewis, Jason Edward. 2016. "A Brief (Media) History of the Indigenous Future." Public 27 (54): 36–50. https://doi.org/10.1386/public.27.54.36 1.

Lima, Manuel. 2011. "CH. 2 From Trees to Networks" and "CH. 3 Decoding Networks". Visual Complexity: Mapping Patterns of Information. New York: Princeton Architectural Press.

Loukissas, Yanni Alexander. 2019. "Introduction", "CH. 1 Local Origins" and "CH. 3 Collecting Infrastructures". p. 1-26 and p. 55-94. All Data Are Local: Thinking Critically in a Data-Driven Society. MIT Press.

Martin, Alison. 2021. "Hearing Change in the Chocolate City: Computational Methods for Listening to Gentrification." Digital Humanities Quarterly 015 (1).

Robinson, Laura, Shelia R. Cotten, Hiroshi Ono, Anabel Quan-Haase, Gustavo Mesch, Wenhong Chen, Jeremy Schulz, Timothy M. Hale, and Michael J. Stern. 2015. "Digital Inequalities and Why They Matter." Information, Communication & Society 18 (5): 569–82. https://doi.org/10.1080/1369118X.2015.1012532.

Vosloo, Steven. 2018. "Designing Inclusive Digital Solutions and Developing Digital Skills: Guidelines." Paris: United Nations Educational, Scientific and Cultural Organization Digital Library. Text Available at the Website: Https://Unesdoc. Unesco. Org/Ark:/48223/Pf0000265537. Accessed January 13: 2019.

Winner, Langdon. 2020. "CH. 2 Do Artifacts have Politics?" and "CH. 6 Mythinformation". p. 19-39 and p. 98-120. The Whale and the Reactor: A Search for Limits in an Age of High Technology, Second Edition. 2 edition. Chicago: University of Chicago Press.

Suggested Reading List

Collins, Patricia Hill. 2019. "CH. 3 Intersectionality and Resistant Knowledge Projects" and "CH. 8 Intersectionality without Social Justice?". Intersectionality as Critical Social Theory. Durham, N. C: Duke University Press.

Costanza-Chock, Sasha. 2020. "CH. 5 Design Pedagogies" and "Conclusion". p. 173-236. Design Justice: Community-Led Practices to Build the Worlds We Need. Cambridge, Massachusetts: The MIT Press.

Eichhorn, Kate. 2019. "Introduction", "CH. 5 In Pursuit of Digital Disappearance" and "Conclusion". p. 1-25 and p. 117-144. The End of Forgetting: Growing Up with Social Media. Harvard University Press.

Gray, Jonathan, Lucy Chambers, and Liliana Bounegru. 2012. "CH. 1 Introduction" and "CH. 2 In the Newsroom". p. 1-60. The Data Journalism Handbook: How Journalists Can Use Data to Improve the News. 1st edition. O'Reilly Media.

Lima, Manuel. 2011. "Introduction" and "CH. 6 "Complex Beauty". Visual Complexity:

Mapping Patterns of Information. New York: Princeton Architectural Press.

Loukissas, Yanni Alexander. 2019. "CH. 4 Newsworthy Algorithms" and "CH. 6 Models of Local Practice". p.95-122 and p. 161-189. All Data Are Local: Thinking Critically in a Data-Driven Society. MIT Press.

Roberts, Sarah T. 2019. "Introduction" and "CH. 6 Digital Humanity". p. 1-19 and p. 201-222. Behind the Screen. Yale University Press.

Winner, Langdon. 2020. "CH. 1 Technologies as Forms of Life" and "CH. 10 The Whale and the Reactor". p. 3-18 and p. 164-178. The Whale and the Reactor: A Search for Limits in an Age of High Technology, Second Edition. 2 edition. Chicago: University of Chicago Press.

Online Resources List

Information is Beautiful https://informationisbeautiful.net/

Whose Land https://www.whose.land/en/

Visual Complexity http://www.visualcomplexity.com/vc/

Design Justice Network https://designjustice.org/

Anatomy of AI https://anatomyof.ai/

A People's Guide to AI https://alliedmedia.org/resources/peoples-guide-to-ai

Against Catastrophe https://againstcatastrophe.net/

Indigenous Futures https://indigenousfutures.net/

Black Sound Lab http://blacksoundlab.com/

Black Covid Care https://blackcovidcare.com/

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. Courses run in person will require a standard classroom.

No extra resources or lab equipment is needed to run the course.

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.

Beginning in 2019, academic planning for the Markham Centre Campus included discussions about courses that serve to create community across academic programs, support the transition to university, and provide opportunity to explore topics with interdisciplinary lenses. The small size of the campus, at least in the early years, and the participation of several Faculties has led to agreement that two 3-credit courses would be required of many students in 4-year programs, with the option for students enrolled in first-year Science and Engineering students.

A small pan-Faculty working group was convened in 2020 and reconvened in 2021-2022 to develop these courses. This working group was led by Michael Darroch (Associate Dean Academic AMPD), with participants from AMPD, Lassonde, LAPS, Science, and Libraries and was supported by Samantha Cutrara (Office of the Vice Provost Academic).

In summer 2023, a different working group was assembled (also with participants from AMPD, Lassonde, LAPS, Science, and Libraries), to refine and develop the course outlines developed by the previous working group with the aim of proposing these courses to their Faculty Councils. While the overall goal of these courses was for them to be run in a centralized manner (using the still-in-development pan-university framework, for example), our solution was to ensure the same course could be offered in each faculty (with the necessary course exclusions in place) for ease of enrolment and requirement for students in different programs. These courses are intended to speak to the campus identity as an interdisciplinary, technology- and entrepreneurial-focused learning environment with space for innovation and support within and amongst the campus programs.

Faculty and Department Approval for Crosslistings:

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 crosslist. All relevant signatures must be obtained prior to submission to the Faculty curriculum committee.

Dept:	Signature (Authorizing cross-listing)	AMPD Department	Nov 27, 2023 Date
Dept:		_LAPS	Nov. 27, 2023
	Signature (Authorizing cross-listing)	Department	Date
Dept:	Signature (Authorizing cross-listing)	Lassonde Department	<u>29 Nov 2023</u> Date

Accessible format can be provided upon request.



MEMORANDUM

York University Libraries

To: Samantha Cutrara

From: Leigh Jackson, Content Development Librarian, Content Development and Analysis Department

Date: September 25th, 2023

Subject: Library Statement of Support – Mobilizing Digital Citizenship

Summary

York University Libraries (YUL) are well positioned to support the proposed course. Faculty and students can make use of an array of library resources and services to meet their research and learning needs. This statement highlights offerings related to the major themes of the course. It also brings attention to collections of interest from connected fields such as communication studies, user experience design, equity studies, environmental studies, etc.

Collections

The Libraries' collections echo the curricular and research priorities of students and faculty. Care is given to select materials that reflect new courses taught at York, as well as research and publishing trends. Library personnel review reading lists supplied for proposed courses to address any potential gaps. Tailored purchasing profiles ensure new materials are regularly purchased on subjects such as:

 Digital media, social media, popular culture, representation, artificial intelligence, social inequality, surveillance, social interaction, social networks, ethics, digital literacy, information literacy, information society, copyright, critical thinking, capitalism, intersectionality, inclusive design, colonialism, unconscious bias, etc.

Historically, textbook publishers have not made their electronic content available for purchase by libraries. This remains an ongoing challenge. Library personnel can assist with locating Open Access alternatives. Furthermore, the Libraries' Open Scholarship department offers support to researchers on digital publishing, open repositories, and creative commons licensing.

The Omni single-search interface provides students with access to a wide range of materials, including books, book chapters, articles, dissertations, streaming media, etc. Library users may also request items from partner libraries through Omni. A selection of electronic collections of interest are highlighted below. The A-Z list on the Libraries' website provides a complete register of electronic offerings.

eBook Platforms:

- De Gruyter eBooks
- Elgar Online
- Oxford Scholarship Online
- Cambridge Core
- Taylor & Francis eBooks
- ProQuest eBook Central
- Scholars Portal Books
- Springer eBooks

Subject Databases:

- Worldwide Political Science Abstracts
- Communication Source
- Sociological Abstracts
- Ethnic Diversity Source
- Art and Architecture Source
- Environment Complete
- Psyc Info
- Applied Science and Technology Index
- History of Science, Technology and Medicine
- Library and Information Science Abstracts
- ABI (Abstracted Business Information) Inform Trade and Industry
- ACM (Association for Computing Machinery) Digital Library
- IEEE (Institute of Electrical and Electronics Engineers) Xplore
- Engineering Village
- JSTOR
- Web of Science

Canadian Content:

- Canadian Periodicals Index Quarterly (CPI.Q)
- Canadian Business and Current Affairs Complete (CBCA)
- America: History & Life
- Érudit

Legal Resources:

- Legal Trac
- Hein Online
- Lexis Advance Quick Law
- Westlaw Canada

Reference Resources:

- EHRAF (Human Relations Area Files) World Cultures
- Bloomsbury Design Library
- Britannica Online
- Universalis
- Oxford Bibliographies Online
- Oxford Reference Online
- Very Short Introductions (Oxford University Press)

Newspaper/ Magazine Collections:

- Alternative Press Index
- Press Reader
- Factiva
- Eureka.cc
- Nexis Uni
- National Geographic Magazine Archive
- Gale Academic One File

Images/ Primary Sources:

- Art Stor
- Ad Access
- American History in Video
- Entertainment Industry Magazine Archive

Streaming Media:

- Kanopy
- National Film Board
- Curio.ca
- Audio Ciné
- · Criterion on Demand
- PBS (Public Broadcasting Service) Video Collection
- Sage Research Methods
- LinkedIn Learning (e.g., learning paths on prototyping, social media, marketing, coding, programming, EDI (Equity, Diversity, Inclusion), etc.)

Services

Library Instruction

Librarians and archivists help students build research skills and digital fluencies through <u>workshops</u>, online <u>research guides</u>, and individual research assistance. Instructors can <u>arrange a research skills workshop</u> (or seminar) geared to a specific assignment, course, or competency.

Research Guides of Interest:

- Social Sciences Guide
- Communications and Culture Guide
- Legal Research for Non-Law Students Guide
- Artificial Intelligence Guide
- Digital Scholarship and Digital Humanities Guide

- Arts and Media Administration Guide
- Communications Guide (Bilingual FR/EN)
- Media Creation Lab Guide

Research Help

Online <u>research assistance</u> is available in both French and English via chat, text, and email. In addition, students and faculty can book <u>one-hour research consultations</u> with a specialist librarian. The Libraries also offer a virtual drop-in service hosted through Zoom for help in real-time.

Accessibility Services

Located on the first floor of the Scott Library (Keele Campus), <u>Library Accessibility Services</u> (LAS) provides alternative content formats, as well as adaptive technologies and spaces. With a referral, York University faculty and students can request transcription services or reserve an accessibility lab workstation.



COMMITTEE ON EXAMINATIONS AND ACADEMIC STANDARDS

FACULTY OF SCIENCE

4700 KEELE ST TORONTO ON CANADA M3J 1P3 T 416 736 2100 EXT 33803 sciceas@yorku.ca www.yorku.ca November 22, 2023

Faculty Level Review of 2022-2023 Departmental Grade Reports

As per policy and toward a consistent and fair application of grading practices across the faculty, the Committee on Examinations and Academic Standards (CEAS) has conducted a faculty level review of the departmental grade distributions for the 2022-2023 academic year. A departmental report on anomalous grades was solicited from each departmental chair in September 2023. These reports were distributed to CEAS committee members who met on November 22, 2023 to discuss the results. Each department has been provided with a response that addresses their particular grade anomalies and concerns. This includes recommendations from CEAS, where appropriate, to reduce grade anomalies. The original departmental anomalies reports (redacted to protect personal information) as well as the response letters are available as an appendix to this report.

Considering all the reports provided, CEAS had a thorough discussion about broader issues leading to grade anomalies. This led to the following items for Faculty Council to consider:

- Departments have reported that E/F anomalies may have a significant contribution from DEF and DNW students. However, the grade report provided to the Chairs does not include students with DEF grade qualifiers. If a DEF qualifier has replaced the final grade, it will not contribute to the percentage of E/F for the course. Importantly, CEAS would like to remind course directors that a final grade should never be left blank for any students at the time of GAM submission, even those who have been approved for a deferred standing agreement (DSA). Following the final exam, all students should have a grade uploaded to the GAM, which may include zero for a missed final exam. Students must submit a DSA for missed final exams, and if approved, will cause the final grade to be replaced with the DEF qualifier. Once the deferred exam is completed, a new grade should be submitted as soon as possible. Secondly, a broader issue seems to be that students are using the DSA process to avoid completing assessments that they are unprepared for. Ultimately, many of these students fail the course, inflating E/F grades. CEAS recommends that course directors indicate the number of students missing term work as well as the final assessment as part of their anomalous grade rationale.
- Increasingly, instructors are reporting that they are unsure how to handle students
 who are unprepared for their courses. Recent concerns seem to be attributed to
 inconsistency in academic standards during the COVID-19 pandemic. Some
 instructors feel the need to inflate grades to avoid significantly high E/F from
 unprepared students. CEAS recommends that course directors do not inflate grades
 and that learning outcomes must be achieved. Course directors should address
 these issues, with specific examples where possible, when providing rationale
 for anomalous grades.
- Instructors have indicated that poor attendance is a significant contributor to anomalous E/F grades, noting generally that students who attend class tend to perform well. The Faculty should consider policies that can encourage students to attend and engage in lectures.
- Increasingly, instructors are offering to shift weight from term assessments

towards final exams and projects if performance improves. The rationale for this is to acknowledge cumulative learning. However, this approach may prevent underperforming students from dropping the course leading to inflated E/F grades if they fail the final assessment. CEAS recommends that instructors refrain from advertising such a policy to students. If instructors feel such an approach is warranted, they should only consider it after the final exam has concluded.

- Higher E/F anomalies seem to appear in cumulative courses which require a mastery
 of prerequisite course material. The Faculty and departments should consider
 strategies that minimize cases for high-failure probability.
- Students increasingly report that they are unable to compute weighted averages and
 thus their term grade. The eClass Gradebook provides an opportunity to compute
 this, but it does not easily handle complicated grading schemes such dropping the
 lowest assignment of quiz mark. This confusion may be preventing students from
 dropping courses who otherwise should.
- There continues to be a high percentage of A and A+ grades in Biology and CEAS
 noted this in the letter to their department. Grade inflation may be a long-term issue
 in all departments which could negatively impact the success of students postgraduation. The Faculty should be careful to monitor this in the coming years.

The Faculty policy on anomalous grades has not been reviewed in several years. The policy states that within 3 years of implementation, it will be reviewed. CEAS is currently reviewing this policy and will provide recommendations for Faculty Council's approval in early 2024.

Sincerely,

Iain Moyles Chair, CEAS

In Rope

Philip Johnson Tihana Mirkovic

· •

Jan Sapp Toby Zeng

Yashna Manek

Panel Members, CEAS

APPENDIX A: Departmental Anomaly Reports and Response Letters

DEPARTMENT OF BIOLOGY GRADE DISTRIBUTION REPORT 2022-2023

Grades Review Report to CEAS

November 2023

Department of Biology

This report was prepared by members of the teaching committee Nicole Nivillac (UPD), Andrew Donini, Charlotte De Araujo, Tanya Da Sylva, Dasantila Golemi-Kotra and Robert Tsushima (Chair of Department)

This report is based on grade distributions obtained from the university information system (see attached excel file). The grade distributions reflected in the Excel file are largely due to the increased opportunities for student collaboration on course evaluations/assignments, and changes to the format of course assessments. Most of our courses were also redesigned to better support students with challenges regarding mental health and wellness.

Courses within the CEAS guidelines were not addressed in this report.

General Comments

Many factors contributed to higher grades this year. For some lab courses certain online labs that were implemented due to COVID have remained in place and have resulted in higher lab grades. The ability to provide online options for assessments resulted in more collaboration (both permitted and not-permitted) among students, and access to online resources including answer-generating sites such as CHEGG and ChatGPT also contributed.

The following changes were found to be common to all courses with grades outside the normal distribution:

- Changes in assessments: These changes were made due to the fact that many course
 instructors have recognized the benefits of incorporating online components in their
 courses to reinforce course concepts. Given the learning gains associated with these
 blended course formats, these components have remained as a part of the standard
 course design.
- 2. Increased awareness and application of Universal Design for Learning Principles (UDL): Many of the instructors with high grade distributions attributed most or all of the changes in their distributions to the incorporation of UDL principles and assessment strategies. These changes were meant to promote an inclusive student environment and to minimize the challenges relating to stress and anxiety faced by students. An increase in UDL principles in a course typically correlates with an increase in peer-to-peer learning/collaboration, flexibility in assignment style and deadlines, options to exclude some assessments with lower grades, and more frequent low stakes assessments rather

than the traditional individual timed midterms and exams.

Several instructors also indicated a frustration in applying evidence-based pedagogy, such as UDL, while trying to remain within the grade distribution values imposed by the Faculty.

3. Grade distribution policy expectation that instructors include commentary on intended changes to address concerns: The Teaching Committee would like to point out that several of the "anomalous" grade distributions were due to the application of evidence-based pedagogy and assessment. Given these rationales, the Biology department is firm in the opinion that we do not intend to discourage any instructors from adopting/applying these principles to their courses since they align with best practices for teaching and learning. These principles also play a significant role in student comprehension of concepts and student retention with our courses and programs.

The arguments in support of providing flexibility to students, decreasing stress and anxiety, and encouraging student collaboration are all important course goals. However, concerns have been raised in previous year regarding courses where the majority of students consistently attain A/A+ grades. In these instances, these courses can contribute to pronounced disparities in grade distributions across the program, potentially leading to reduced student satisfaction in courses adhering to more traditional evaluation schemes. The underlying concern stems from the notion that if every student consistently earns an A/A+, it may have consequences post-graduation, where students achieving these grades might not be perceived as high-achieving but rather merely average.

The teaching committee (and the department) will likely have to determine whether the Department of Biology's grade averages align with those at other institutions within Ontario.

Brief summary of findings from instructor reports:

BIOL 1000/1001

Some sections in BIOL 1000 had grade distributions that were lower than Faculty guidelines. Increased failure rates in the Winter term sessions (BIOL 1000 M, N) are common, as these sections tend to have high numbers of non-majors as well as students who were not successful in the course in the preceding Fall term.

BIOL 1001 grades overall were higher than those for BIOL 1000 (with several sections falling outside guidelines). One reason for higher grades is likely the removal of one midterm to allow for the introduction of "Questions of the Fortnight" and dropping some of the lowest

assignment scores. These modifications were implemented to encourage a more profound understanding of the course material and foster critical analysis.

While there were still noticeable differences between BIOL 1000/1001, compared to the previous academic year, these distributions were not as drastic. Despite the fact that BIOL 1000 used traditional midterms/final exams, these changes may be attributed to the format of the assessments being online in the Winter term. Additionally, the BIOL 1000 team kept the increased 10% activity portion of the course and the policy where students could replace the lowest midterm grade with that of the final exam if the final exam was higher.

A plan has been made for the BIOL 1000 and 1001 teams to meet and discuss how these grade discrepancies can be addressed moving forward.

Second Year Courses

Courses outside guidelines included (but are not limited to) BIOL 2020 (Biochemistry), BIOL 2040 (Genetics), BIOL 2070/1 (Research Methods in Cell and Molecular Biology), BIOL 2900 (Microbiology for Nurses) and BIOL 2905 (Introduction to Medical Microbiology).

- **BIOL 2020:** The instructor for this course provided more leniency to students in areas such as assignment submission dates and the ability to drop lower midterm grades.
- <u>BIOL 2040</u>: The instructors state that the higher grades are due to the continued implementation of UDL principles, modification of the frequency of assessments, more opportunities for collaborative work and increased feedback.
- <u>BIOL 2070:</u> The instructor explained that the course was redesigned to provide students
 with multiple attempts on certain assignments to demonstrate their understanding of
 course concepts, flexibility in assessment deadlines and opportunities to improve their
 written work. The instructor also provided students with redacted version of the
 evaluations in an effort to reduce student anxiety.
- **BIOL 2900:** This course is for nursing majors, who tend to be highly motivated resulting in higher grades.
- <u>BIOL 2905:</u> Increased opportunities for collaboration, increased enrollment of mature students and an online midterm/exam format were attributed to the increased A/A+ in this course.

Third- and Fourth-Year Courses

Approximately 40% of our 3rd and 4th year courses combined resulted in higher grade distributions. These distributions were attributed to the following reasons:

Retention of some online teaching methodologies and assessments.

- Increased awareness and incorporating of UDL principles.
- Providing more supplementary materials to complement lectures.
- Improvements in the type and timing of feedback provided to students.
- Increased opportunities for students to work collaboratively.
- Flexibility in assignment deadlines to help students balance course load and manage mental health challenges.
- Ability to drop a low scoring assignment.

The teaching committee would like to point out that the numerical grade distribution data presented in the grade distribution should be taken at face value. It is important to note that, in evaluating academic performance, we must also consider the dynamic nature of best practices in teaching and learning, which may not be fully reflected in the presented numerical data. The numbers serve as a starting point for discussion and analysis, recognizing the ongoing commitment to refining our educational methods and ensuring that we are creating be best learning environment to support our students.



COMMITTEE ON EXAMINATIONS AND ACADEMIC STANDARDS

FACULTY OF SCIENCE

4700 KEELE ST TORONTO ON CANADA M3J 1P3 T 416 736 2100 EXT 33803 sciceas@yorku.ca www.yorku.ca November 22, 2023

Faculty Level Review of 2022-2023 Departmental Grade Reports – Biology

Thank you for the submission of your anomalous grades report for the 2022-2023 academic year. The Committee on Examinations and Standards (CEAS) met on November 22, 2023 to review anomalous grade reports.

Overall, the committee was unsatisfied with the rationale provided for courses with anomalous grades, particularly for the high number of courses with A and A+ grades (some with more than 90%). The Faculty of Science policy on grades requests that all anomalous courses be identified and that a rationale be solicited from specific course directors. This was not provided for third- and fourth-year courses. A list of anomalous grades for your department has been provided as an appendix to this letter. It was brought to CEAS' attention that members of the department may not have been provided access to the anomalous grade reports. We remind the department that the Faculty of Science policy on grades states that "The spread sheet and written report, stripped of identification of specific instructors, will be made available to all faculty members in the unit". CEAS was unsatisfied with the broad rationale that high percentages of grades are due to the implementation of Universal Design for Learning (UDL) principles and implementation of evidence-based practices in the scholarship of teaching and learning. CEAS encourages the use of such practices, but if they are used as a rationale then specific examples should be provided including a breakdown of the assessments for the courses and how the established practice leads to the graded outcomes while maintaining the university's academic standards. CEAS will be initiating further review of these anomalous grades.

The Faculty of Science policy on grade anomalies requests that grades are consistent with the Senate policy on grading schemes

(https://www.yorku.ca/secretariat/policies/policies/common-grading-scheme-for-undergraduate-faculties/). This policy notes, for example, that exceptional thorough knowledge is a criterion for A+, meaning it should be reserved for outstanding achievement. CEAS recommends that the department assess grades through this lens. We are also concerned that grade inflation may lead to worse outcomes for York students compared to other institutions. We strongly urge the department to assess the typical performance at other Ontario universities and to track student success post-graduation to begin to understand this potential impact. CEAS encourages the department to engage with the Committee on Teaching and Learning (CoTL) to align their pedagogical efforts with ensuring rigorous academic standards are maintained.

Broader comments and observations from all departments will be made available as part of the annual CEAS report to Faculty council in an upcoming Faculty council agenda package.

We thank the departmental efforts for their anomalous grade review. Following Faculty of Science policies, we request that this letter be disseminated to department members so course directors can review and assess their teaching and course practices accordingly.

Sincerely,

Jin Moys

Iain Moyles Chair, CEAS

Philip Johnson

Tihana Mirkovic

Jan Sapp

Toby Zeng

Yashna Manek

Panel Members, CEAS

Summary action items:

- Resubmission of anomalous grade report to include all courses which are considered anomalous. Courses where a justification is not provided by a course director should be noted so CEAS can follow up appropriately.
- Ensure that the grade anomalies report is made available to unit members and solicit feedback and comments.
- Cite and clearly document evidence as to which UDL principles are used, how they
 provide a pedagogical advantage, and how they maintain the academic standards of
 the university.
- Consider that the use of A and A+ grades should be reserved for exceptional students.
- Review the impact that increasing grade inflation may have on student success postgraduation.
- Engage with CoTL on aligning pedagogical initiatives with rigorous academic standards

APPENDIX A: Anomalous Grades Table for Biology

BIOL 3-4th Year courses with grades outside of expected range for >=15 student class size and >=50% A/A+

Acad Year	Session	Course	Section	Period	Course name	Total Grades	GPA	A/A+ %
2022	FW	BIOL4120	М	W	Applied Immunology	50	8.4	96%
2022	FW	BIOL4270	В	F	Integrative Reproduction: Questions and Concepts	49	8.33	94%
2022	FW	BIOL4305	М	W	Controversies in the Modern Life Sciences	45	8.38	91%
2022	FW	BIOL4285	М	W	Human Molecular Genetics	71	8.31	89%
2022	FW	BIOL3140	М	W	Advanced Biochemistry and Molecular Genetics Laboratory	33	8.58	88%
2022	FW	BIOL4120	Α	F	Applied Immunology	50	8.16	86%
2022	FW	BIOL4270	Α	F	Integrative Reproduction: Questions and Concepts	51	8.08	84%
2022	FW	BIOL4390	M	W	Population Genetics	60	7.95	80%
2022	FW	BIOL4380	М	W	Systems Neuroscience	62	7.98	79%
2022	FW	BIOL3120	М	W	Immunobiology	130	7.23	69%
2022	FW	BIOL4005	М	W	The Scientific Method	48	7.5	67%
2022	FW	BIOL4245	Α	F	Conservation Biology	43	7.4	63%
2022	FW	BIOL4400	М	W	Behavioural Genetics	15	7.2	60%
2022	FW	BIOL4141	Α	F	Current Topics and Methods in Cell Biology	48	7.33	60%
2022	FW	BIOL3290	М	W	Plant Ecology	39	7.28	59%
2022	FW	BIOL3120	Α	F	Immunobiology	261	7.19	59%
2022	FW	BIOL4250	М	W	Birds and the Environment	56	6.86	56%
2022	FW	BIOL4720	Α	F	Environmental Contaminants: Impacts on Organisms and Ecosystems	32	6.81	56%
2022	FW	BIOL4154	М	W	The Human Microbiome	49	7.33	55%
2022	FW	BIOL3140	Α	F	Advanced Biochemistry and Molecular Genetics Laboratory	35	7.43	55%
2022	FW	BIOL4265	Α	F	Biology in Environmental Management	34	7.06	50%

BIOL 1-2rd Year courses with grades outside of expected range for >=15 student class size and >=30% A/A+

Acad Year	Session	Course	Section	Period	Course name	Total Grades	GPA	A/A+ %
2022	FW	BIOL2040	Α	F	Genetics	244	7.59	69%
2022	FW	BIOL2040	М	W	Genetics	285	7.2	64%
2022	FW	BIOL2040	В	F	Genetics	238	7.18	59%
2022	FW	BIOL1001	Α	F	Biology II	189	7.07	57%
2022	FW	BIOL2070	М	W	Research Merthods in Cell and Molecular Biology	227	6.85	52%
2022	FW	BIOL2050	Α	F	Ecology	208	6.83	46%
2022	FW	BIOL1001	М	W	Biology II	465	6.52	45%
2022	FW	BIOL1500	М	W	Intro to Biology	108	6.39	45%
2022	FW	BIOL1000	В	F	Biology I	378	6.11	44%
2022	FW	BIOL2905	М	W	Introduction to Medical Microbiology	105	5.92	44%
2022	FW	BIOL2020	В	F	Biochemistry	156	5.63	41%
2022	FW	BIOL1001	N	W	Biology II	430	6.2	40%
2022	FW	BIOL2900	В	F	Clinical Microbiology for Nurses	180	6.59	38%
2022	FW	BIOL2900	Α	F	Clinical Microbiology for Nurses	155	6.39	36%
2022	FW	BIOL1001	Р	W	Biology II	287	5.94	34%
2022	FW	BIOL2030	М	W	Animals	168	5.71	34%
2022	FW	BIOL2010	М	W	Plant Biology	182	5.43	31%
2022	FW	BIOL2020	М	W	Biochemistry	133	5.03	31%
2022	FW	BIOL1001	0	W	Biology II	354	5.59	30%

BIOL 3-4th Year courses with grades outside of expected range for >=15 student class size and >20% E/F

Acad Year	Session	Course	Section	Period	Course name	Total Grades	GPA	E/F%
2022	FW	BIOL3010	M	W	Advanced Biochemistry	119	4.79	32%
2022	FW	BIOL3110	В	F	Molecular Biology I: Nucleic acid metabolism	152	3.75	26%
2022	FW	BIOL3130	N	W	Molecular Biology II: Regulation of Gene Expression	149	4.3	25%
2022	FW	BIOL3155	M	W	Virology	191	3.66	24%
2022	FW	BIOL3130	М	W	Molecular Biology II: Regulation of Gene Expression	64	4.28	20%



FACULTY OF SCIENCE

Department of Chemistry

Jennifer van Wijngaarden Professor and Chair

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vanwijng@yorku.ca

October 5/ 2023

Re: 2022/23 Chemistry Anomalous Grades Report

Dear Professor Scheid and CEAS members:

Members of the Chemistry Teaching Committee (D. Jackson, L. Hébert, T. Mirkovic, C. Young) met to review the grades in the spreadsheet that you sent us. I have used their input in generating this report and will herein refer to an edited copy of that spreadsheet (with 2 tabs), sent as an e-mail attachment where anomalies are highlighted in yellow. Based on your advice, courses with enrolments of 15 or fewer students were not considered.

First, as a general comment, the Chemistry Teaching Committee raised concerns with the review process and specifically, with the inclusion of students who have not completed the course in the E/F grade category. Anecdotally, members felt that students who were not engaged throughout the term did not necessarily withdraw and that this inflates the reported number of F grades. Concerns were also raised about the arbitrary nature of the % cutoffs and difficulties in comparing courses across the discipline (theoretical versus applied, required versus options, etc.). Overall, it was suggested a review of the policy on grades is long overdue.

CHEM 1000G -high percentage (31%) of E/F

There are common assessments across all sections of this course in the Fall term but the evening time slot of this course tends to have a lower average. This may be a reflection that the unpopular time slot (Tu/Th 6-8 pm) is chosen by weaker/repeating students to avoid scheduling conflicts or because the timing of the lecture discourages attendance. Although lectures for all sections are recorded and made available online for students to mitigate attendance issues, the cumulative nature of the course makes it difficult to catch up for students who fall behind. Compared with other sections in Fall, Section G did not fall outside the GPA variance tolerances set by CEAS.

CHEM 1000N -slightly high percentage (29%) of E/F

This is the only section of CHEM1000 offered in Winter term and runs from 6-10 pm to avoid scheduling conflicts for those repeating the course from Fall. This course was team-taught by two very experienced faculty members (Chair and UPD) and we can certainly attest to a very low level of attendance (~25%) as students seemingly relied heavily on the recordings. Due to the compacted timetable (1 meeting per week), it is easy for students to fall behind if they miss even one class.

CHEM 2000A -high percentage (41%) of A/A+

This course was introduced a few years ago and intended for chemistry majors to bolster their problem-solving abilities through lectures in applied mathematical methods. With only 27 students in the F2022 course, it was noted that if only two students got a B+ instead of A, the grade distribution would not be anomalous by CEAS standards. This course has been attracting students from other Departments including 2 Mathematics for Education students and 3 applied math majors in the F2022 which skewed the grade distribution to higher grades.

CHEM 2011M -high percentage (39%) of E/F GPA range of 2.35 across sections

In the previous year, both Winter sections of this course reported a similar level of E/F grades as Section M reported in W23. This was attributed to the return to in-person testing and the poor participation of students in midterms (~40% of students transferred the weight to the final in W22). For W23, Section N now reports far fewer grades of E/F (16%) compared with Section M despite the instructors using a common set of slides and students writing the same assessments. Section M is considerably larger (87 students) than Section N and has a higher percentage of 2nd year students (36% versus 23%) which may imply that a greater proportion of students in Section N are repeating the course and doing better the second time around. Section M was also comprised of 51% CHEM majors (versus 23% in Section N) who are, on average, lower performing than BCHM students across many of our core courses. As before, the instructors reported a concern with students failing to complete term work with more than 20% of students in Section M missing nearly all (>80%) of the lower stakes evaluations (quizzes, midterms) during the term. At this time, more than 12% of students in Section M still have not written the final exam so taking account of this, the grade distribution would be nearly within the CEAS cutoff for E/F grades (27%). The historically high failure rates in physical chemistry remain a concern for the Department. In S2 2023, we offered CHEM2011 for the first time to assist students with progression through their degrees. For W2025, we will likely merge Sections M and N as the total enrollment is now only about 70% of what it was when the course was split into two sections several years ago which will remove the multi-section disparities but not address the course challenge of student engagement.

CHEM 2020D/F -high percentage (33-36%) E/F CHEM 2020E -slightly high percentage (35.5%) A+/A GPA variance of 1.18 across sections

Even though the graded assessments were common to the three Fall sections of this course, the night section (Section F) did not perform as well as the other

two (lower A+/A grades, higher E/F grades). While this is an unpopular time slot which attracts fewer CHEM/BCHM majors, the grade distribution was surprisingly not as disparate as in previous years and actually similar to that of Section D which runs midday. It is not clear why the students in Section E outperformed the others but the experienced teaching-stream instructor for this section reported a strong cohort of ~10 students who were highly engaged throughout the term. While this may not have been sufficient to mathematically skew the results in a class this size, it may have positively influenced the class dynamics for all students in lecture.

CHEM 2020M -high percentage (33%) of E/F

This is the only section of CHEM2020 offered in Winter and a high fraction of the class are students repeating the course. In past years, it has been noted that these students are noticeably weaker, on average, than students in the Fall term. Compared with last year when Section M had 60% of students earning grades of E/F (attributed to the fact that there was a return to in-person exams in the Winter term), the grades in W2023 are more in-line with the Fall section reults and the % of E/F grades is actually lower than for Section F.

CHEM 2021P/R -high percentage (40-41%) A+/A CHEM 2021Q - high percentage (33%) E/F GPA variance of 1.65 across sections

In general, student performance is normally stronger in this course as those who fail the pre-requisite (CHEM2020) in Fall are not able to enroll. This is confirmed in the results for the two daytime sections (P, R) having a high percentage of A+/A grades. The students in Section Q (Tu/Th 6-8pm) performed less well and it was felt that the time-slot was generally a deterrent to attendance. All lectures and tutorials are recorded to mitigate these effects but students may have misjudged the effort needed to keep up the course material.

CHEM 2030 -high percentage (30%) of E/F

This course is normally taught by an experienced teaching stream colleague who was on sabbatical last Fall. The contract faculty member who was hired for this course had not taught in the Department since before the pandemic. Although provided with lecture notes by the previous instructor, the contract faculty member may not have been familiar or comfortable with classroom technology as he did not make use of eClass, recordings and other tools to which students are accustomed. For the coming years, I plan to rotate another colleague into CHEM2030 to build depth in the Department's teaching roster.

Advanced courses:

Compared to last year's report, in which we noted a surprising variation in the apparent level of difficulty in 3000/4000 level courses (with some having over

80% earning A+/A and others are low as 6%), we are pleased to note that this spread is greatly reduced in the FW2022-2023 grades. Only two courses fall outside the anomalous grade cutoffs.

CHEM 3030A and CHEM 3060A -high percentage (27-28%) of E/F

The instructors for both courses reported poor attendance and several students who were not engaged throughout the term (missing most (if not all) assessments). This was enough to negatively skew the results in classes this size (30 and 43 students, respectively). Both courses had a substantial group of students (17-21%) earning grades of A+/A suggesting that the assessments were conducted at an appropriate level of difficulty.

Overall, the results described above suggest that as a Department and Faculty, we need to test creative solutions for improving the engagement/attendance of students. While recorded lectures are provided in many courses, we perhaps need to better communicate the importance of active engagement through attending lectures and experiment with more interactive tutorials or other new resources that students want to access. To catch those who do not participate earlier, we might consider a broader policy whereby course instructors/UPD/Chair reach out to students who miss key assessments during the term to point them to appropriate resources.

Please do let me know if further clarification is needed.

Best regards,

Jennifer van Wijngaarden

Professor, Chair of Chemistry



COMMITTEE ON EXAMINATIONS AND ACADEMIC STANDARDS

FACULTY OF SCIENCE

4700 KEELE ST TORONTO ON CANADA M3J 1P3 T 416 736 2100 EXT 33803 sciceas@yorku.ca www.yorku.ca November 22, 2023

Faculty Level Review of 2022-2023 Departmental Grade Reports - CHEMISTRY

Thank you for the submission of your anomalous grades report for the 2022-2023 academic year. The Committee on Examinations and Standards (CEAS) met on November 22, 2023 to review anomalous grade reports.

Firstly, the committee was very impressed and appreciative of the thorough effort you put into your anomalous grades report which made the review process streamlined and straightforward. Further, we acknowledge that comment provided about a review of the anomalous grade policy which CEAS intends to undertake early in 2024.

Overall, the committee was satisfied with the rationale provided for courses with anomalous grades and saw no immediate concerns. It was noted in your report that CHEM 2000 has been attracting students from outside the department, particularly mathematics. The department should continue to monitor this course and if increasing enrollment from mathematics leads to further anomalous A grades, the department may consider a course credit exclusion to students from mathematics and statistics.

Broader comments and observations from all departments will be made available as part of the annual CEAS report to Faculty council in an upcoming Faculty council agenda package.

We thank the departmental efforts for their anomalous grade review. Following Faculty of Science policies, we request that this letter be disseminated to department members so course directors can review and assess their teaching and course practices accordingly.

Sincerely,

Iain Moyles Chair, CEAS

In Olops

Philip Johnson Tihana Mirkovic

Jan Sapp

Toby Zeng

Yashna Manek

Panel Members, CEAS



Summary action items:

 Monitor outside departmental enrolment, particularly from mathematics, in CHEM 2000.

Subject: Grade Review for the Department of Mathematics and Statistics

October 11, 2023

Academic Standards Committee, Department of Mathematics and Statistics

Jorg Grigull (Chair), Man Wah Wong, Norman Purzitsky, Igor Polyakov

The academic year FW 2022-2023 was the first year with in-person teaching in almost all courses, after the pandemic disruption in 2020/2021 and the transition year of 2021/2022. The Grade Review Committee collected rationales provided by individual course instructors explaining grade anomalies, analyzed the specific pattern of these anomalies for the academic year and expressed suggestions and concerns regarding policies for preventing distribution anomalies in multisection courses.

A significant portion of anomalies in first and second year courses – those flagged as higher than 25% percentages of failing (E&F) grades - are merely technical in nature and caused by DNW grade reports that switch to F grades. Several instructors pointed out that grade distributions reported with E +F percentages lower than 25% and subsequent E,F & DNWs percentages higher than 25% - due to students missing the final exam - can not be included in the category of a grade anomaly. Upon closer view, however, the DNW's shouldn't be dismissed, as they might flag an anomaly too. Students who either miss or fail in many components of their term work (tests and assignments) very often do not write the final exam. A broader criterion for a "healthy" course might be the retention rate, or even better split up into two components: I) How many students enrolled at the end of week #1 are still enrolled just before the last drop-date, and II) how many students are still enrolled after the drop-out date? A high number #(A-B) + DNW, relative to the total number of students enrolled at the end of week #1, needs to be monitored and explanation/rationale be sought in cases were either DNW or #(A-B)+DNW signal a possible degree of anomaly. There should also be a stronger mechanism to encourage those students who, for various reasons, lack adequate term work or fail in most of their tests & assignments to drop the course, for a later retake - instead of letting non-performing students stay to the end, only to see them miss or fail the final exam, on a disproportionate scale.

A recurring theme in the rationales that are given for anomalously high E&F ratios is the lack of preparation among students who were unable to fully engage and participate – effectively left in zoom limbo - in their online-classes and faced online-tests only (or predominantly) during the pandemic in highschool, as well as in their in their first year at university. Knowledge gaps were left open for a significant part in this student population who are now assumed to bring basic skills in calculus in their first-and second year mathematics and statistics courses. Weak attendance, unfortunately, is also repeatedly identified as a cause of poor performance and higher than normal E&F ratios - especially among students who report tight temporal constraints in their attendance as resulting from non-academic work commitments.

Another factor was pointed out previously in the committee's report for the academic year 2021/2022: Where A/A+ or E/F anomalies appeared in courses that are taught by graduate students or postdocs, the provided rationales admitted a degree of teaching inexperience that led to the anomalies. For these situations, a possible remedy in improving pedagogical competency among graduate student and postdoc instructors might be to mandate the auditing of an adequate course volume - say at least one complete course, from beginning to the end – for the adequate grasp of course specifics and student expectations - prior to taking responsibility as a junior course instructor. -

Please find attached here the responses by the Grade Review Committee from the course instructors.

MATH 1506, MATH 1507, MATH 1510, or MATH 1520

The A/A+ and E/F numbers in my section (C) were within accepted range, although barely as 24% of the students failed.

The grade point average without F (DNW) was 3.76, and with F (DNW) 2.86. I am not sure if this was anomalous with the other two sections.

The problem with the performance in my section was in good part due to a poor attendance. Also, the students went into the exam with failing term grades; they did not drop the class in time. In addition, 12 out of 50 students did not write the exam and two that wrote the deferred exam performed very badly, both failed. This course is a prerequisite for MATH 1520, which in turn is a prerequisite for MATH 1013, and it is absolutely crucial that the students should be able to handle the course material.

Thanks,

MATH 1520

I sent the following to Steve and Augustine when the grades for MATH 1520 A (Fall) were submitted:

"The students' performance is very similar to the performance in the course this past Winter term. Alas, it is not good at all.

Out of 65 students enrolled in the course, 16 students did not write the exam. In fact most of these wrote no term tests and no assignments.

Out of 49 students that wrote the exam, 7 earned the grade of E and 17 the grade of F. Most of these students were failing the term tests but chose to remain in the course and I am not sure why. The final exam was very easy. The average grade on the exam is more or less the same as the average grade on the term tests. In my

opinion, the students that failed the course would not be able to handle MATH 1013 for which this course is a pre-requisite."

Thanks,

MATH 1581

The anomaly in grades in MATH 1581 S23 is due to the large number of DEF: 11 / 58 = 20% of the students. In addition there were 3 students listed in GAMS who did none of the course work, and wrote neither the midterm nor the final (and so will receive grades of F).

The deferred exam is being held today (Sep 18) so the grades should be updated by the end of the week.

I've attached the grades distribution excel spreadsheet. If you need anything more from me, please let me know.

MATH 2022

As of April 30, the GPA difference between the two section was 0.41 which was within the acceptable range. The anomaly was likely caused by the three students in Section M failing their deferred exams and the small size of Section M.

In Winter 2023, close to 10% of the students failed the course because they did not show up for the final exam. That was out of my control and should not be the reason for any grade adjustments.

MATH 1300, MATH 1310

For MATH 1300 F22 and MATH 1310 W23, all sections of both courses had 100% common assessments and 100% shared and pooled TA resources, so there were no differences between sections for the student for grading consistency or consistency in assessment. Any variations in grades between sections are strictly due to the particular student population in each section. For example, Section N was held in the evening and such sections notoriously have lower averages. Undergraduate students tend to self-select into stronger groups in certain sections of the course. When reviewing the

section grades at the end of each semester, I did not believe any grade adjustments were appropriate given the circumstances described above.

For my sections N and O of MATH 1090 Winter 2023 after the Deferred Final Exams, I detected just a very small anomaly 1.2 in my section's GPAs. Section N: E,F 19%, GPA 4.4(4.19), section O: E,F 21%, GPA 3.2(2.78). This might be due to the difference in the number of Midterm Tests, Section N (3 one-hour classes a week with 3 50-min Midterm Tests, 3 Written Assignments and FE), section O (2 1.5-hour classes a week with 2 80-min Midterm Tests, 3 Written Assignments and FE) or to the frequency of classes in a week or else just to weaker students in section O.

MATH 2030

My initial comments regarding 2030 are very straightforward. Many of my students simply never attended (it was a 7-10pm class) and I found many students coming out of covid to have very weak skills in Mathematics. While 1013/1014 was a prerequisite I had to aid them a great deal with more basic concepts (functions, fractions, etc).

Please let me know if and when you need more information.

Best,

MATH 3001

I appreciate your question about the grading anomaly observed in the MATH 3001 course, and I would be happy to provide some insights to help you better understand the situation.

The main factor I identified was the transition to in-person classes. Most courses were conducted online for an extended period. The change in the learning environment and teaching methodologies with inperson instruction posed a challenge for some students who had become accustomed to online learning, which could have affected their performance in the course.

Additionally, it is important to consider the class size in MATH 3001, which comprised only 23 students. A small class size like this can have an impact on statistical reliability when analyzing grade distributions. A broader analysis, including a comparison with data from previous years and considering any additional relevant information, may be beneficial to gain a more comprehensive understanding of the situation.

I hope this explanation provides some clarity on the matter. Should you require further information or clarification, please do not hesitate to reach out.

Best,

MATH 3010

Here is the rationale for the grade anomaly in Math3010 3.0. Excluding the 2 FDNW and 4 DEF, there was no anomaly. The % of E & F was 9.68, no anomaly.

The 4 DEF did not show up and the 2 FDNW did not contact me about why DNW, these 6 students got an F. The new % of E & F is 29.3, an anomaly.

MATH 1014

I believe that this issue of failing grade class percentage has manifested through a miss interpretation on how the final grades percentages are calculated by the Registrar's Office compared to my interpretation of how it should be calculated.

When I uploaded the final course grades to GAM, failing grades (E/F) are based on the number of students that actually complete the course by writing the final exam, and does not include the number of students that received a FDNW rating because they did not finish the course (e.g. not writing the final exam) and did not drop the course prior to the deadline.

Based on my take on how the percentage should be calculated, both my courses MATH 1014 (N,S) are within the pass/fail grade parameter (<25%).

For MATH 1014 (N), my fail (E/F) total was 12 out of the 53 students that completed to course by writing the final exam with a corresponding percentage is 22.6%, within the <25% target range. The 11

students that did not show up to write the final exam received a FDNW. When the Registrar Office proceeded to change the FDNW's - blank grade, in the subsequent weeks, to an F grade, it jumped the final percentage to 44%.

For Section MATH 1014 (S): real number of E/F was also 12 for all the students that wrote the exam and completed the course (making the corresponding percentage 24.4%). Again, 10 students did not write final exam and did not drop the course before the deadline. When the Registrar' office changed the FDWN to an F, the calculation percentage E/F jumped to 45%.

While I wish I had more control on how to get students to write the final exam unfortunately it is beyond my control.

After inquiring for any insight why the might be an anomalous distribution of E/F grades in my Section MATH 1506(H) I received the following response from the Coordinator of the course

"Each section in Math 1506 and 1507 wrote the same assessments created by the course coordinator, and had access to all of the same preparatory material in terms of notes and homework. It is difficult to say why one section had significantly different performance from the others."

If you have any further questions on this issue please feel free to reach out to me.

MATH 1200

In the 2023 winter term, 37% of students my course Math 1200 Section M received an A or A+ grade. The course enrollment was 30 students, so 37% is about half of one student above the 35% threshold. The abundance of excellent or outstanding grades in my section is a reflection of the high number of motivated and academically excellent students enrolled.

Math 1200 is a small, major-only course with a curriculum that aligns directly with the core content of mathematics majors. The small course size is significant when calculating anomalies, but I also believe the major breakdown and course content played a factor in my grade distribution. Several students who enrolled in the course began with significant background knowledge of the topic, reflecting a deep interest in mathematics. For similar reasons, many students were highly committed to deeply learning each course topic.

The high level of student engagement and proficiency was visible throughout the course: each student who earned an A or A+ thoroughly prepared for all or most class meetings, actively participated in class, and frequently communicated with their instructor and TAs though email and/or office hours. Final grades were based on multiple assessment categories, and the students in question also demonstrated unquestionably "excellent" or "outstanding" conceptual knowledge and skills throughout, with the lowest "A" grade sitting more than three percentage points above the 80% cutoff. The overall grade breakdown and 60% of the grade components (homework assignments and the final exam) were developed in collaboration with Natasha May, an experienced instructor of Math 1200, so I am confident these high marks reflect true proficiency in the course content.

Below is my explanation for the grading anomalies in 2022F MATH 3021 A.

In Fall 2022, I taught MATH 3021A and had a total of 26 students.

Among them, 17 took the final exam, and 7 students submitted a deferred standing request. Among the seven students who deferred the exam, 3 did not attempt the final exam.

Therefore, a total of 5 students did not attempt the final exam.

Regarding the exam, it was split into questions, each of which was assigned a certain score. The total possible score was 100 points. Among these points, 48 could be achieved by:

- Stating definitions. For example, what does a|b mean? The answer is "a divides b" or "b is an integer multiple of a" or "for some integer k, b=ka"
- Explaining whether a given object satisfies a definition. For example, is the set of all 2x2 real matrices with multiplication a group? The answer is "No, because not all 2x2 real matrices are invertible".
- A direct application of a concept requiring a one-line response. For example, write the orbit of x = (1,2,1,2) under the standard group action of S_4 on R^4. The answer is "(1,2,1,2), (1,1,2,2), (1,2,2,1), (2,1,1,2), (2,1,2,1), (2,2,1,1)"

I believe that a student with a baseline familiarity with course material and hardly any problem-solving skills should be able to score all these points.

Among the students who took the final exam, 4 received a total score under 25%, indicating that their preparation was far below what it should be to pass the course. This may be due to students having passed prerequisite courses during the pandemic and thus often not achieving the expected learning outcomes or due to complacency.

Excluding all the aforementioned cases, 3 students received a final grade of E, and none a final grade of F.

I hope the CEAS will find this explanation sufficient, but feel free to let me know if you require additional details.

Best regards,

September 27, 2023

Grade anomalies report – MATH 4130K Winter 2023

Instructor:

Grades for MATH 4130K (Winter 2023) were anomalous due to 3 "E" grades and 3 "F" grades together representing 37.5% of all grades. I believe this result is due to chance in a relatively small class (16 students) where there were four failing students that did not submit all the required coursework. These students are as follows:

- One student did not hand in any assignments or sit any of the exams.
- One student handed in the first assignment, but not the remaining assignments. This student did not write any of the exams.
- One student handed in all coursework except for the final project, which represents 15% of the grade calculation.
- One student handed in all coursework but did not write the final exam.

After accounting for these, there were only two students who submitted all the required coursework and received failing grades. I should also note that 5/16=31.25% of students received either "A" or "A+". Thus, I do not believe the anomaly is due to anything systematic; rather, it is simply a result of chance.



COMMITTEE ON EXAMINATIONS AND ACADEMIC STANDARDS

FACULTY OF SCIENCE

4700 KEELE ST TORONTO ON CANADA M3J 1P3 T 416 736 2100 EXT 33803 sciceas@yorku.ca www.yorku.ca November 22, 2023

Faculty Level Review of 2022-2023 Departmental Grade Reports – Mathematics and Statistics

Thank you for the submission of your anomalous grades report for the 2022-2023 academic year. The Committee on Examinations and Standards (CEAS) met on November 22, 2023 to review anomalous grade reports.

Overall, the committee was satisfied with the rationale provided for courses with anomalous grades and saw no immediate concerns. However, it was noted that a rationale was not provided for every anomalous course. We remind the department that the Faculty of Science policy on grades requires that a course director rationale be solicited for all courses that are considered anomalous. If such requests are ignored the departmental report should make note of this so CEAS can follow up as needed. CEAS may initiate further review for courses for which an anomalous justification was not provided.

Broader comments and observations from all departments will be made available as part of the annual CEAS report to Faculty council in an upcoming Faculty council agenda package.

We thank the departmental efforts for their anomalous grade review. Following Faculty of Science policies, we request that this letter be disseminated to department members so course directors can review and assess their teaching and course practices accordingly.

Sincerely,

Iain Moyles Chair, CEAS

In Olops

Philip Johnson

Tihana Mirkovic

Jan Sapp

Toby Zeng

Yashna Manek

Panel Members, CEAS



Summary action items:

 Resubmission of anomalous grade report to include all courses which are considered anomalous. Courses where a justification is not provided by a course director should be noted so CEAS can follow up appropriately.

Division of Natural Science (NATS) 2022-23 Anomalous Grades Report November 15, 2023

In 2022-23, 29% of NATS courses had anomalously high grades. This is down a few percent from the last 2 years, during which time we experienced unusually high grade distributions as a result of the transition to online learning during the pandemic. Regardless, NATS courses are particularly prone to high grade distributions because, while they are 1000-level introductory courses, students can take them at any point during their degree. In 2022, 33% of NATS students were in their 2nd year or higher, and 15% were in their 3rd or 4th year. For many NATS courses, learning outcomes include components which introduce students to university-level expectations, such as exercises designed to improve students' skills in reading, writing, citation, etc. Thus, upper-year students are likely raising the class average, even though the material is new to them and being taught at an appropriately-challenging level for a NATS course.

Having said the above, it is important for us to ensure that our learning outcomes are being reliably evaluated and that academic integrity is being maintained. To that end, we have reviewed each of the 2022-23 courses with anomalous grades and have provided a rationale for the anomalies in the following sections.

Leg	end
	A,A+ > 35%
	E,F > 25%
	section grade point averages beyond 1 grade point in variation

Year	Course	Title	Sect	Per	Format	Instructor	Cr	A/A+	E/F Pct	GPA	Total
								Pct			Grades
2022	NATS1515	Atmospheric Pollution	М	W	LECT		3	36%	12%	5.6	147
2022	NATS1830	Mysteries of Everyday Matter	А	Υ	LECT		6	39%	8%	5.9	114

NATS1515 – 2022 was the first academic year that this course was offered with a prerequisite of NATS 1512. The marginally anomalous A/A+ grades are likely due to the additional experience that students had from having taken the

prerequisite. will continue to monitor grades in this course this academic year to see if this is the case. It should also be noted that the prerequisite requirement has been dropped owing to the challenge of enforcing prerequisites for general education courses.

NATS1830 – 2022-23 is the second year that labs were offered in this course. Lab grades were high compared to the first year that labs were offered and resulted in overall higher final grades. As labs are an important part of the experiential education in the course, will continue to monitor the lab grades and consider increasing their difficulty level in future terms.

Year	Course	Title	Sect	Per	Format	Instructor	Cr	A/A+ Pct	E/F Pct	GPA	Total Grades
2022	NATS1525	Extraterrestrial Life	Α	F	LECT		3	38%	9%	6.0	170

The number of A/A+ in **NATS1525** was higher than expected in 2022 due to a bonus assignment that was made available to all students, for added flexibility during this transitional year after the pandemic. The bonus assignment was intended for students who had to miss a tutorial, or who did poorly on one of the term tests. A number of students with already-high grades elected to complete the bonus assignment and this resulted in an increase in the number of A/A+ grades.

Year	Course	Title	Sect	Per	Format	Instructor	Cr	A/A+	E/F Pct	GPA	Total
								Pct			Grades
2022	NATS1595	Mathematics of Biology	Α	F	LECT		3	62%	2%	7.1	49
2022	NATS1595	Mathematics of Biology	М	W	LECT		3	55%	11%	6.4	91
2022	NATS1920	Nature & Growth of	Α	Υ	LECT		6	55%	10%	6.3	113
		Mathematical Ideas									

NATS1595 – 2022/23 was the first year this course was offered. There was a significant drop in the proportion of A/A+ in the second offering in W2023. While this proportion is still too high, it is expected to drop as the "kinks" in the new course are worked out. This will include more challenging questions on assessment which will include long answer questions and fewer calculation questions.

NATS1920 – There were some issues with inconsistent (artificially high) grading in this course by teaching assistants. This was made apparent after the final exam (which the course director graded) as it had a much lower average than the tests (TA graded), but contained very similar questions. In the current iteration of the course, the course director is now asking the TAs to grade 5 tests/assignments, then reviewing and regrading their work, and then providing them with detailed comments. The course director is also providing TAs with videos illustrating how the assignment solutions should be done.

Year	Course	Title	Sect	Per	Format	Instructor	Cr	A/A+ Pct	E/F Pct	GPA	Total Grades
2022	NATS1660	Biology of Sex	Α	Υ	LECT		6	37%	14%	5.5	117

In 2022-23, **NATS 1660** was taught (for the first time) by a CUPE2 instructor who was filling in for the usual instructor during their sabbatical. The 2022-23 version contained some additional flexibility to support students with transitioning back to inperson classes and labs. For example, labs were marked on a pass/fail basis, resulting in a higher average for the lab component. In addition, the final exam grade replaced the lowest test mark if the final exam grade was higher than that lowest mark, in order to encourage students to improve on their knowledge from earlier in the term. These one-time accommodations are likely to be the cause of the higher number of A+/A grades.

Year	Course	Title	Sect	Per	Format	Instructor	Cr	A/A+ Pct	E/F Pct	GPA	Total Grades
2022	NATS1675	Human Development	Α	Υ	ONCA		6	17%	26%	4.1	164
2022	NATS1675	Human Development	В	Υ	ONCA		6	27%	12%	5.3	165
2022	NATS1675	Human Development	N	W	ONCA		6	28%	14%	5.1	188

NATS1675 has rarely, if ever, had an anomalous grade distribution. The 2022 distributions for sections B and N are very consistent with previous years. However, 2022 was an anomalous year for this course, since NATS1675A is normally offered in the in-person (LECT) format. In August 2022, we had to convert section A to ONCA to address workplace accommodations that had been approved for the Course Director by HR. Students were alerted of the change and were given the opportunity to switch to other in-person NATS courses, but nearly all students remained in the course. The course

director has reported that in section A, 23 students (14%) did not complete enough assessments to pass, in comparison to only 4% of students in sections B and D and 6% in the SU22 section of this course. Thus, we suspect that section A's last-minute transition to ONCA created some confusion, particularly among 1st-year students who may not have been prepared for the expectations of an online course and may not have sufficiently engaged in the course materials or been aware of deadlines. While unfortunate, this is an isolated incident as section A has returned to the LECT format for 2023.

Year	Course	Title	Sect	Per	Format	Instructor	Cr	A/A+ Pct	E/F Pct	GPA	Total Grades
2022	NATS1740	Astronomy	Α	Υ	LECT		6	49%	7%	6.4	216
2022	NATS1740	Astronomy	В	Υ	ONLN		6	12%	14%	4.5	203
2022	NATS1740	Astronomy	М	W	LECT		6	17%	15%	4.6	211

NATS1740 - During this post-pandemic transitional year, chose to use entirely online assessments, 70% of which were project based. While NATS1740B is also entirely online, 60% of the final grade comes from timed online exams. As 2022 saw a rapid rise in use of ChatGPT and similar tools, academic integrity may have been compromised on assignments, which are unique to her section. It is not teaching in NATS in 2023-24, but when she returns to NATS, this exercise may trigger a review of NATS assessments to ensure that they are appropriately challenging and that academic honesty is being maintained.

Year	Course	Title	Sect	Per	Format	Instructor	С	A/A+ Pct	E/F	GPA	Total
							r		Pct		Grades
2022	NATS1745	History of Astronomy	Α	Υ	LECT		6	16%	12%	4.8	205
2022	NATS1745	History of Astronomy	В	Υ	ONCA		6	30%	3%	5.6	214
2022	NATS1745	History of Astronomy	М	W	LECT		6	40%	7%	6.1	184
2022	NATS1945	Physics & Tech for World	Α	Υ	LECT		6	36%	7%	6.2	108
		Leaders									
2022	NATS1585	Exploring the Universe	Α	F	LECT		3	40%	8%	6.1	73

Prof. Rafiee has identified that one of his 2022-23 assessments had a 10% increase from previous years. The assessment involves a series of short research essays in which the top 5 of 6 essays are counted in the final grade. This assessment is

used in all of NATS courses and amounted to 20% of the final grade. Suspects that the assessments were compromised by the use of AI, especially as the use of AI was not explicitly prohibited in course outlines from FW22-23. This year, has adjusted the assessment by reducing it by 5% while increasing the weight of inperson assessments. In addition, there is now a statement in the course outline as well as the assignment instructions about prohibiting the use of AI. Lastly, the assessment's evaluation scheme now places a greater emphasis on the correct use of citations. These modifications are likely to bring down the average GPA and number of A/A+ grades in courses. We will revisit this during the 2023-24 anomalous grades exercise to determine if additional modifications are necessary.

Year	Course	Title	Sect	Per	Format	Instructor	Cr	A/A+ Pct	E/F Pct	GPA	Total Grades
2022	NATS1530	Spaceflight and Exploration	Α	F	LECT		3	29%	15%	5.2	229
2022	NATS1530	Spaceflight and Exploration	N	W	ONLN		3	54%	7%	6.6	244

Prof. Delaney has identified that for **NATS1530** W23, the class average on the essay assessment (worth 15%) was unusually high, likely owing to AI use. All other assessments had normal distributions. has since dropped the essay assessment and replaced it with short-answer questions in a timed examination assessment. We will revisit this during the 2023-24 anomalous grades exercise to determine if additional modifications are necessary.

Year	Course	Title	Sect	Per	Format	Instructor	Cr	A/A+ Pct	E/F Pct	GPA	Total Grades
2022	NATS1750	Earth and its Atmosphere	Α	Υ	LECT		6	22%	34%	4.2	32
2022	NATS1750	Earth and its Atmosphere	В	Υ	ONLN		6	31%	12%	5.6	32
2022	NATS1780	Weather and Climate	Α	Υ	LECT		6	11%	33%	3.5	171

NATS1750 and NATS1870, when taught by during the FW term, typically have a higher percent of E/F grades than other NATS courses, though in FW22-23 the percent of E/F grades was unusually high. We reviewed evaluation scheme and confirmed that it is consistent with other NATS courses (with in-person exams comprising 55%-60% of the final grade) and clearly communicated to students. We also reviewed the course assessments in detail and confirmed that the average grades are within normal ranges for similar assessments in other NATS courses.

In addition to the exams, both courses use assessments comprised of multiple assignments throughout the course (eg, 6 labs, 10-12 quizzes, etc.). Deadlines are clearly and frequently communicated to students and the assessments contain an appropriate amount of flexibility (eg, students have 2 full weeks to complete an online quiz, and the quiz can be retaken to improve one's mark.) Despite this, students who failed the course were found to have numerous zeros for assessments, suggesting that an unusually high number of students have difficulty keeping up with the coursework. We checked the course evaluations and class rep comments for insight, but neither contain complaints about the quantity and difficulty level of the assessments. Both of these diagnostics, combined with consistently high enrolment and retention in classes, are indicative of a well-designed course. It should also be noted that SU version of NATS1870 has a normal grade distribution.

Regardless, grant is going to investigate the following strategies for engaging students at risk of failing the course:

- Posting an interim grade prior to the drop date
- Providing instructions for students to calculate their grade
- Prior to the drop date, alerting students with failing grades and suggesting that they contact the course director to discuss strategies for improving their mark
- Holding an exam review

Year	Course	Title	Sect	Per	Format	Instructor	Cr	A/A+ Pct	E/F Pct	GPA	Total Grades
2022	NATS1810	Energy	Α	Υ	LECT		6	48%	19%	5.6	42

Since 2020, **NATS1810** has been taught by a PHAS faculty member who delivers the course similarly to a first-year physics course. Final grades are computed entirely from a series of unit tests involving mathematical problem solving. The emphasis on mathematics is not stated in the Course Description, leading to low retention; in 2022, the peak enrolment was 65, dropping down to 42 (65%) by the end of the term. This is ~15% lower than the average retention in a NATS course. Thus, students who remain in the course are more likely to be high-achieving students with strong math skills. Such students are also more likely to attend tutorials, during which he provides considerable assistance. As a result, the course has consistently had a high percentage of A/A+ grades. Certainly, the anomaly is not a result of assessments that aren't challenging enough.

In 2023-24, is co-teaching the course with a CUPE2 member as is not available to teach it in the Winter term. This change may have an impact on retention and final grades.

Year	Course	Title	Sect	Per	Format	Instructor	Cr	A/A+ Pct	E/F Pct	GPA	Total Grades
2022	NATS1940	Biodiversity & Conservation	Α	Υ	LECT		6	39%	7%	6.2	175
2022	NATS1690	Evolution	Α	Υ	LECT		6	42%	5%	6.3	178

In 2022-23, NATS 1690 and NATS1940 exams were held open-book and online for the first time, in order to support the cohort of students with minimal experience writing in-person exams. It is suspected that the open-book aspect of the exams, in addition to undetected use of AI, may have inflated the exams scores. In 2023-24, NATS1690 exams have returned to in-person. NATS 1940 has remained in the fully-online format and is investigating strategies for maintaining academic honesty in online assessments. Regardless, in 2024-25, NATS1940 will be offered in the LECT and ONCA formats and exams will be held in person.

This report is the result of a Department-level review conducted by the NATS Director, NATS Undergraduate Program Director, and the NATS Chair of Teaching & Learning, following the procedures outlined in the Faculty of Science Policy on Grades.

NATS Director

NATS Undergraduate Program Director

Carly Rozins

NATS Chair of Teaching & Learning



COMMITTEE ON EXAMINATIONS AND ACADEMIC STANDARDS

FACULTY OF SCIENCE

4700 KEELE ST TORONTO ON CANADA M3J 1P3 T 416 736 2100 EXT 33803 sciceas@yorku.ca www.yorku.ca November 22, 2023

Faculty Level Review of 2022-2023 Departmental Grade Reports - NATS

Thank you for the submission of your anomalous grades report for the 2022-2023 academic year. The Committee on Examinations and Standards (CEAS) met on November 22, 2023 to review anomalous grade reports.

Firstly, the committee was very impressed and appreciative of the thorough effort you put into your anomalous grades report which made the review process streamlined and straightforward.

Overall, the committee was satisfied with the rationale provided for courses with anomalous grades and saw no immediate concerns. It was noted in your report that some courses (NATS 1740 for example) have different assessments and weights between sections. The department acknowledges this is an issue and CEAS recommends that, when possible, consistent assessments and grading schemes be used across all sections of a course. We note the Faculty of Science grading policy states "Students should expect a consistent standard when taking courses in different years and across different sections. Achieving a certain grade in a course should reflect having the comparable attainment of the learning outcomes by a student, irrelevant of when it is taken, and which instructor teaches it."

Broader comments and observations from all departments will be made available as part of the annual CEAS report to Faculty council in an upcoming Faculty council agenda package.

We thank the departmental efforts for their anomalous grade review. Following Faculty of Science policies, we request that this letter be disseminated to department members so course directors can review and assess their teaching and course practices accordingly.

Sincerely,

lain Moyles Chair, CEAS
Philip Johnson

In Olops

Tihana Mirkovic

Jan Sapp

Toby Zeng

Yashna Manek

Panel Members, CEAS



Summary action items:

 Continue to remind course directors of the importance in consistency in assessments and grading schemes across sections of the same course

Grade Report to CEAS PHAS FW 2022-2023 M. George UPD

The grades from the FW 22/23 session were reviewed according to the Faculty of Science Policy on Grades. We have reviewed the grades of all courses and have highlighted the courses below which were outside of the levels given in the policy guidelines. This report was compiled by the UPD and reviewed the PHAS Curriculum Committee.

PHYS 1412M 3.0, Physics Fundamentals 2, Winter, 51% A,A+

Students: 163 CD:

Grade Distribution:

A+	Α	B+	В	C+	С	D+	D	E	F
25%	26%	14%	9%	9%	6%	1%	1%	0%	10%

Syllabus: Labs 20%, Assignments 10%, Tests(2) 40%, Final Exam 30%

Investigation: This is the first time the course director has taught this course. The course elements are weighted appropriately, and all topics appear covered at a sufficient level. Tests and exams were not rescaled. The same structure was used in the preceding PHYS 1411 by the same course director with many of the same students setting similar expectations and there was a very reasonable 26% A/A+.

Moving Forward: The course director will readjust the expectations for this course and set the tests and exams at a slightly higher level.

PHYS 1422M, Physics with Life Science Applications 2, 3.0, Winter, 37% A/A+

Grade Distribution:

Students: 88

A+	Α	B+	В	C+	С	D+	D	E	F
13%	24%	16%	5%	13%	12%	1%	2%	2%	12%

Syllabus: Assignments 20%, Labs 20%, Test 30%, Final Exam 30%

Investigation: Marginally above FSc Grades Policy guidelines. Although at the 1000-level, this course attracts students from all year levels, and contains a large fraction of high-achieving life-sciences and kinesiology students who aspire to professional school. This distribution is not unexpected for this

course, especially given the historically low enrollment numbers (not explained here)- we suspect high-achieving students disproportionately stuck with the PHYS 1421/1422 sequence.

Moving forward: No changes to course presentation.

PHYS 1510A, Introduction to Physics, 3.0, Fall, 47% A/A+

Students: 49 CD:

Grade Distribution:

A+	Α	B+	В	C+	С	D+	D	E	F
20%	27%	8%	6%	16%	8%	4%	2%	2%	6%

Syllabus: Assignments 25%, Tests(2) 40%, Final Exam 45%

Investigation: Course Director notes that

"The major problem is that there are many moderate/strong students and many terrible students. My problem is that my tests are always done very poorly and to bring the class average up I need to adjust marks. To keep the number of failures at a reasonable level and to reduce the number of students dropping after the first test as well."

Moving Forward: The course director is reminded there should be no pressure to raise students grades to allow students who cannot demonstrate sufficient understanding of the course learning outcomes to pass (which in turn causes those doing "good" in the course to be raised to the A/A+ level).

PHYS 1510M, Introduction to Physics, 3.0, Winter, 28% E/F

Students: 83 CD:

Grade Distribution:

A+	Α	B+	В	C+	С	D+	D	E	F
10%	16%	5%	8%	11%	5%	5%	13%	1%	27%

Syllabus: In-Class participation 5%, Assignments 20%, Tests(2) 40%, Final Exam 35%

Investigation: Only a minor variance. Many students succeed in this course, but a cohort really struggled. The course material, pace of presentation, and text and exam expectations were very similar

to previous years. Perhaps this cohort of students struggled through high-school during covid and did not enter the course with the expected level of previous physics exposure.

Moving Forward: No changes recommended. Student are required to demonstrate appropriate understanding of the course learning outcomes to pass.

PHYS 1800M, Engineering Mechanics, 3.0, Winter 41% E/F

Students: 103 CD:

Grade Distribution:

A+	Α	B+	В	C+	С	D+	D	E	F
10%	5%	7%	9%	9%	14%	7%	0%	16%	25%

Syllabus: Assignments 10%, Online Quizzes 10%, Labs 20%, Tests(2) 24%, Final Exam 36%

Investigation: PHYS 1800 WL is a course which is comprised of students who failed PHYS 1800 F and students starting their program in January. A disproportionately large number of students did not put in a reasonable amount of effort. 18% of students completed less than half of the online quizzes, and 10% did not write the final exam.

From the course director:

"... students who exhibited regular class attendance and consistently completed assigned tasks excelled and achieved commendable grades. On the other hand, those who did not attend class due to late enrollment or late arrivals and failed to engage with assignments struggled to perform well in crucial assessments. It is my belief that the accommodation of late enrollment contributed to a misconception that success could be attained with effort. Conversely, had the weight of midterms not been transferred to the final exam, students might have opted to withdraw from the course before the withdrawal deadline."

Moving Forward: From the course director:

"For future instances, the approach of transferring midterm weights to the final exam will not be employed unless otherwise it is very well justified. Instead, students failing to complete more than 50% of their assessments prior to the withdrawal deadline will be advised to drop the course. This proactive measure aims to ensure that students commit to the course's requirements from the outset, enhancing their chances of success."

PHYS 2040A, Relativity and Modern Physics 3.0, Fall, 40% A/A+

Students: 55 CD:

Grade Distribution:

A+	Α	B+	В	C+	С	D+	D	E	F
18%	22%	20%	24%	4%	2%	5%	4%	2%	0%

Syllabus: Assignments 20%, Tests(2) 40%, Final Exam 40%

Investigation: From the course director:

- a) the Covid-19 years, with varying prep for students coming to university
- b) the backgrounds of students coming from PHYS1011/1012 vs other 1st year classes.

So, I tried my best to keep the students who weren't doing well engaged, but a good number of them failed to do well on tests and dropped. The exam average was 71% the two class test averages were 80% and 73% respectively, and included failing grades, but the students could make up on assignment grades. So there was a high number of very motivated students.

Should I have punished them for that???"

This appears to be residual fallout from covid, and good "course planning" (through dropping) by students who were not doing well.

Moving Forward: Course director is reminded that student who cannot demonstrate sufficient understanding of the course learning outcomes should not pass the course.

PHYS 2211A 1.0, W, Experimental Electromagnetism 36% E/F

Students: 196 CD:

Grade Distribution:

A+	Α	B+	В	C+	С	D+	D	E	F
30%	41%	10%	9%	4%	2%	1%	2%	0%	1%

Syllabus: Labs 100%

Investigation: This is entirely a lab course, and is worth 1.0 credit, Students submit an independent report, however in-class collaboration is greatly encouraged.

Measures are put in place to mitigate opportunities for students breaching academic honesty policy, such as altering the report templates each year, changing experiment parameters, checking IP addresses of submissions, and taking careful attendance.

Moving forward: This is a typical grade distribution for this course. Students who show up and participate in the labs perform well.

[&]quot;There was a very uneven playing field in this class, perhaps for multiple reasons:



COMMITTEE ON EXAMINATIONS AND ACADEMIC STANDARDS

FACULTY OF SCIENCE

4700 KEELE ST TORONTO ON CANADA M3J 1P3 T 416 736 2100 EXT 33803 sciceas@yorku.ca www.yorku.ca November 22, 2023

Faculty Level Review of 2022-2023 Departmental Grade Reports - Physics

Thank you for the submission of your anomalous grades report for the 2022-2023 academic year. The Committee on Examinations and Standards (CEAS) met on November 22, 2023 to review anomalous grade reports.

Overall, the committee was satisfied with the rationale provided for courses with anomalous grades and saw no immediate concerns. It was noted in your report that some course directors felt obligated to inflate grades to avoid low averages. CEAS would like to affirm the departmental response that course directors should not feel pressured to scale grades and that grades which fall within the anomalous spectrum are acceptable provided they are sufficiently justified.

Broader comments and observations from all departments will be made available as part of the annual CEAS report to Faculty council in an upcoming Faculty council agenda package.

We thank the departmental efforts for their anomalous grade review. Following Faculty of Science policies, we request that this letter be disseminated to department members so course directors can review and assess their teaching and course practices accordingly.

Sincerely,

Iain Moyles Chair, CEAS Philip Johnson Tihana Mirkovic Jan Sapp Toby Zeng Yashna Manek

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Panel Members, CEAS



Summary action items:

• Continue to remind course directors that they should not feel pressured to inflate grades solely to avoid low averages or anomalously low grades.

To: Chair, CEAS, Faculty of Science

From: Vera Pavri, Chair, Science, Technology and Society Department

Date: October 18 2023

Subject:STS Grades Review Report

STS Department – Grades Review 2022-23

Our department has reviewed the grades for all STS courses in 2022-23.

According to the grades spreadsheet we were given, there are two courses over fifteen students which present anomalous findings, STS 3400 (56% A or A+) and STS 4780 (52% A or A+). The instructor for STS 3400 was contacted and has provided a rationale for their grades distribution. Please see below. I am satisfied with this response.

After careful consideration, I have determined that no further action should be taken for STS 4780. It is only slightly above the anomalous threshold which is quite normal in a 4th year course with few students.

If you have further questions or require more information, please do not hesitate to contact me.

STS 3400 - Instructor Comments

The reason my students had good grades is because they worked on collective projects at the end of the year (3 or 4 per group), and they did a very good job. I was quite impressed. I also asked them to write a short paper after their collective project where they had to reflect on their experience. This is also something that they did well. They also had 2 papers to write during the year, some did very well, others less so.



COMMITTEE ON EXAMINATIONS AND ACADEMIC STANDARDS

FACULTY OF SCIENCE

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Faculty Level Review of 2022-2023 Departmental Grade Reports - STS

Thank you for the submission of your anomalous grades report for the 2022-2023 academic year. The Committee on Examinations and Standards (CEAS) met on November 22, 2023 to review anomalous grade reports.

Overall, the committee was satisfied with the rationale provided for courses with anomalous grades and saw no immediate concerns.

Broader comments and observations from all departments will be made available as part of the annual CEAS report to Faculty council in an upcoming Faculty council agenda package.

We thank the departmental efforts for their anomalous grade review. Following Faculty of Science policies, we request that this letter be disseminated to department members so course directors can review and assess their teaching and course practices accordingly.

Sincerely,

lain Moyles Chair, CEAS

gin Olops

Philip Johnson

Tihana Mirkovic

Jan Sapp

Toby Zeng

Yashna Manek

Panel Members, CEAS



Summary action items:

• None

York University 2022

Strategic Scheduling Evaluation



February 13, 2023

York University Final Report

Consultants:

Lisa Hunter, Christine Stewart, Laura Kelley



Introduction

Project Overview

The Academic Scheduling Unit at York University has been advocating for several years for an external, objective review of scheduling practices and processes to ensure that the institution is operating as effectively and efficiently as possible while ensuring student success.

After a competitive procurement process, York University made the decision to partner with Ad Astra to conduct a qualitative and quantitative review of course scheduling processes, policies, procedures, course offerings, and classroom capacity.

The goal is to have this partner, Ad Astra, provide a list of recommendations to York University that will improve the academic scheduling practices and processes to achieve better utilization of space and creates a student-centered academic schedule.

Key Questions

- Is York utilizing classroom space as effectively and efficiently as possible?
 - Are there enough seats and courses to meet student demand?

The qualitative review or *Course Scheduling Infrastructure Evaluation* consisted of the following two components.

- 1. Course Scheduling Infrastructure Diagnostic Survey
- 2. Key Stakeholder Focus Groups

The quantitative review or *Strategic Scheduling Checkup* consisted of an analysis of the following two components.

- 1. Course Offerings
- 2. Classroom Capacity

Methodology

Steering Committee

To begin the project, York identified key stakeholders to serve on a steering committee. The role of the steering committee is to provide input and feedback to Ad Astra consultants throughout the length of the project, as well as serve as campus liaisons for York stakeholders.

The following individuals agreed to serve on the steering committee.

- Frankie Billingsley (Associate Registrar & Director, Student Records & Scheduling)
- Laurie Mobilio (Director, Student Systems)
- Dr. Mike Scheid (Associate Dean, Students, Faculty of Science)
- Dr. Julie Clark (Faculty Member, Natural Sciences, Faculty of Science)
- Dr. Maggie Quirt (Associate Dean, Programs, Faculty of Liberal Arts & Professional Studies)
- Dr. Michael Darroch (Associate Dean, Academic, School of Arts, Media, Performance & Design)
- Dr. Karin Page-Cutrara (Associate Dean, Teaching, Learning & Academic, Faculty of Health)
- Dr. Merv Mosher (Faculty Member, Kinesiology, Faculty of Health)
- Bradley Parkes (Facilities)
- Helen Psathas (Director, Campus Planning)
- Emily Rush (Provost's Office)
- Pam Edgecombe (Director, Strategic Policy & Planning, Lassonde School of Engineering)
- Paul Elliott (Executive Officer, Faculty of Environmental & Urban Change)
- Laura Crane (Director, Academic Affairs & Operations, Faculty of Education)
- Gilles Thibodeau (Director, Academic Services, Glendon)
- Luba Pan (Director, Student & Enrolment Services, Schulich School of Business)
- Karen Willoughby (International & Academic Programs Coordinator, Osgoode Hall Law School)

- Wesley Moir (Associate Director, Graduate Academic Affairs, Faculty of Graduate Studies)
- Carolyn Sebastian (Faculty Assistant, Faculty of Liberal Arts & Professional Studies)
- Cristina Bregar (University Lead, Academic Advising, Office of the University Registrar)
- Mark Conrad (Director, Strategic Intelligence and Predictive Analytics, Office of Institutional Analysis & Planning)

Members of the Steering Committee attended a project kickoff meeting with the Ad Astra consultants, which consisted of a project overview and an opportunity for members to ask questions of the consultants and discuss internal processes. Additionally, two project kickoff meetings, open to all campus members, were held in April 2022.

Project Timeline

The project consisted of the following components:

- Feb 2022-pre- Kickoff
- March 2022- Ad Astra/York- project touchpoints
- April 2022- Project kickoff
 - o June/July 2022- Focus Group Meetings
 - o June 7th: Deans
 - o June 7th: Associate Deans
 - o June 10th: Academic Scheduling Team
 - June 13th: Advising Community
 - June 21st: Faculty Members
 - June 27th: Scheduling Leads
 - o June 27th: Registrar
 - o June 29th: Additional Session for Steering Committee
 - o July 7th: Facilities Management
- August 2022- Ad Astra/York- project touchpoint meetings
- Sept 2022- Final review call- small group
- November 2022- Ad Astra/York- project touchpoint meetings
- December 2022: Data review meetings
- January 2023: Ad Astra/York- project touchpoint
- Feb 2023; Final Presentation- Steering Committee

Results

Course Scheduling Infrastructure Diagnostic Survey

The Course Scheduling Infrastructure Diagnostic (CSID) survey questions and results are organized into the categories of student success, sustainability, schedule grid, classroom scheduling, student information system, faculty scheduling, and policy & procedure. The survey results are compared against other institutions that have completed the survey in a similar engagement as a reference point for institutions to gauge where there may be strengths and opportunities. This is not a benchmark and should not be interpreted as such. Scoring lower or higher than peers is a reference point only to begin further exploration.

Table 1 shows the overall comparison results in each category. York University respondents scored themselves lower than other institutions in the categories of student information system, classroom scheduling, policy and procedure, and schedule grid. The executive summary presentation (included in the appendix) includes a slide for every category and all survey statements; however, the remainder of this section of the report will focus on these four categories.

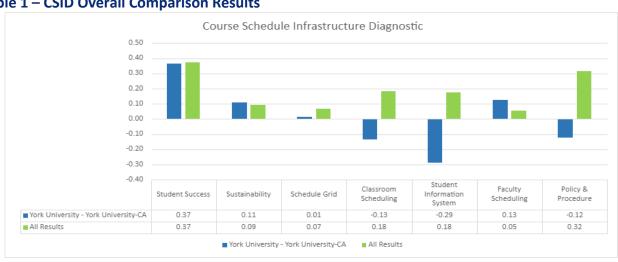


Table 1 – CSID Overall Comparison Results

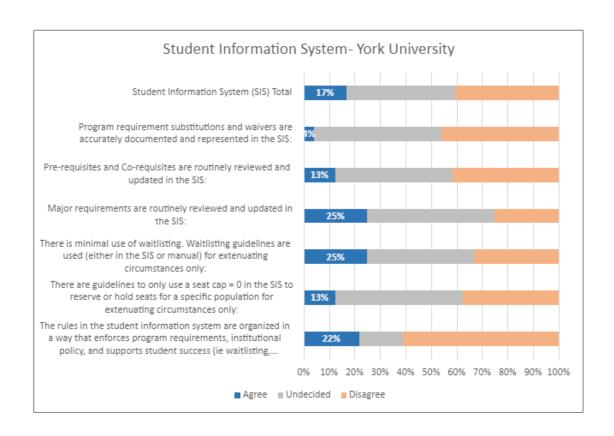
Student Information System

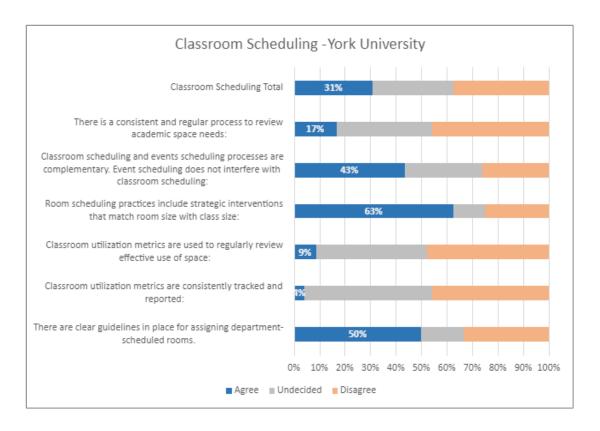
Questions in the student information system section of the survey allow the institution an opportunity to review and discuss how much detail course scheduling stakeholders do know and should know about key areas of the student information system as related to the course schedule. The results, as illustrated in the chart below, indicate not only a high number of undecided respondents but also quite a bit of a gap between the agree and disagree responses. Specifically, project consultants would encourage York to further investigate responses around the last prompt "The rules in the student information system are organized in a way that enforces program requirements, institutional policy, and supports student success." Having the student information

system align to course scheduling policies and procedures is critical to course scheduling infrastructure.

Classroom Scheduling

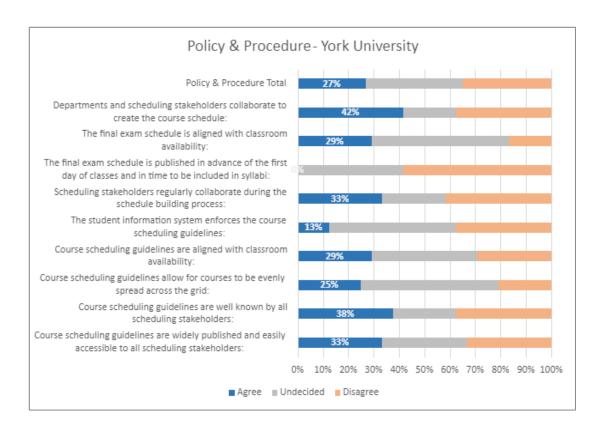
The results of the classroom scheduling section of the survey indicate an opportunity for growth for York University. However, it should be noted that there is 63% agreement around the statement "room scheduling interventions include strategic interventions that match room size with class size." This response would indicate that many course scheduling stakeholders are aware of and agree that these efforts are taking place. The consultants would encourage the institution to consider galvanizing around a set of key metrics that can be tracked to measure classroom scheduling effectiveness term over term. Key metrics should be determined based on goals and might include standard and prime week utilization, seat fill based on enrollment, and off-grid waste. York should also explore metrics available within the current room scheduling software to determine what is possible and how well it fits with classroom scheduling goals.





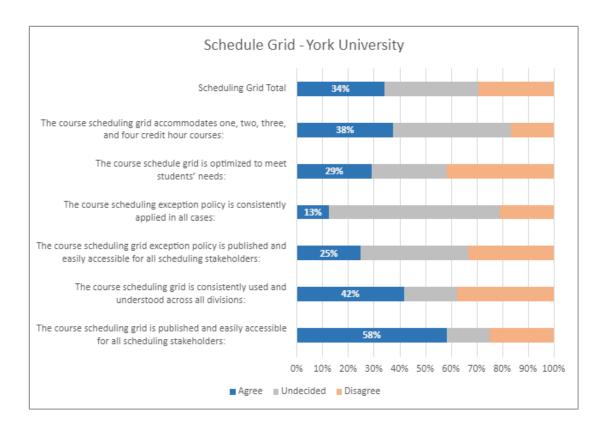
Policy & Procedure

When considering course scheduling policies and procedures, it is important to differentiate those that are published and the ad hoc practices that are in place that may or may not follow published guidelines. It is the consultants' understanding that no published course scheduling guidelines within an academic scheduling policy exist. The consultants noted a 42% agreement among respondents on the statement, "Departments and scheduling stakeholders collaborate to create the course schedule." This is wonderful to report, and the consultants encourage York to continue this effective practice. The consultants would encourage stakeholders to discuss how best to create awareness around and form an academic scheduling policy emphasizing course scheduling guidelines based on the results illustrated below.



Schedule Grid

Congratulations to York for having a course scheduling grid (set meeting patterns) that is distributed to course scheduling stakeholders during the schedule building process. Results from the strategic scheduling checkup below will review how well courses align with the established meeting patterns and the effectiveness in supporting student success. Upon review of this section of the survey, the consultants would encourage York to consider reviewing and including an exception process for offgrid scheduling within an approved academic scheduling policy. Survey results would indicate that several respondents are not aware of the exception processs, and including it within an approved academic scheduling policy would help address this issue.



Key Stakeholder Focus Groups

Key stakeholder focus groups consisted of 45-60 minutes conversations structured as a stop, start, continue exercise. Upon collection of all the qualitative focus group data, the consultants analyzed the feedback to identify emerging themes. The following themes were identified.

Strengths

- Commitment to data-informed continuous improvement
 - O It has been clear throughout the entirety of the engagement that the stakeholders involved with the project are committed to using data to improve outcomes and inform their decisions. Stakeholders are supportive of the goals of the project and willing to change the ways processes are being done to ensure a stronger, more sustainable route.
- Academic Program Requirements
 - Stakeholders report that undergraduate academic program requirements are published and easily accessible to students. While there are some differences across the institution with availability of courses and processes for registration and scheduling, stakeholders agree that students are clear on what courses are needed to complete their degree. It should be noted that focus groups with students were not a part of this engagement; consequently, this sentiment has not been verified with a student group.
- Overall Student Success
 - Project stakeholders care about students, York University's mission, and the integrity
 of their work. There is a strong desire to remove barriers for students, especially within

the population of students that each stakeholder group represents, serves, or supports.

Opportunities

- Classroom Scheduling
 - The current process for course scheduling and for room scheduling includes a high degree of manual touch and use of spreadsheets.
 - A theme also emerged around confusion of scheduling the RAC rooms vs non-RAC rooms.

Policies and Procedures

- A theme emerged around the need for conceptual agreement about the primary goal or outcomes of the course schedule. Some stakeholders are optimizing for student success (i.e., a conflict- free schedule, alignment to students' needs), and others are optimizing for faculty requests, still, others are optimizing to balance the two.
- Other themes emerged around the need for an outline for clear roles/responsibilities
 for course scheduling, awareness of and adherence to the off-grid exception process,
 and review/optimize the timeline for schedule planning, course schedule publication,
 and registration. Clear roles and responsibilities for course scheduling and the off-grid
 exception process should be included in an approved academic scheduling policy.

Schedule Grid

- A theme emerged around no break or passing period between time blocks, creating the need for instructors to let students out of class early to get to the next class on time. This also creates a bottleneck for instructors who need to enter a specific room and prep for the next class, instructors that need to help students after class, etc.
- In general, there is a desire to have more visibility into the scheduling grid and the offgrid exception policy.
- A theme emerged around the need to further review and refine final exam scheduling.

Student information system

The current student information system is home-grown and therefore has certain limitations that are impacting the ability of stakeholders to carry out their roles and responsibilities effectively and as efficiently as possible. These limitations include but are not limited to, the ability to integrate with other software, the ability to automate internal processes that align with course scheduling guidelines. There is also a need for stakeholders to understand more about the student information system functionality and guidelines. This may help stakeholders overcome some of the current limitations.

Strategic Scheduling Checkup Analysis

The Strategic Scheduling Checkup leverages data within the Higher Education Scheduling Index[™] to benchmark existing scheduling effectiveness and highlight the opportunities and approaches needed to realize them. It is important to note that the percentile ranking is based upon the 371 institutions included in our Higher Education Scheduling Index (HESI[™]) benchmark. Ad Astra reviewed Fall data from 2017-2021 for the course offering analysis. For the capacity analysis, results have been provided for both Fall 2019, as well as Fall 2021 for Classroom/Lecture Hall spaces on the Keele campus.

The Course Offering Summary below shows the Enrollment Ratio (fill rates) of Fall 2021 courses at York University. This provides some initial insight into how courses are filling. The Course Offering Analysis provides an overview of the recommendations that Ad Astra has made for Fall 2021 based on the historical trend data for individual course/campus combinations. These recommendations come in the form of what are called candidates. Addition candidates are defined as courses in which the historical trend suggests that an additional section could be filled to at least 50%. Reduction candidates use the same historical trend, but the data suggests that an entire section could be removed, and there would still be enough seats available to meet the historical demand for that course/campus combination.

Please make a note of the data below for Overloaded Courses and Addition Candidates. While the historical trend only suggests a need to add 4 sections in Fall 2022, the Course Offering Summary shows that 200+ courses were overloaded (filled > 95%) in Fall 2021. The "math" involved in the linear trend may not suggest the need to add a section that could be filled to at least 50%. Given the large section sizes at York University, that trend would need to be significant. The opportunity here lies in a deeper dive into the Overloaded Courses from Fall 2021 to determine where additional seats may be gained and offered in the Fall 2022 schedule.

Conversely, there are 50 potential sections for reduction. It is important to review if these courses are single section offerings, which may require further review of student need for the Fall 2022 term. However, this data could uncover opportunities to reallocate resources (space/faculty) to allow for the addition of needed seats/sections in the bottlenecked/overloaded courses.

Course Offering Summary

Strategic Scheduling Check-Up

Course Offering Summary - Fall 2021

Measurement	Percent	Courses	All Institutions Percentile
Enrollment Ratio (85% target)	79%		61 st
Overloaded Course Ratio (>95% Enroll Ratio)	15%	202 of 1,338 courses	64 th
Balanced Course Ratio (>70% <95% Enroll Ratio)	50%	669 of 1,338 courses	95 th
Underutilized Course Ratio (<70% Enroll Ratio)	35%	467 of 1,338 courses	72 nd

Course Offering Analysis

Strategic Scheduling Check-Up

Course Offering Analysis - Fall 2022

Measurement	Percent	Sections	All Institution Percentile
Reduction Candidates	2%	50 sections	90 th
Addition Candidates	0.19%	4 sections	94 th

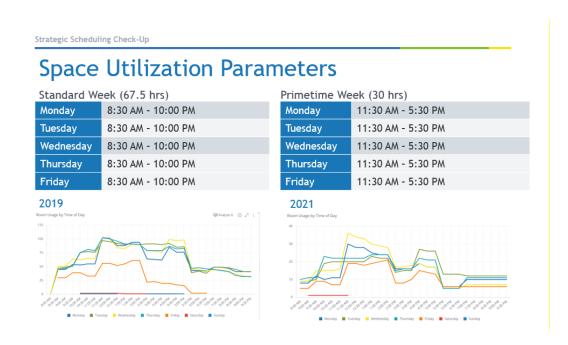
The capacity analysis provides insights into your Classroom/Lecture space at the Keele Campus. As mentioned above, analysis is provided for both Fall 2019 and Fall 2021. Ad Astra reviews utilization metrics in two different ways: standard utilization and primetime utilization. Standard Utilization reviews the utilization during the hours the campus is "open," whereas primetime utilization reviews metrics during the peak hours in an academic schedule. The images below provide data around these metrics, as well as a visual to show the difference between classroom usage from 2019 to 2021.

Space Utilization Summary

Strategic Scheduling Check-Up

Space Utilization Summary

Measurement	2019 Percent	2019 Percentile	2021 Percent	2021 Percentile
Standard Utilization	51%	80 th	27%	19 th
Primetime Utilization	68%	65 th	39%	8 th
Primetime Compression	34%	83 rd	43%	67 th



When reviewing how space is being utilized at the Keele Campus for classroom and lecture halls, it is helpful to consider the different meeting patterns being used within that Standard and Primetime to ensure the space is being used as efficiently as possible. Overall, there were 225 meeting patterns used in 2019, and that dropped to 107 in Fall 2021. Within these terms, the data shows Off-grid Waste to be 13% in 2019 and 19% in 2021. Off-grid waste is defined as the percentage of capacity wasted by scheduling non-standard meeting patterns during the prime-time hours. This increasing percentage of off-grid waste, which occurs when established patterns are not followed, can be a warning signal associated with scheduling conflicts for students. In Fall 2019, the Keele Campus was approaching the room bottleneck status (defined as 80% in primetime) at 68%. In Fall 2021, primetime utilization was down to 39%. Given these utilization metrics, overall, York University seems to have sufficient open space in Classroom/Lecture Hall rooms during prime-time and throughout the scheduling week. A review of unique meeting patterns may uncover the opportunity to optimize the meeting patterns to benefit York University's capacity concerns and result in fewer scheduling conflicts for students.

Strategic Scheduling Check-Up

Meeting Pattern Analysis

Measurement	Percent (Fall 2019)	Percentile (Fall 2019)	Percent (Fall 2021)	Percentile (Fall 2021)
Off Grid Usage	35%	15 th	19%	45 th
Off Grid Waste	13%	44 th	19%	14 th

Recommendations

The options and recommendations below are based on the results of triangulating the data and feedback collected from three data sources (course scheduling infrastructure diagnostic, stakeholder interviews, and strategic scheduling checkup). York University already has a project steering committee in place to oversee the project. The next phase of the project is to create an action plan with the steering committee. In this phase, the steering committee in collaboration with appropriate stakeholders and leadership approval will determine how York shall proceed to achieve their goals and an appropriate timeline for action.

Policy & Process Recommendations (York University)

Create an academic scheduling policy

- Qualitative feedback indicates that there are multiple processes and systems being used among the faculties to build, refine, and communicate the course schedule.
 Multiple systems create inconsistencies and increase the likelihood of user error.
- Clear policies and procedures ensure clarity and transparency across the institution for any complex endeavor that includes multiple stakeholders. The development of supporting documentation can ensure input and feedback from key stakeholders. An academic scheduling policy would greatly benefit stakeholders when building, editing, and publishing the course schedule. When there is stakeholder or leadership transition, such policy will help ensure the success of future stakeholders. There is already a strong governance process in place to approve important policies. The consultants believe that using the governance processes already in place to create an academic scheduling policy is of prime importance to the institution and should be started as soon as possible.
- The academic scheduling policy would include guiding principles that would provide structure to assist when departments/faculties are requesting the same space. An Academic Scheduling Policy should outline the roles, responsibilities, and functions of key scheduling stakeholders. It should provide clear policy language and serve to answer stakeholder questions. Some of the suggested items to include in the policy are also listed as separate recommendations and are discussed in detail in the recommendation. Please note that these are not the only components of an academic scheduling policy. York is encouraged to customize the policy according to the needs of the institution.
 - Priority Room Scheduling Guidelines (see priority room scheduling recommendation below)
 - Approved Meeting Patterns and Exception Guidelines (see meeting pattern analysis recommendation below)
- Include Priority Room Scheduling Parameters and Guiding Principles in an Academic Scheduling Policy
 - Priority room scheduling refers to a process and timeline that allow certain departments or faculties to assign classroom spaces before those classrooms become general classroom spaces for academic scheduling. After a certain date in the course scheduling process, classrooms that remain unscheduled are used by the academic scheduling unit for general classroom assignments to optimize classroom space and efficiency.
 - Classroom space and room scheduling emerged as a significant concern across data sets. The consultants also want to highlight the willingness of stakeholders to collaborate and share classroom space to support the institution's needs.
 Additionally, there are concerns about how best to collaborate while ensuring the needs of departments that have primary responsibility for maintaining a space are still met. The consultants encourage York to consider creating and adopting clear, transparent priority room scheduling guidelines within an academic scheduling policy.
 - Priority room scheduling guidelines serve the purpose of making clear what rooms departments can schedule, priority scheduling timeline and access, and when unused classrooms in the priority scheduling pool will be turned over to the academic scheduling office for general classroom scheduling.

Should York want to use data to inform such guidelines within an academic scheduling policy, York can engage with Ad Astra to do a more in-depth capacity analysis around RAC and non-RAC rooms compared with department enrollment numbers. This capacity analysis can be included in the Meeting Pattern Analysis service from Ad Astra, mentioned in a later recommendation. For some institutions, this type of analysis can be used to maintain their classroom inventory and guidelines for departmental priorities for classroom space.

Establish and Adhere to Standard Meeting Patterns

- As indicated in the results above, concerns emerged through qualitative and quantitative analyses about the meeting patterns used at York. Concerns included no break or passing period and exclusively one day per week class times. Additionally, the data indicated more off-grid usage than on-grid usage of the set meeting patterns. An intensive deep dive into these issues was not within the scope of this project; however, the consultants encourage York to consider how current meeting patterns may be causing barriers for students and instructors, impacting effective and efficient use of classrooms, and other unintended consequences. If York would like assistance with this work from Ad Astra, the Meeting Pattern Analysis consulting service recommended below will support this area.
- There is no single meeting pattern grid that is universally recommended by the consultants but analyzing the percentage of sections that fall into contact hour bands can be useful in determining options for an institution. For example, most of York's offerings are taught as three contact hour sections. Therefore, the meeting pattern grid should optimize for this majority use case. Pedagogy should be the main driver of the patterns, but the industry seems to be moving to a combination of a 3-day/week 50-minute (MWF) and 2-day a week 75–80-minute (T/TH) patterns as the most desirable for students and faculty.
- It is recommended that York include language around the adoption and use of approved meeting patterns in an academic scheduling policy as well as how York will handle exceptions to care for appropriate use cases when courses/sections can be scheduled outside the approved meeting patterns.

Consider Additional Course Demand Analyses

- The consultants want to acknowledge that course scheduling stakeholders are committed to using data to better inform the building of the course schedule. From the analyses, the priority should be on eliminating bottleneck courses to remove barriers and pent-up demand for specific courses.
- To take action on this recommendation, York could begin by reviewing all courses that are completely full at the census date for the previous like term. Evaluating whether these courses are always full (in like terms and in other terms) can help to prioritize situations where a lack of seats may be contributing to an inability for students to register for required courses. More advanced data analysis can be conducted utilizing software to perform a historical and predictive analysis of course demand. Some institutions can conduct this analysis on their own; however, Ad Astra is able to provide this type of software should the Steering Committee pursue this as an action item.
- Utilize Data to Support Student-Centric Course Scheduling Through Pathways

The post-pandemic landscape of higher education will continue to evolve, as will the needs of York's students. The consultants encourage continuous dialogue among the steering committee, executive leadership, and course scheduling stakeholders about how best to balance students' course scheduling needs and faculty course day/time requests and classroom needs. As the course scheduling infrastructure matures using the recommendations above, there will be additional ways to use data to support success through scheduling. The steering committee can have productive conversations about understanding or predicting student demand, analyzing student preferences for specific course or degree requirements, and refining pathway offerings to ensure students can register for the courses they need in the appropriate term. Such strategic planning ahead of schedule building will support the institution's desire to keep the completion promises they make to students upon admission to York University.

Existing Software & Service Recommendations (York University)

- Business Process Review and Audit Use of Room Scheduling Software (R-25)
 - One of the recurring themes that emerged from the qualitative data is the significant amount of manual work that is taking place to build and monitor the course schedule, as well as the difficulty of effectively and efficiently scheduling classrooms. The more manual work and data entry that takes place, the more room there is for human error and inefficiencies regarding the use of space. The consultants acknowledge that the room scheduling software has recently been fully implemented. Once the university has been using the software for two full scheduling cycles, it is suggested that a business process review and subsequent audit be completed to ensure that the room scheduling software is supporting the course scheduling business processes.
- Continue Implementing Current Plan for SIS and Optimize to Support Course Scheduling Business Processes (Oracle)
 - There was significant feedback regarding the limitations of using and maintaining a home-grown, antiquated student information system. It is a recommendation of the consultants for York to continue prioritizing moving toward an established student information system product that integrates easily with other student success and business intelligence software already in place or planned for use in the future. The student information system is an integral piece of course scheduling infrastructure, and the capacity within an updated system would allow stakeholders to eliminate errors and automate and enforce course scheduling policies and procedures. As an example, course credit exclusions are not automatically handled in the student information system so students may register in error for a course where they have already received credit. This impacts scheduling because unnecessary seats of certain courses may be offered.

Software & Service Recommendations (Ad Astra)

Registration Monitoring and Tracking (Ad Astra - Monitor Software)

- Registration monitoring and tracking software would allow key stakeholders to easily watch and track registration velocity and provide key data on courses such as modality, enrollment, number of sections, and location to help make important decisions during student registration.
- Meeting Pattern Analysis (previously included in the RFP)
 - While York University could make progress on establishing common meeting patterns without additional Ad Astra analysis, this service offering would allow the consultants to dive deeper into the noted capacity concerns. The quantitative data indicates that York University is not as constrained in classroom utilization as it feels during scheduling. The current overlapping meeting pattern usage (for most patterns, off-grid usage is higher than on-grid usage) is creating constraints felt in classroom utilization. This additional analysis would allow York to determine the structure of a meeting pattern grid that can accommodate pedagogical needs while optimizing available space.
- Pathways Analysis (A combination of previously titled Cohort Enrollment Health and Degree Velocity in original proposal).
 - o Pathways or degree maps (the term-by-term list of courses required) provide students with a clear and direct path to degree completion. The creation of pathways is the simplest, most cost-effective, and highest return action an institution can take to facilitate students' on-time degree completion. When created and implemented effectively, pathways can improve student degree velocity, graduation rates, and retention rates. If selected, this service will help guide the institution through the process of creating pathways and analyzing them across the curriculum to ensure successful implementation at scale. Building a pathways infrastructure would allow York to create synergy in offerings and increase a student's time to completion.
 - O During the sales process, Ad Astra identified several service opportunities for York to consider. This consulting service has since been renamed at Ad Astra and combines two of the opportunities provided during the sales process (Cohort Enrollment Health and Degree Velocity). Degree Velocity measurements (how quickly students are progressing) can only be assessed against the pathways.

Appendix A

Original RFP Service List

The current project was part of an RFP. In the RFP response by Ad Astra, three additional services were mentioned based on the knowledge that Ad Astra had the time that was believed to align best with York's goals. For reference, the consulting services listed in the RFP were as follows:

Meeting Pattern Analysis

Scope

This engagement analyzes current scheduling practices around meeting patterns in use, dominant meeting patterns based on sections offered, and space utilization to ensure that an institution's meeting pattern grid is promoting student success. Understanding academic space constraints, as well as the institution's scheduling goals, help to inform recommendations for scheduling grid changes to meet those needs while allowing flexibility where needed. This analysis can also provide insights into proposed scheduling grid changes and the impact on the institution postimplementation.

Cohort Enrollment Health

Scope

Institutions are faced with tough decisions about how best to sustain enrollments in academic programs. Delivery methods and modes of institutional offerings significantly impact whether an academic program can be sustainable. The number of campuses, restricted day/evening cohort programs, online-only offerings, accelerated programs, while designed to meet students' needs better, often divide programs to the point of being unsustainable. Pathway or course program requirements can cause further division by dispersing students among several courses versus concentrating enrollment in fewer options. This service provides a data-informed planning framework to manage student cohorts and progression through pathways.

Degree Velocity

Scope

Degree velocity is a comprehensive analysis of students' progress through their academic program pathway. A combination of a productive and unproductive credit hour and program pathway data are used to determine a current velocity rate and projected completion time. Results are reported by academic program pathways using average student velocity, allowing institutions to determine where critical bottlenecks may be impeding student progress. Unlike graduate rate data, a post hoc analysis using a cohort that already graduated, degree velocity uses real-time student progress data that is representative of full-time and part-time students to produce actionable results.

Since the RFP was submitted, Ad Astra has renamed some of the service offerings above. In addition, the consultants are using the results of the current project to make service recommendations based on what will best serve York in attaining its goals.

2022–2023 Course Scheduling User Manual Office of the University Registrar



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Overview

The Course Scheduling User Manual provides assistance in the process of retrieving, updating and submitting the following spreadsheets and reports involved in the course scheduling process:

- retrieving, updating and submitting the Initial Offering (IOF) Spreadsheet
- submitting Course Notes
- retrieving, updating and submitting the Confirmation of Offering (COF) Spreadsheet

Symbols used in the manual



A reminder of key information



An alert to common trouble spots

SUMMER 2022 COURSE OFFERING DEADLINES - ALL FACULTIES

Dates	Description	Source/Destination
Currently available	Initial Offering (IOF) Report available Spreadsheet is available for download, review and update.	download spreadsheet from www.sis.yorku.ca
Thursday October 7– 2 to 4 PM Tuesday October 12 – 9 to 11 AM Wednesday October 13 - 2 to 4 PM Tuesday October 19 – 2 to 4 PM	▶ Scheduling Forums 4 available options to attend. Attendance is required.	https://acadschd.apps01.yorku.ca/ machform/view.php?id=14181 Note: form will be available for submissions as of Monday October 4, 2021
November 1, 2021	▶ Initial Offering (IOF) due Submission of Summer 2021 Course Offerings is due from departments. Please DO NOT submit changes between Nov 2 to Nov 17, 2021.	submit updated spreadsheet to acadschd@yorku.ca
November 29, 2021	▶ Confirmation of Offerings (COF) Report available Spreadsheet available for download, review and update.	download spreadsheet from www.sis.yorku.ca
December 20, 2021	▶ Confirmation of Offerings (COF) due Submission of changes for Summer 2021 Course Offerings is due from departments. Please DO NOT submit changes between Dec 21 to Jan 14, 2022.	submit updated spreadsheet to acadschd@yorku.ca
January 13, 2022	▶ Course Access Specifications (CAS) Report available Reports available for download, review and update.	download from www.sis.yorku.ca
January 24, 2022	▶ Course Notes submission due.	submit course notes online at http://intranet.registrar.yorku.ca/policies/notes/
January 24, 2022	▶ Course Access Specifications (CAS) due Submission for CAS Updates due from departments.	submit updated spreadsheet to: acadcas@yorku.ca
February 1, 2022	▶ Course Timetable online.	https://w2prod.sis.yorku.ca/Apps/WebObjects/cdm

FW 2022-2023 COURSE OFFERING DEADLINES - ALL FACULTIES

		
Dates	Description	Source/Destination
Currently available	▶ Initial Offering (IOF) Report available Spreadsheet is available for download, review and update.	download spreadsheet from www.sis.yorku.ca
November 9- 9:00 to 11:00 AM	▶ Scheduling Forum Refresher, attendance not required	https://acadschd.apps01.yorku.ca /machform/view.php?id=14181 Note: form will be available for submissions as of Monday October 4, 2021
November 30, 2021	Initial Offering (IOF) due Submission of FW 2021-2022 Course Offerings is due from departments. Please DO NOT submit changes between Dec 1 to Dec 17, 2021.	submit updated spreadsheet to acadschd@yorku.ca
January 24, 2022	▶ Confirmation of Offerings (COF) Report available Spreadsheet available for download, review and update.	download spreadsheet from www.sis.yorku.ca
February 1, 2022	Submission of Offerings (COF) due Submission of changes for FW 2022-2023 Course Offerings is due from departments. Please DO NOT submit changes between Feb 2 to Feb 18, 2022.	submit updated spreadsheet to acadschd@yorku.ca
February 1 to February 18, 2021	Academic Scheduling available to review unplaced course offerings for FW 2022-2023.	submit email to dcloss@yorku.ca, larms@yorku.ca
February 24, 2022	➤ Course Access Specifications (CAS) Report available Reports available for download, review and update.	download from www.sis.yorku.ca
March 7, 2022	▶ Course Access Specifications (CAS) due Submission for CAS Updates due from departments.	submit updated spreadsheet to acadcas@yorku.ca
March 21, 2022	▶ Course Notes submission due.	submit course notes online at http://intranet.registrar.yorku.ca/policies/notes/
April 4, 2022	▶ Course Timetable online.	https://w2prod.sis.yorku.ca/Apps/ WebObjects/cdm

Quick Guide: Reports / Tasks and Contacts

COURSE OFFERING INQUIRIES & REQUESTS	CONTACT		
Course offering and CAS changes	acadschd@yorku.ca		
Ad Hoc Booking Requests	https://yulink-new.yorku.ca/group/our-academic scheduling/room-booking		
Yu Link OUR-Academic Scheduling	nk OUR-Academic Scheduling https://yulink-new.yorku.ca/group/ouscheduling/home		
	Denise Closs	Assistant Director	
	Aaron Ross	Manager	
Academic Scheduling Team (AST)	Lisa Armstrong	Team Lead	
	Anna Graniero	Analyst	
	Deena Nguyen	Analyst	
	Enza De Bellis	Analyst	

CLASSROOM INFORMATION	CONTACT
Guest Speakers and Temporary Use of University Space: Procedures / Applications	http://tuus.info.yorku.ca/
Ordering Classroom Equipment	http://ceo.yorku.ca/
Request for Special Classroom Software a standard set of software that is already installed - see the list of software applications	http://staff.computing.yorku.ca/faculty-staff/teaching- research-computing/classroom-technology/list-of- applications-available-in-classrooms/
REPORTING CLASSROOM PROBLEMS	
Issues with Room Configurations, Room Temperature, Broken or Missing Furniture Locked Classrooms (7am to 4pm Monday to Friday)	facilities@yorku.ca Work Control Centre, CSBO extension 22401
Issues with Room AV	ASKIT@yorku.ca UIT Help Desk extension 55800
Locked Classrooms (after 4pm Monday to Friday and on weekends)	Security extension 58000
Emergencies	Security extension 33333

September 2021

Initial Offering (IOF) Spreadsheet (All Faculties)

Dates and Deadlines

For dates and deadlines concerning the Initial Offering (IOF) Spreadsheet, please refer to p. 4, 5.

Retrieving the Initial Offering (IOF) Spreadsheet

Retrieve the offerings from the previous Academic Period. Modify offerings for the upcoming Academic Period.

- 1. Go to the Student Information System (SIS) website at www.sis.yorku.ca
 - Click on Administrative Reports (SRM) under the For Administration section.
 - Log in to Passport York (if prompted).
 - Expand the Courses button. Click on BLM Load file for Course Delivery.

NOTE: IF YOU DO NOT HAVE ACCESS TO SIS ADMINISTRATIVE REPORTS, PLEASE CONTACT YOUR DIRECT MANAGER.

- 2. Choose from SU 2021 offerings:
 - ▶ To retrieve SU 2021 offerings.
 - Choose 2020 as the Academic Year (Academic Year).
 - Choose SU as the Session (Study Session).
 - If you want to download the course sections your Faculty/Department is responsible for, choose from the Resp Fac Sec and/or Resp Unit Sect drop down menus.
 - ⊳ If your department does not have offerings in other departments, then choose from the **Fac** (Faculty) and **Subj** (Subject) drop down menus.
 - Click the Get Excel Report button. The report will open in Excel.

Student Information Systems Administrative Reports v3.2.1 BLM Load file for Course Delivery Purpose: Returns: Act, Seq Crs View, Fac, Subj, Crs Num, Rub Var, Cred Wel, Lang, Acad Year, Session, Per Fac, Per, Resp Fac, Resp Unit, Pre- req, Is Preco, Enf Pre- req, Sect, Lang Sect, Max Enr Sect, Targ Enr Sec, Resp Fac Sec, Enr, Day, Hour, Dur., Book Prio, Rm R1, Rm R2, Rm R3, Rm R4, Rm R5, Rm R6, Rm R7, Rm R8, Rm R9, Rm R10 Search: May be used to search any information contained in the report. For example, entering "Geography" will return all occurrences of Geography, regardless of where that appears. Any combination of the drop down menus may be used. Search Get Report Get Excel Report

▶ To retrieve FW 2022-2023 offerings

- Choose 2021 as the Academic Year (Academic Year).
- Choose FW as the Session (Study Session).
- If you want to download the course sections your Faculty/Department is responsible for, choose from the Resp Fac Sec and Resp Unit Sect drop down menus.
 - ⊳ If your department does not have offerings in other departments, then choose from the **Fac** (Faculty) and **Subj** (Subject) drop down menus.
- Click the Get Excel Report button. The report will open in Excel.

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Student Information Systems Administrative Reports v3.2.1

BLM Load file for Course Delivery

Returns: Act, Seq Crs View, Fac, Subj, Crs Num, Rub Var, Cred Wei, Lang, Acad Year, Session, Per Fac, Per, Resp Fac, Resp Unit, Pre- req, Is Preco, Enf Pre- req, Sect, Lang Sect, Max Enr Sect, Targ Enr Sec, Resp Fac Sec, Resp U Enr, Day, Hour, Dur., Book Prio, Rm R1, Rm R2, Rm R3, Rm R4, Rm R5, Rm R6, Rm R7, Rm R8, Rm R9, Rm R10

Search: May be used to search any information contained in the report. For example, entering "Geography" will return all occurrences of Geography, regardless of where that appears.

Any combination of the drop down menus may be used.

search	
Fac ▼ Subj ▼ Crs Num ▼ 2021 ▼ FW ▼ Per Fac ▼ AP ▼ ECON	~
Get Report Get Excel Report	
© York University 2011-2016	

Before you begin working on the spreadsheet, save it as an excel spreadsheet.



DO NOT change the order of the columns or rows of the spreadsheet.

Submitting the spreadsheet

- 4. Make your changes to the spreadsheet: (see the Add / Update / Delete section later in this manual).
 - Save the file, and e-mail it to acadschd@yorku.ca
- DO NOT copy individual Academic Scheduling staff on the e-mail.

Reading the Initial Offering (IOF) Spreadsheet

The following section provides information about the various columns on the spreadsheet.

What is on the spreadsheet?

Depending on the options selected when you downloaded your spreadsheet, you should be looking at the complete list of meets that were offered in either SU 2022 or FW 2022-2023. This includes course meets that were cancelled, and course meets that were kept as back-ups (see Appendix B). Each meet has its own row on the spreadsheet, which means that some course sections may have more than one row. For example: A lecture (LECT) that was taught on Mondays, Wednesdays and Fridays would have three rows.

Sample of an Initial Offering (IOF) Spreadsheet

To make the spreadsheet easier to read in Excel:

- 1. change the orientation of the column titles from horizontal to vertical.
- 2. re-size the columns so that all content is visible.
- 3. freeze the top row (column titles), so it remains visible as you scroll down the rows.

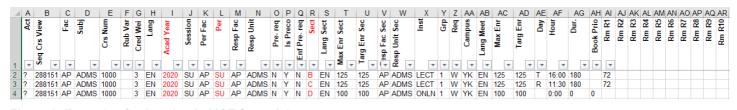
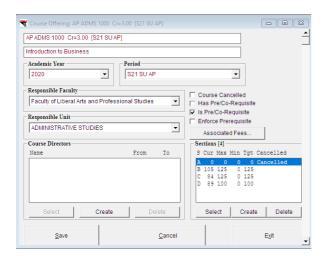


Figure 1: Example of a downloaded IOF Spreadsheet

Example: The spreadsheet above shows AP/ADMS 1000 3.0 SU21 (SU=Session and 2020=Academic Year)

- Column I (Acad Year) indicates AP/ADMS 1000 3.0 was taught in academic year 2020.
- Column L (Period) indicates AP/ADMS 1000 3.0 was taught in period code SU.
- Column R (Section) indicate that Section B and C were taught as LECT while section D was taught as Fully Online. Note IOF spreadsheet does not include cancelled sections/courses. You can view all sections of ADMS 1000 3.0 SU21 including the cancelled section A via COS (see below).



Only **Column F** (Rubric Variance) and **Columns (Al–AR)** (Room Requirements) may be left blank when you submit the Confirmation of Offering (COF) Spreadsheet.

Any spreadsheet containing additional blank columns will be returned to you for revision and only processed once we have received your corrected version.

Explanation of the Columns of the Initial Offering (IOF) Spreadsheet
The following tables explain each of the column titles and possible update options:

	Column	Column Title	Spreadsheet Update Options/Examples	Explanation
Course ID Information	A	Act (Action)	A = Add (to create a new course offering)	① In the first spreadsheet you submit to the Office of the University Registrar, ALL_courses will be Action "A". Change the "?" to "A".
Columns (A-H) must be identical for ALL meets of the same course. For cross-	В	Seq Crs View (Sequential Course View)	The Seq Crs View of the course that the offering is for.	This field MUST NOT be left blank. If you are creating offerings for a course that was NOT offered in SU 2021 or FW 2021-2022, you will need to look up this number in COS. (See "Scenario 2: Adding a Course NOT currently on the Initial Offering (IOF) Spreadsheet" later in the manual).
listed courses: The items in this	С	Fac (Faculty)	AP, ED, EU, FA, GL, GS, HH, LE, LW, SB, SC	Enter Faculty acronym.
section are for the original course ID.	D	Subj (Subject)	ANTH, BIOL, etc.	Enter course subject acronym Use CAPITAL LETTERS.
Do NOT change them to match the	E	Crs Num (Course Number)	1010, 2021, etc.	Enter four-digit Course Number.
cross-listed course ID. See the "Important Reminders " section for more	F	Rub Var (Rubric Variance)	A, B, C etc. or Blank	Use if the course number has a letter immediately after it (e.g. HUMA 4000A 6.00). ① This is NOT the section letter. This entry will be blank for most courses.
information on cross- listed and integrated courses.	G	Cred Wei (Credit Weight)	0, 3.00, 6.00, 9.00, 12.00, 1.25 etc.	The academic Credit Weight of the course. It is essential that this be completed accurately.
	н	Lang (Language of Instruction)	EN, FR, etc.	The Language of instruction for the entire course (all sections).

	Column	Column Title	Spreadsheet Update Options/Examples	Explanation
	ı	Acad Year (Academic Year)	Enter 2021 for Summer or 2022 for Fall/Winter	Academic Year course is offered. For SU 2022 change to 2021. For FW 2022–2023 change to 2022.
	J	Session	SU, FW	Academic Session course is offered.
	К	Per Fac (Period Faculty)	AP, ED, EU, FA, GL, GS, HH, LE, LW, SB, SC	Matches Faculty acronym in Column C.
	L	Per (Period)	F, W, Y, SU, etc.	Sessional date Period code for the course. for Summer Period Codes, if offered in a condensed period, must adjust the offering dates must be adjusted, ie: S1 for a 6.0 course should be 4 days 180 mins.
	М	Resp Fac (Responsible Faculty)	AP, ED, EU, FA, GL, GS, HH, LE, LW, SB, SC	Responsible Faculty for all the sections of the course.
Course Offering	N	Resp Unit (Responsible Unit)	ANTH, ADMS, BIOL, etc.	Responsible Unit/Department for all sections of the course.
Information	o	Pre- req	Y or N	Use "Y" if the course has a pre- or co-requisite. Use "N" if it does not.
	Р	Is Pre/co (Is Pre/Co-requisite)	Y or N	Use "Y" if the course is a pre- or co-requisite. Use "N" if it is not.
				Use "Y" if your course repository officer has coded the course pre-requisites in COS and if you want to prevent students who don't meet the pre-requisites from enrolling.
		Enf Pre- req (Enforce Pre/Co-requisite)	Y or N	Use "N" if your course repository officer has coded the course pre-requisites in COS but you DO NOT want to prevent students who don't meet the pre-requisites from enrolling.
		(Emoroc Frozorioquisite)		Use "N" if your course repository officer has NOT coded the pre-requisites in COS.
				① If the Enforce Pre-requisite flag is checked and the pre-requisite information has not been coded in the repository, then students will not be able to enroll in the course.

	Column	Column Title	Spreadsheet Update Options/Examples	Explanation
Section	R	Sect (Section Key)	SUMMER Term Section SU A to Z S1 A to L S2 M to Y FALL/WINTER Term Section F A to L Y A to Y W M to Y EECS & MATH for LE ENG students Term Section F E Y Z W P	This is the section letter for the course and cannot be blank. ① If a course is offered in more than one period code within the same academic session (Fall/Winter or Summer), they MUST have a different section letter. ① If offering sections in overlapping Periods, (e.g. SU and S1, the offering in S1 must be the next letter - SU is Section A and S1 is Section B) ① A course offered in F and Y cannot have the same section letter. The Y will begin at A and the F will follow. ② Except for EECS & MATH courses for LE ENG students, the section lettering MUST be sequential. If not, it will be changed by the Academic Scheduling staff.
	s	Lang Sect (Language of Instruction Section)	EN, FR, etc.	Language of instruction for the specific section.
	т	Max Enr Sect (Maximum Enrolment Section)	25, 100, etc.	
	U	Targ Enr Sec (Target Enrolment Section)		Target number of students allowed to enroll in the section. ①The Target will be activated at the start of term.
	v	Resp Fac Sec (Responsible Faculty Section)		Responsible Faculty for all meets for the current section of the course.
	w	Resp Unit Sec (Responsible Unit Section)		Responsible Unit/Department for all meets for the current section of the course.

	Column	Column Title	Spreadsheet Update Options/Examples	Explanation
Meet	X	Inst (Instructional Format)	BLEN = blended learning CLIN = clinical CORS = correspondence DIRD = directed reading DISS = dissertation FDEX = field experience FIEL = field trip IDS = individual directed study INSP* = internship ISTY = independent study LAB = lab LECT = lecture LGCL = language classes ONLN = online learning PERF = performance PRAC* = practicum REEV = research evaluation RESP = research paper REVP = review paper SEMR = seminar STDO = studio THES = thesis TUTR = tutorial WKSP = workshop	*INSP and PRAC are excluded from using the Withdrawal (W) option as per Senate Policy. All other instructional Types are available for online Withdrawl.
	Y	Grp (Group Number)	01, 02, 03 etc.	Number for the meet. For a course with a LECT and multiple TUTR, the LECT would be 01, and the first tutorial would also be 01. The second tutorial would be 02.
	Z	Req (Frequency)	W = Weekly M = Monthly F = Fortnightly (every 2 weeks)	Indicates the frequency of the meet being taught. ① For courses offered monthly or fortnightly, the specific dates must be added to the Notes column (Column AS).
	AA	Campus	YK, GL, OC	Location (campus) where meet is offered. YK = Keele campus GL = Glendon campus OC = Off Campus
	АВ	Lang Meet (Language of Instruction of Meet)	EN, FR etc.	Primary language of the meet.
	AC	Max Enr (Maximum Enrolment)	100, 25 etc.	Total number of students allowed to enroll in the meet. ① Multiple meets (within a section), must add up to the section maximum.
	AD	Targ Enr (Target Enrolment)	100, 25 etc.	Target number of students allowed to enroll in the meet. ① If you have multiple meets (within a section), make sure that they all add up to match the section target.

	Column	Column Title	Spreadsheet Update Options/Examples	Explanation
	AE	Day (Day of Week)	M = Monday T = Tuesday W = Wednesday R = Thursday F = Friday S = Saturday U = Sunday SU = Saturday and Sunday	Day of the week when the meet is taught. If the course doesn't meet (e.g. internet courses), leave this field blank. If the course is taught over several days (e.g. M, W and F) put each day on a different row in Excel.
	AF	Hour	8:30, 13:00 etc.	Based on the 24hour clock, the start of the meet, on the hour or the half-hour.
	AG	Dur (Duration)	30, 60, 180 etc.	The duration (in minutes) of the meet.
Meet Information	AH	Book Prio (Room Booking Priority)	Note: If a change is required, a reason MUST be indicated in the Notes Column (Column AS) on the far-right side of the spreadsheet.	0 = No Room Required. 1 = Back-Up Sections/Tutorials. 2 = Non-RAC Room If arranging for a departmental room, you must ensure you have agreement with the booking office of the room prior to submitting to the Office of the University Registrar. The room must be listed in the Notes column. 3 = Taught With or Integrated in a Rac Room (more than one course taught in same room). In the Notes column, the course it is "taught with" MUST be specified. 5 = Taught With in a Non Rac Room (more than one course taught in same departmental room). In the Notes column, the course it is "taught with" MUST be specified and provide the Non Rac room that has been arranged. 7 = Medical Requests MUST be submitted with your original offerings, accompanied with the name of the course instructor. This information is to be added in the Notes column (Column AS). Medical documentation is not to be submitted to the Office of the University Registrar but must be on file at the Department or Faculty. If a Medical Priority is no longer required, indicate its removal in the Notes column. 9 = Keystone Where a course is considered critical to student progression and/or preparation, it should be prioritized within the schedule for room allocation. Clarification on the course will be required from the faculty during the scheduling process where prioritization within a time block may be in question.

	Colum n	Column Title	Spreadsheet Update Options/Examples	Explanation
	Al	Rm R1 (Room Requirement)	Enter only the number that corresponds to the appropriate room requirement.	Valid Room Requirements: 4 – Room, Language Class Suitable 10 – Continuous Writing Surface 21 – Furniture, Lectern/Podium 25 – Windows 26 – Blackout Drapes/Blinds 27 – Chalkboard 28 – Extra Chalkboard 40 – Manual Projection Screen 43 – Cinema Grade Projector 46 – TV Display 49 – Dimmer Switch
	AJ	Rm R2		
	AK	Rm R3		
	AL	Rm R4		
Room Requiremen	АМ	Rm R5		
t Information	AN	Rm R6		
	AO	Rm R7		66 - Dual Projection 69 – Video Camera (Video
	AP	Rm R8		Streaming) 70 - Piano 72 - Document Camera 76 - Single Proector 85 - Electric Projection Screen 91 - Camtasia 95 - Crestron Touch Control 96 - PC Audio Recording
	AQ	Rm R9		
	AR	Rm R10		
				Incorrect or conflicting requests will result in unplaced courses. ONLY these requirements will be considered, if not coded, the required AV may not be available. Room availability is also restricted
				by room capacity.
Notes	AS	Notes	Enter any additional information that is relevant to the scheduling process.	Provide details of monthly and fortnightly meetings from Column Z (Meeting Frequency).
				Provide details of Medical (7), Integrated or Taught-With (3) and Non-RAC rooms (2) from Column AH (Booking Priority).
				Provide course Taught With or Integrated with. (If not provided the 3 or 5 WILL BE REMOVED causing incorrect room placements).
				Room requirements that can be coded as per column Al to AK will not be considered if listed as a Note.

Comparing the Spreadsheet Columns to COS

Accessing the Course Offering System (COS)

COS is accessed through the Citrix Receiver. Visit <u>Set Up SIS Applications Using Citrix Receiver</u>, at Computing for Faculty and Staff, for installation instructions.

COS can be used to find information needed to complete the spreadsheet such as the **Seq Crs View number** (**Column B**). See scenario 2: Adding a course NOT currently on the Initial Offering (IOF) Spreadsheet for an example of how COS and the spreadsheet can be used together.

By using the course **AP HREQ 1880 Cr=6.00 [F09-W10 F AP]** as an example, Figures 2, 3 and 4 illustrate how to match the columns of the Initial Offerings (IOF) Spreadsheet to information found in COS.

1. Course Offering Information: Comparing the spreadsheet Columns (C - Q) to COS

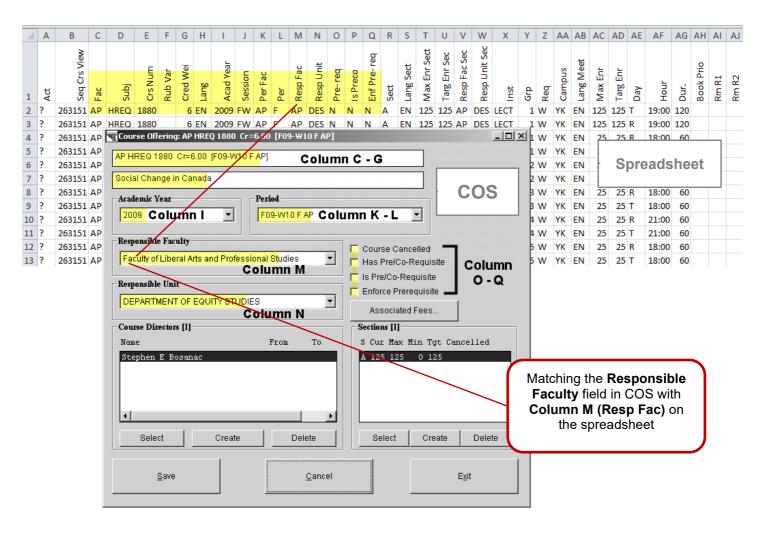


Figure 2: Comparing the Initial Offering (IOF) Spreadsheet to COS - Columns (C - Q)

2. Course Section Information: Comparing the spreadsheet Columns (R - W) to COS

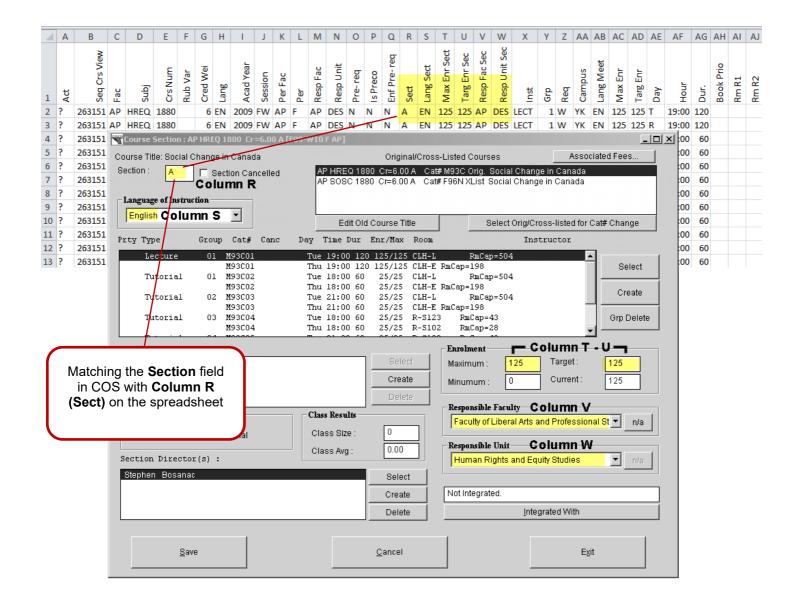


Figure 3: Comparing the Initial Offering (IOF) Spreadsheet to COS - Columns (R - W)

3. Course Meet Information: Comparing the spreadsheet Columns (X - AR) to COS

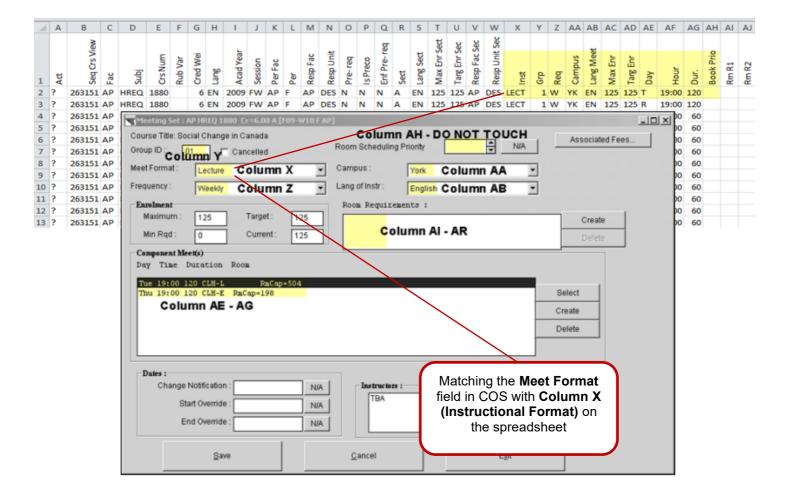


Figure 4: Comparing the Initial Offering (IOF) Spreadsheet to COS - Columns (X - AR)

Adding/Updating/Deleting Information on the Spreadsheet-the INITIAL Submission

Dates and Deadlines

For dates and deadlines concerning updating the Initial Offering (IOF) Submission, please refer to p. 4, 5.

Making changes to the Initial Offerings (IOF) Spreadsheet

In the downloaded spreadsheet you have an exact copy of what was offered in SU2021 or what is currently being offered for FW2021-2022. The next step is to adjust the file so that it reflects what is intended to be offered in SU2022 or FW2022-2023. There are three types of changes:

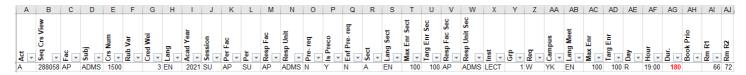
- 1. **ADD** new information (e.g. create an additional tutorial/section/course).
- 2. **UPDATE** existing information (e.g. adjust enrolment maximums, change meeting days).
- 3. **DELETE** information or lines from the spreadsheet if a course, section or tutorial will not be offered in SU2022 or FW2022-2023.

Scenario 1: Adding an Additional Meet

Example: instead of offering a three-hour lecture on Thursdays, the course changes to a two-hour lecture on Thursdays, and a one-hour lecture on Tuesdays.

- 1. Change the 180 duration for Thursdays to 120 duration and highlight it in red font
- 2. Select and **Copy** the entire row of the current Thursday meet. Choose **Insert Copied Cells** and the new row will be added to the spreadsheet. Change the Thursday to Tuesday and change the 180 duration to 60. Highlight this new row in red font.

Original:



After Update:



Adding an Additional Section with Multiple Meets

Adding an additional section will often mean that you need to add multiple meets for a course taught over several days and/or with multiple meet types (e.g. LECT and TUTR).

If you are copying the structure of an existing section, it is best to copy all of the rows for the existing section and insert them into the spreadsheet. Then, change the section letter for all of the new rows, and make any necessary modifications.

Scenario 2: Adding a Course NOT currently on the Initial Offering (IOF) Spreadsheet

Instead of copying and pasting the existing information as in the previous scenario, refer to the Course Offering System (COS) and manually type in the new course identification on the spreadsheet.

Follow these steps to locate the necessary information in COS:

- Log into the Course Offering System (COS).
- 2. Choose Mode > Course Repository > List Courses / Create Offerings.
- 3. The List of Approved and Provisional Courses screen will open.

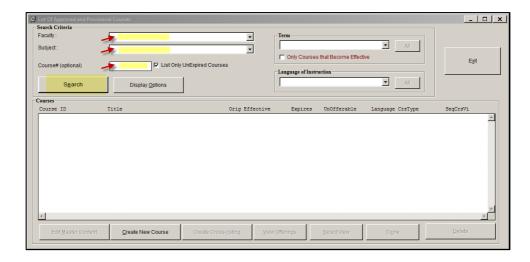


Figure 5: COS List of Approved and Provisional Courses screen

- 4. Choose the Faculty, Subject and Course Number for the course that you want to offer (see Figure 7).
 - Note: if the course is cross-listed, you must look up the original course information.
- 5. Click the **Search** button.
 - If no courses appear, the course has not been created in the repository. Contact your Faculty's repository officer for more information.
- 6. Check the search results.
 - If the **Orig** column says *Orig*, you have selected the correct course. If the **Orig** column says *Xlist*, you have selected the cross-listed course ID and you must modify your search to retrieve the Original course ID.
 - If you do not know the Original course ID, click on the **Edit Master Content** button. The screen that opens will show you the Original course, plus all cross-listings. Close the window, and search for the course again, using the Original course information.
- 7. Scroll to the right of the search results to view the 6 to 8-digit **SeqCrsVi** (Sequential Course View) number.

TIP: Maximize this window on your screen (see the red arrow in Figure 8) to reduce the need for scrolling and to maintain the alignment of the information in the columns with the column titles.

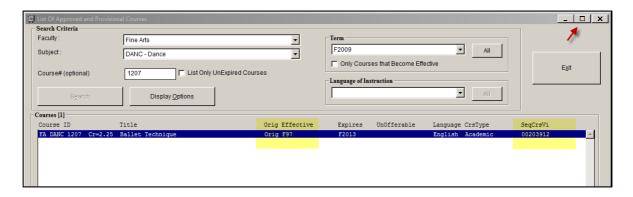


Figure 6: COS List of Approved and Provisional Courses screen - (SeqCrsVi)

- 8. Enter the **SeqCrsVi** number into **Column B** of the spreadsheet.
 - Do not leave **Column B** blank. If a **SeqCrsVi** number is NOT indicated, the spreadsheet cannot be uploaded, and it will be returned to you.
- 9. Fill in the Initial Offering (IOF) Spreadsheet **Columns C-G** with the **Course ID** information from COS (highlighted in yellow in Figure 9) for the Original course. Any inquiries regarding this view are to be directed to the Course Offering Repository Officer and NOT the Office of the University Registrar.

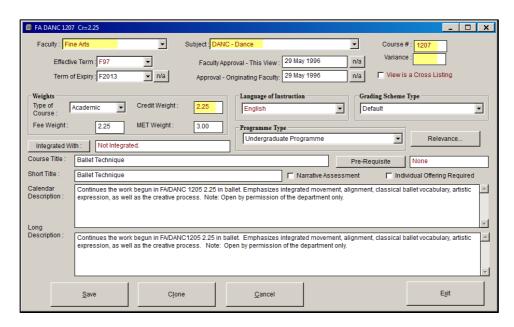


Figure 7: COS - Course ID information

- 10. Fill in **Column H** on the spreadsheet with the **Language of Instruction** indicated in COS.
- 11. **Columns I** to the end of the spreadsheet represent the course offering, section and meet information. Copy the information from a similar course and make any necessary adjustments.
- If you have a course that is either pending approval or has not been added to the course repository DO NOT include it in your spreadsheet submission. In this case, follow up with your Faculty repository officer.

Scenario 3: Updating the Academic Year

Column I on the Spreadsheet must be changed to Academic Year 2021 for SU2022 offerings, or Academic year 2022 for FW2022-2023 offerings.

You have downloaded files of the current years (SU 2021 or FW 2021-2022) course offerings. You will be submitting these files to upload into SU 2022 and FW 2022-2023. To update the year, change the information in Column I (Academic Year) using YYYY format. This is mandatory. If you don't make this adjustment, the courses will be uploaded into the current session.

Original: For ALL courses Update the Academic included in the Year (Column I) to **INITIAL** submission reflect your current of the spreadsheet offering remove the "?" and add an "A" for add (Column A). Pre- red Cred Wei Acad Year Unit Num Resp Resp Lang Subj _ գ Sect Crs Per Per Euf ~ ~ <u>«</u> 286222 AP **ECON** 1000 3 EN 2020 SU ΑP S1 AP ECON N N Ν Α ? 286222 AP **ECON** 1000 3 EN 2020 SU ΑF S1 AP ECON N N N Α 286222 AP 2 2020 SU AP **ECON** 1000 3 EN S2 ECON N N Ν M 286222 AP **ECON** 1000 3 EN 2020 SU S2 ΑP ECON N N М N 1000 ? 286 222 AP 3 EN 2020 SU ΑP S2 AP **ECON** ECON N N Ν 286222 AP ΑP S2 **ECON** 1000 3 EN 2020 SU AP ECON N N Ν Ν After Update: 0 e d Ë ▲ Is Preco Enf Pre- r <u>6</u> ▲ Resp L Resp Lang Subj Pre-Sect → Pac Per ⊸ P ~ ~ ~ 2021 SU 3 EN ΑP 286222 AP **ECON** AΡ ECON N N 1000 S1 Ν Α Α 286222 AP **ECON** 3 EN 2021 SU AP S1 AP ECON N N N Α 1000 286222 AP 3 EN 2021 SU AP ECON N Α **ECON** 1000 AP S₂ N Ν M Α 286222 AP **ECON** 1000 3 EN 2021 SU AP S₂ AP ECON N Ν Ν M 2021 SU AP 286222 AP **ECON** 1000 3 EN S₂ AP ECON N N N N ECON N 286222 AP ECON 1000 3 FN 2021 SU AP AP N N

Figure 80: Updating the Initial Offering (IOF) Spreadsheet

Scenario 4: Updating the Meet time

Original:

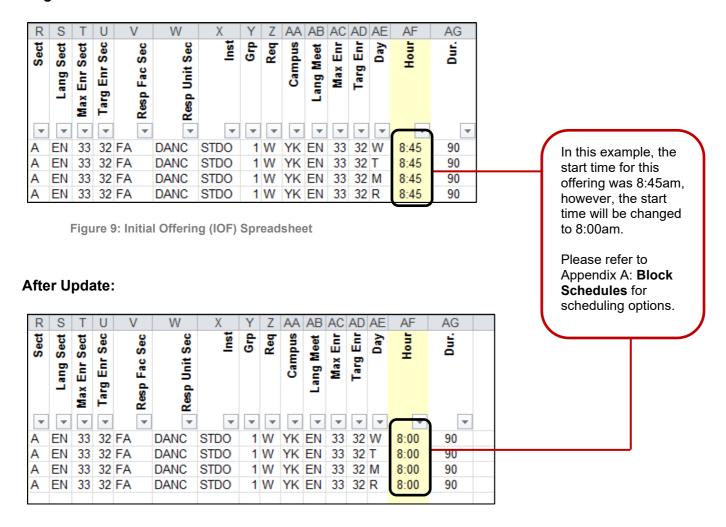


Figure 10: Updating the Initial Offering (IOF) Spreadsheet - updating the meet time (Column AF)

Scenario 5: Deleting a Meet / Section / Course

If you want to remove a meet, section or course, then delete it entirely from the spreadsheet.

- 1. Highlight the entire row by clicking on the row number at the far-left side of the spreadsheet.
- 2. Right click on the highlighted row. A popup menu will appear.
- 3. Choose **Delete** from the popup menu. The highlighted row will disappear.
- 4. Continue row by row until all of the information has been deleted.

If you're deleting an entire section, make sure that you don't leave a meet remaining on the spreadsheet. For example, if the lecture (LECT) was previously offered on M, W, F, it will have three rows on the spreadsheet. You must delete all three rows.

FA/DANC has decided to delete their Section B Wednesday Studio meet for DANC 1207 2.25 (row 25), but they will continue to teach the Monday and Thursday meets (rows 23 and 24).

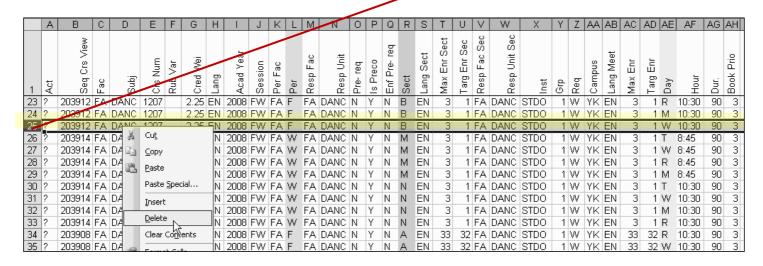


Figure 11: Updating the Initial Offering (IOF)Spreadsheet - deleting a meet

Submitting Course Notes Online

Overview

A course note can be mounted against any course if there is information students should know when enrolling (e.g. the class has irregular class meets, auditions, special instructions for labs, etc.)

The academic scheduling staff is not responsible for mounting course notes for your offerings. All course notes must be submitted through the online Course Notes Submission Form only.

Dates and Deadlines

For dates and deadlines concerning Online Course Notes, please refer to p. 4, 5.

Go to http://intranet.registrar.yorku.ca/policies/notes/ Complete the Course Notes Submission Form.

If you want to submit one note for one course section, choose "an individual course note".

If you want to multiple notes for multiple course sections, choose "bulk course notes".

Please attach a file (saved in a comma-delimited .csv file format) containing ONLY the following data columns highlighted in yellow (see Figure 14).

Click Submit

A	Α	В	С	D	Е	F
1	SeqCrsView	Responsible Faculty	Academic Year	Course Period	Course Section	Course Note
2	234476	FA	2014	F	Α	Lab 04 is for non-majors only
3	234476	FA	2014	E	G	Sheridan-Trafalgar
4	241159	FA	2014	W	M	Lab 04 is for non-majors only

Figure 12: Bulk Course Notes - Excel Spreadsheet Format

Is the **SeqCrsView** still valid?
You can verify this number in COS

Include the **Academic Year**, NOT the Calendar Year



Inquiries

If you have problems uploading your Course Notes, please contact crsnotes@yorku.ca

If you have questions about your courses, please contact acadschd@yorku.ca

Confirmation of Offering (COF) Spreadsheet

Overview

Once the SU2022 and FW2022-2023 offerings for all Faculties have been processed and placed, departments can cross-check their course offerings using the **Confirmation of Offering (COF) Report**.

Dates and Deadlines

For dates and deadlines concerning the Confirmation of Offering (COF) Spreadsheet, please refer to p. 4, 5.

Retrieving the Confirmation of Offering (COF) Spreadsheet

- 1. Go to the Student Information System (SIS) website at www.sis.yorku.ca
 - Click on Administrative Reports (SRM) under the For Administration section
 - Log in to Passport York (if prompted)
 - Expand the Courses button. Click COF Report

NOTE: IF YOU DO NOT HAVE ACCESS TO SIS ADMINISTRATIVE REPORTS, PLEASE CONTACT YOUR DIRECT MANAGER.

- 2. Retrieve your current Course Offerings:
- Search cells cannot be blank. Use the symbol * if not entering details. See descriptions at the top of the report regarding information required for each search cell.
 - ▶ To retrieve SU2022 Confirmation of Offerings Spreadsheet (COF), enter the following fields:
 - Session: enter SU22 (SSYY format) Session is either FW or SU followed by two-digit calendar year.
 - Faculty: enter two-character Faculty code.
 - Subject Code: enter four-character subject code.
 - Course Number: enter four-digit course code.
 - Period Faculty: enter period Faculty code.
 - Responsible Faculty: enter responsible Faculty code.
 - Responsible Unit: enter responsible unit code.
 - Click the Get Excel Report button. The report will open in Excel.
 - ▶ To retrieve FW2022-2023 Confirmation of Offerings Spreadsheet (COF), enter the following fields:
 - Session: enter FW22 (SSYY format) Session is either FW or SU followed by two-digit calendar year.
 - Faculty: enter two-character Faculty code.
 - Subject Code: enter four-character subject code.
 - Course Number: enter four-digit course code.
 - Period Faculty: enter period Faculty code.
 - Responsible Faculty: enter responsible Faculty code.
 - Responsible Unit: enter responsible unit code.
 - Click the Get Excel Report button. The report will open in Excel.
- 3. Save the file before you begin working on it as an excel spreadsheet.
- 4. Make your changes to the spreadsheet: Add / Update / Delete information.
- 5. Review the report and, if necessary, record any concerns/questions.

Sample Confirmation of Offering (COF) Spreadsheet

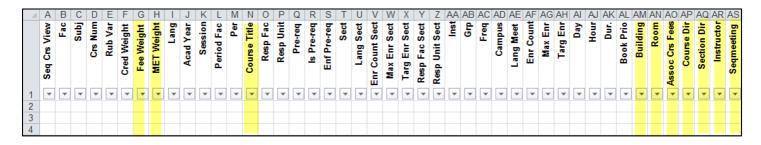


Figure 13: Sample Confirmation of Offering (COF) Spreadsheet

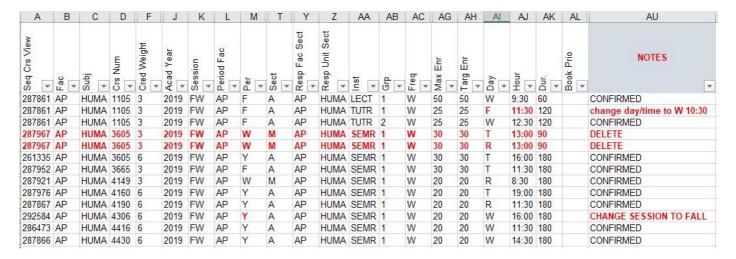
The COF spreadsheet has additional columns of unique information (highlighted in yellow see Figure 15 above) that do not appear on the Initial Offering (IOF) Spreadsheet. As a result, when viewed in Excel, the column letters for the two spreadsheets DO NOT match.

Pay close attention to the following when reviewing the COF Spreadsheet:

- Credit Weight (Column F)
- Period Fac (Column L)
- Section (Column T)
- Day (Column AI), Hour (Column AJ) and Duration (Column AK)
- Maximum Enrolment (Column AG) and Target Enrolment (Column AH)
- Book Priority (Column AL)-ensure that offerings coded as "Medical" have been placed appropriately
- 6. If a change or a correction is required, please make the change to the spreadsheet in red font and add a note to the Notes Column (column AU).

If the offering is complete, indicate "Confirmed" in the Notes Column (Column AU) of the COF spreadsheet. Save the file and send it to acadschd@yorku.ca

DO NOT copy individual Academic Scheduling staff in your e-mail.



Explanation of the Columns of the Confirmation of Offering (COF) Spreadsheet

Column	Column Title	Explanation	
Α	Seq Crs View	For information or changes please contact the Course Repository Officer.	
В	Fac	For information or changes please contact the Course Repository Officer.	
С	Subj	For information or changes please contact the Course Repository Officer.	
D	Crs Num	For information or changes please contact the Course Repository Officer.	
E	Rub Var	For information or changes please contact the Course Repository Officer.	
F	Cred Weight	For information or changes please contact the Course Repository Officer.	
G	Fee Weight	For information or changes please contact the Course Repository Officer.	
Н	MET Weight	For information or changes please contact the Course Repository Officer.	
1	Lang	For information or changes please contact the Course Repository Officer.	
J	Acad Year	2021 for SU 2022. 2022 for FW 2022-2023.	
К	Session	Academic Session course is offered.	
L	Period Fac	Matches Faculty acronym from Column B.	
М	Per Sessional dated Period Code for the course.		
N	Course Title	For information or changes please contact the Course Repository Officer.	
0	Resp Fac	Responsible Faculty for ALL sections of the course.	
Р	Resp Unit	Responsible Unit/Department for ALL sections of the course.	
Q	Pre-req	Y = course has a pre-requisite. N = course does not have a pre-requisite.	
R	Is Pre-req	Y = course is a pre-requisite. N = course is not a pre-requisite.	
s	Enf Pre-req	If the Enforce Pre-requisite flag is checked and the pre-requisite information has not been coded in the repository, then students will not be able to enroll in the course. Y = prevents students who do not meet the pre-requisite from enrolling. N = will not prevent students who do not meet the pre-requisite from enrolling.	

Column	Column Title	Explanation		
Т	Sect	SUMMER Term Section SU A to Z S1 A to L S2 M to Y FALL/WINTER Term Section F LE ENG students Term Section F E E Y Z W P P P P P P P		
U	Lang Sect	For information or changes please contact the Course Repository Officer.		
V	Enr Count Sect	Current Enrolment count.		
w	Max Enr Sect	Total number of students allowed to enroll in the section.		
Х	Targ Enr Sect	Total number of students allowed to enroll in the section.		
Y	Resp Fac Sect	Responsible Faculty for all meets for the current section of the course.		
z	Resp Unit Sect	Responsible Unit/Department for all meets for the current section of the course.		
AA	Inst	The acronym for the format of the meet.		
AB	Grp	Identifier for the meet.		
AC	Freq	Frequency of the meet being taught. W = Weekly M = Monthly F = Fortnightly (every 2 weeks)		
AD	Campus	Location (campus) where the meet is offered. YK = Keele Campus GL = Glendon Campus OC = Off Campus		
AE	Lang Meet	For information or changes please contact the Course Repository Officer.		
AF	Enr Count	Total number of students allowed to enroll in the meet.		
AG	Max Enr	Total number of students allowed to enroll in the meet.		
АН	Targ Enr	Total number of students allowed to enroll in the meet.		

Column	Column Title	Explanation	
Al	Day	Day of the week when the meet is taught. M = Monday T = Tuesday W = Wednesday R = Thursday F = Friday S = Saturday U = Sunday SU = Saturday and Sunday	
AJ	Hour	The start of the meet, based on the 24 hour clock.	
AK	Dur.	The duration (in minutes) of the meet.	
AL	Book Prio	Scheduling Priority 9 = Keystone 7 = Medical 5 = Taught With, Non RAC room 4 = Out of Block 3 = Taught With 2 = Non RAC room 1 = Back-up (see Appendix B) 0 = No Room required	
AM	Building	Letter code of building	
AN	Room	Room number	
АО	Assoc Crs Fees	As per information submitted to Student Financial Services Inquiries: Oana Alexandru, oana_a@yorku.ca.	
AP	Course Dir	Add through Academic Resource Management System (ARMS) at www.yorku.ca/armhelp	
AQ	Section Dir	Add through Academic Resource Management System (ARMS) at www.yorku.ca/armhelp	
AR	Instructor	Add through Academic Resource Management System (ARMS) at www.yorku.ca/armhelp	
AS	Seqmeeting	Not applicable	
AU	Notes	Any changes required for Column AC (Freq) or Column AL (Book Prio) must have additional information added to the Notes Column. Provide Non Rac rooms and Taught With/Integrated with courses. Any additional information that should be highlighted should also be included. If the offering is complete, indicate "Confirm".	

Appendix A: Block Schedules

Block Schedules - Courses with No Tutorial

- When scheduling courses, they should be distributed evenly throughout the day and throughout the week.
- Traditionally, there is a tendency for departments to avoid certain time slots (e.g. 8:30, late afternoons and Friday afternoons) and it has become increasingly difficult for the Office of the University Registrar to meet the needs of all departmental scheduling requests.

Note: Block schedule assumes 3 hours of contact (with some exceptions that will have 2 hours scheduled only).

Lectures with tutorials, please refer to the page "Block Schedules – Courses with tutorials".

① Courses that adhere to the block scheduling times will be scheduled first. Any courses that are outside of the official block scheduling times will not be placed until all other courses have been scheduled.

1-1-1	
MWF	8:30
MWF	9:30
MWF	10:30
MWF	11:30
MWF	12:30
MWF	1:30
MWF	2:30
MWF	3:30
MWF	4:30
MWF	5:30

1.5–1.	5
MW, WF, MF	8:00 – 9:30
TR	8:30 – 10:00
TR	10:00 – 11:30
MW, MR, TR, TF, WF, MF	11:30 – 1:00
MW, MR, TR, TF, WF, MF	1:00 – 2:30
TR	2:30 – 4:00
MW, MR, TR, TF, WF, MF	4:00 – 5:30
MW, MR, TR, TF, WF, MF	5:30 – 7:00

2	
M, T, W, R, F	8:30 – 10:30
M, W, F	10:30 – 12:30
M, T, W, R, F	12:30 – 2:30
M, T, W, R, F	2:30 – 4:30
M, T, W, R, F	4:30 – 6:30

		2-1	
М	8:30 – 10:30	W	8:30 or 9:30
M	8:30 – 10:30	F	8:30 or 9:30
Т	8:30 – 10:30	R	8:30 or 9:30
W	8:30 – 10:30	F	8:30 or 9:30
Т	12:30 – 2:30	R	12:30 or 1:30
М	2:30 – 4:30	W	2:30 or 3:30
М	2:30 – 4:30	R	2:30 or 3:30
W	2:30 – 4:30	F	2:30 or 3:30

2-2	
MW	8:30 – 10:30
WF	8:30 – 10:30
TR	8:30 – 10:30
MW	10:30 – 12:30
MW	12:30 – 2:30
TR	12:30 – 2:30
WF	12:30 – 2:30
MW	2:30 – 4:30
TR	2:30 – 4:30
WF	2:30 – 4:30
Any combination of 2 days	4:30 – 6:30

3	
M, T, W, R, F	8:30 – 11:30
M, T, W, R, F	11:30 - 2:30
M, T, W, R, F	2:30 - 5:30
M, T, W, R, F	4:00 - 7:00
M, T, W, R, F	7:00 – 10:00

Block Schedules – Courses with Tutorials

- When scheduling courses, they should be distributed evenly throughout the day and throughout the week.
- Traditionally there is a tendency for departments to avoid certain time slots (e.g. 8:30, late afternoon and Friday afternoons) and it has become increasingly difficult for the Office of the University Registrar to meet the needs of all departmental scheduling requests.

① Courses that adhere to the block scheduling times will be scheduled first. Any courses that are outside of the official block scheduling times will not be placed until all other courses have been scheduled.

1-1	
MW	10:30-11:30
TR	10:30-11:30
MW	11:30-12:30
TR	11:30-12:30
WF	12:30-1:30

	2
M, T, W, R, F	8:30-10:30
M, W, F	10:30-12:30
M, T, W, R, F	12:30-2:30
M, T, W, R, F	2:30-4:30
M, T, W, R, F	4:30-6:30
M, T, W, R, F*	6:00-800 plus 2 hour
	tutorial*

1.5	
M, W, F	8:00-9:30
T, R	8:30-10:00
T, R	10:00-11:30
M, T, W, R, F	11:30-1:00
M, T, W, R, F	1:00-2:30
T, R	2:30-4:00
M, T, W, R, F	4:00-5:30
M, T, W, R, F	5:30-7:00

Lecture hours must follow the Block guidelines. Tutorials (either 1 hour or 2 hours) may be scheduled at any time, on the half hour.

The block schedule assumes that there are three contact hours (2 hours of lecture and a one hour tutorial) with the exception of 9 credit courses which have 4 contact hours (2 hours of lecture, 2 hours of tutorial). A very small number of courses have 1.5 hour lectures and 1.5 hour tutorials. In the latter case, the tutorials MUST be scheduled during a 1.5 hour lecture block.

For courses with one lecture hour and 2 hour tutorials, the lecture may be scheduled at any hour on the half hour.

* The Lecture Block of 6:00pm to 8:00pm is restricted to 9 credit courses with two hours of lecture immediately followed by two hours of tutorial (4 hours total)

Appendix B: "Back-Up" Sections

Courses / Sections / Tutorials on "Back-Up"

1. On your Initial Offering submissions (IOF) for SU2022 and FW2022-2023, all courses/sections will be considered ACTIVE.

When the SU2022 and FW2022-2023 spreadsheets are downloaded, any course that was placed on back-up for these sessions will have a Room Scheduling Priority of "1". Departments MUST add a MAX and a **TARGET** which is greater than 1 to all backup sections from the previous year.

If the back-up will not be offered for SU2022 or FW2022-2023, the offering should be deleted on the spreadsheet.

2. **During the Confirmation of Offering (COF) process**, the departments must advise the Office of the University Registrar which offerings are to be placed on back-up. Indicate the back-up request in the Notes Column (Column AU) of the Confirmation of Offering (COF) Spreadsheet and change the Course MAX and Target to "0".

September 2021 34 of 34



Strategic Scheduling Evaluation

Executive Summary Presentation

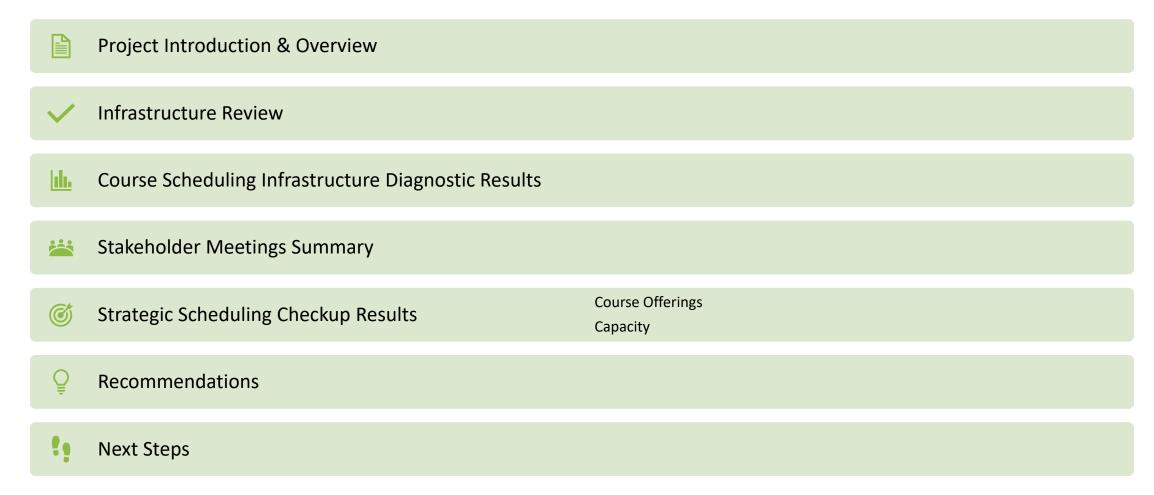
Diagnostic Survey Results

Stakeholder Interviews Overview

Strategic Scheduling Checkup Results

Lisa Hunter, VP of Education Christine Stewart, Senior Solutions Consultant Laura Kelley, VP of Solution Strategy

Agenda



Project Overview

- Insert Institution Image, students etc.
- Frankie to introduce/discuss project purpose and partnership with Ad Astra

Course Scheduling Infrastructure

Core features of the institution that facilitate course scheduling (course scheduling policies, procedures, physical/human/financial/technology resources)

Course Scheduling Infrastructure Categories

- Student Success
- Sustainability: Enrollment & Financial Health
- Classroom Scheduling
- Student Information System
- Faculty Scheduling
- Course Scheduling Policies & Procedures

Infrastructure Supports a Course Schedule Designed for Completions

Structure



Assessing Your Course Scheduling Infrastructure Diagnostic Results

York University

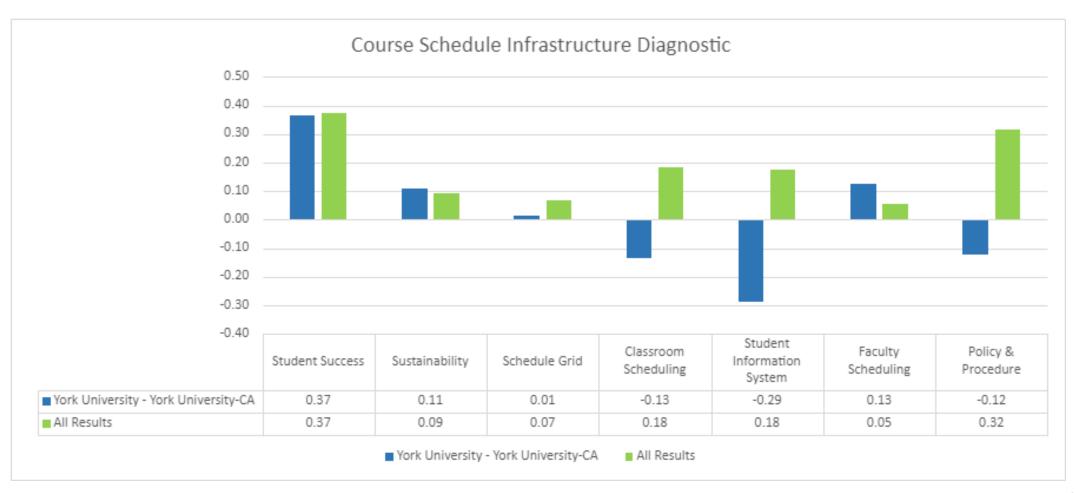


Based on the results of your diagnostic, there is basic course scheduling infrastructure at the institutional level. Some elements of the course scheduling infrastructure support student success and sustainability, but improvement is needed. Course scheduling systems are generally organized, but improvement is needed to drive student success and sustainability. You need to organize all aspects of the course scheduling infrastructure and begin aligning the schedule to students' needs.

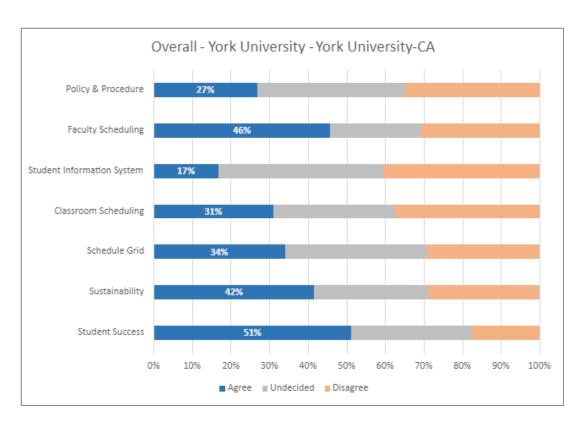
Areas of Greatest Concern:

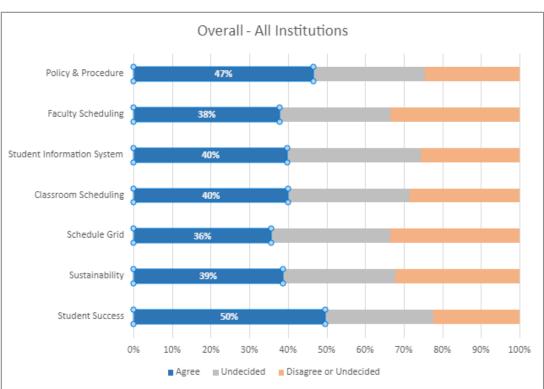
- Student Information System
- Classroom Scheduling
- Policy & Procedure
- Schedule Grid

York University

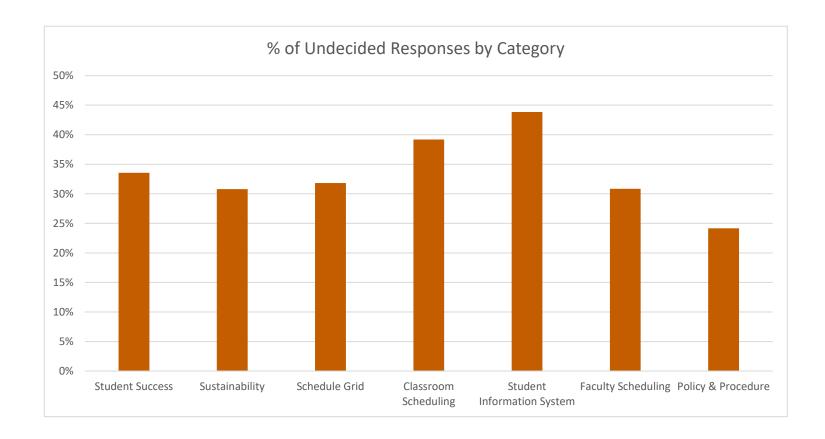


Overall Results



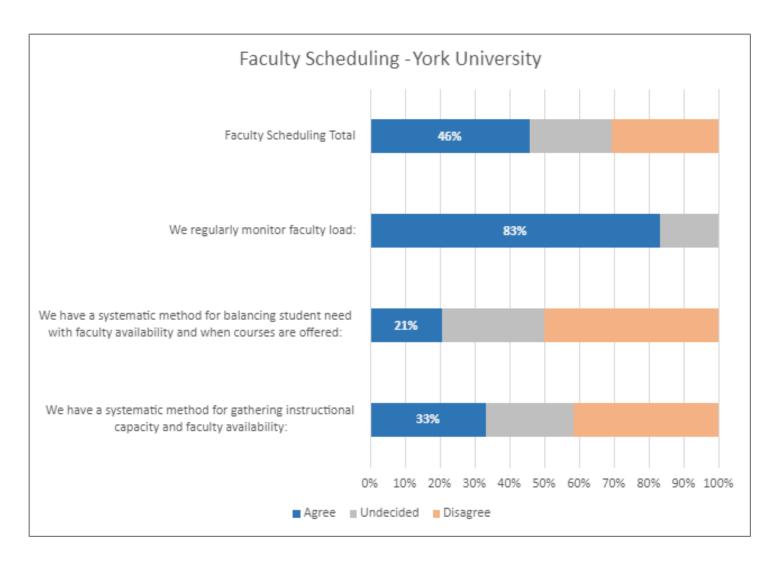


Undecided Responses

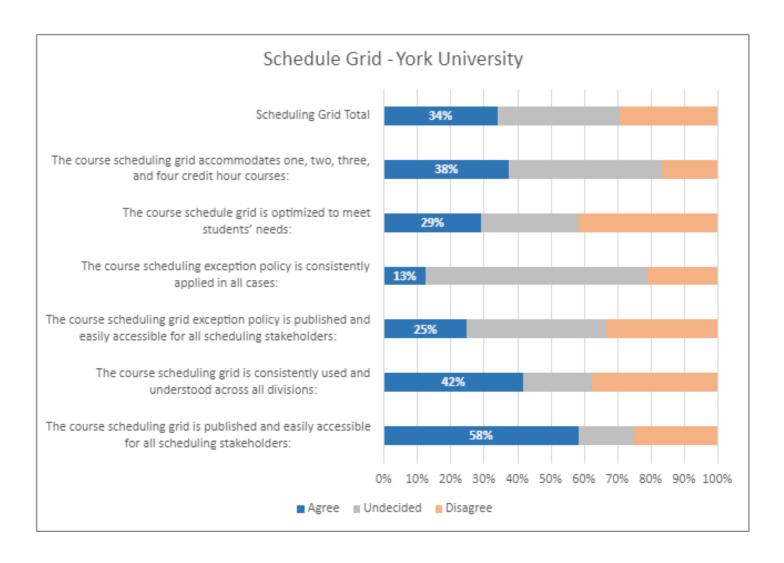


- Impact of 'undecided' responses
- Uncertainty in diagnostic statements?
- Communication and collaboration needed to understand these key areas of infrastructure

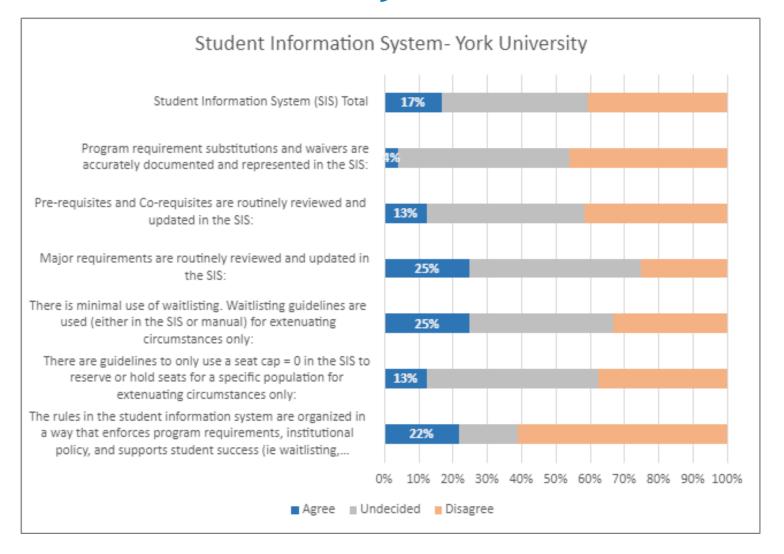
Faculty Scheduling

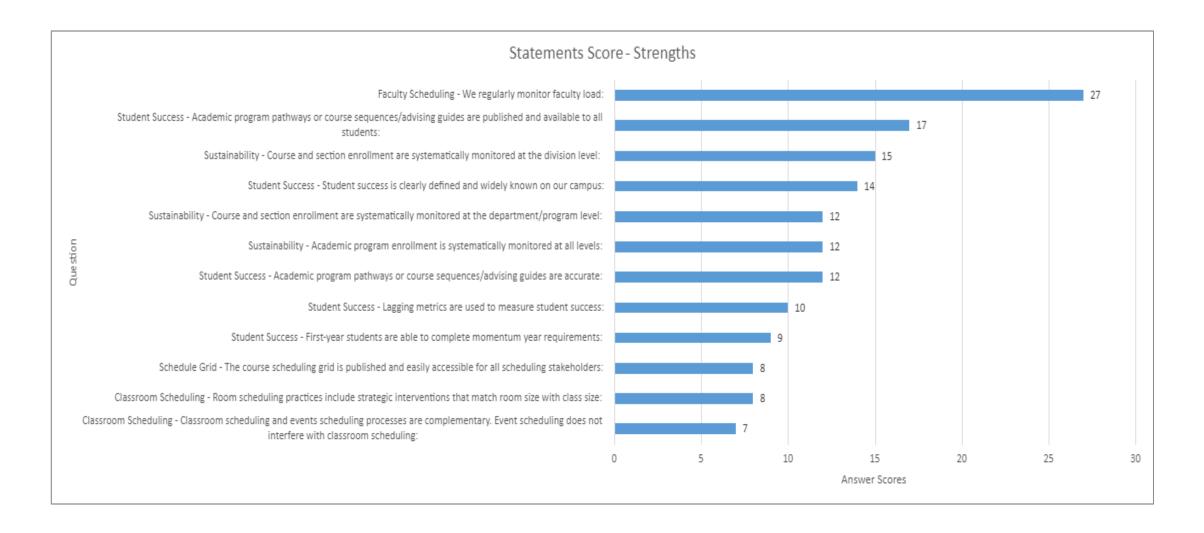


Schedule Grid



Student Information System





Statements Score - Opportunities Student Success - Leading metrics are used to inform student success interventions: Student Information System - Pre-requisites and Co-requisites are routinely reviewed and updated in the SIS: Student Information System - There are guidelines to only use a seat cap = 0 in the SIS to reserve or hold seats for a specific population for extenuating circumstances only: Policy & Procedure - The student information system enforces the course scheduling guidelines: Classroom Scheduling - There is a consistent and regular process to review academic space needs: Sustainability - Metrics beyond academic program enrollment are used to monitor sustainability such as centrality to Question -12 mission or community workforce development needs: Faculty Scheduling - We have a systematic method for balancing student need with faculty availability and when courses are offered: Student Information System - Program requirement substitutions and waivers are accurately documented and represented in the SIS: Classroom Scheduling - Classroom utilization metrics are used to regularly review effective use of space: Student Information System - The rules in the student information system are organized in a way that enforces program requirements, institutional policy, and supports student success (ie waitlisting, prereqs, restrictions etc.): Classroom Scheduling - Classroom utilization metrics are consistently tracked and reported: Policy & Procedure - The final exam schedule is published in advance of the first day of classes and in time to be -20 included in syllabi: -25 -15 -20 -10 **Answer Scores**

Stakeholder Meetings Summary

Strengths (Focus Group v Survey v Web)



Evidence of strong commitment to improve current state of classroom and course scheduling. Willingness to use data.



Program Pathways



Overall Student Success

Opportunity Themes

Student Information System

Room Scheduling

Policies & Procedures

Schedule Grid

Student Information System

- Homegrown system with limitations
 - Ability to integrate with other software
 - Ability to automate internal processes, checks & balances (pre-requisites, student attributes etc.)
 - Increase understanding around functionality and set guidelines

Room Scheduling

- Use of spreadsheets for schedule planning CES
- Inventory of RAC (spelling?) rooms vs. Non-RAC rooms CES
 - Guidelines for shared spaces

Policies & Procedures

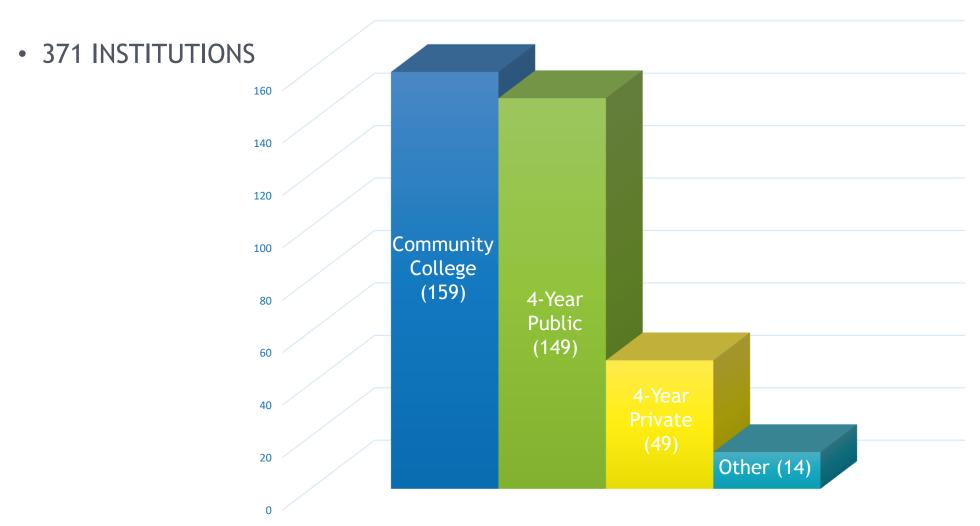
- Conceptual agreement around primary goal for course schedule
 - Is it to optimize for student success (ie conflict free schedule), accommodate faculty requests, or some combination of the two
 - Vetted and adopted through proper governance channels
- Clear outline of roles/responsibilities for course scheduling CES
- Exception policies CES
- Opportunity to review timeline for schedule planning, publication, registration CES

Schedule Grid

- No passing period discussion of instructors needing to let students out early to get to next class
- Exam scheduling CES
- Visibility into scheduling grid CES
 - Exception policy

Strategic Scheduling Checkup Results

Higher Education Scheduling Index

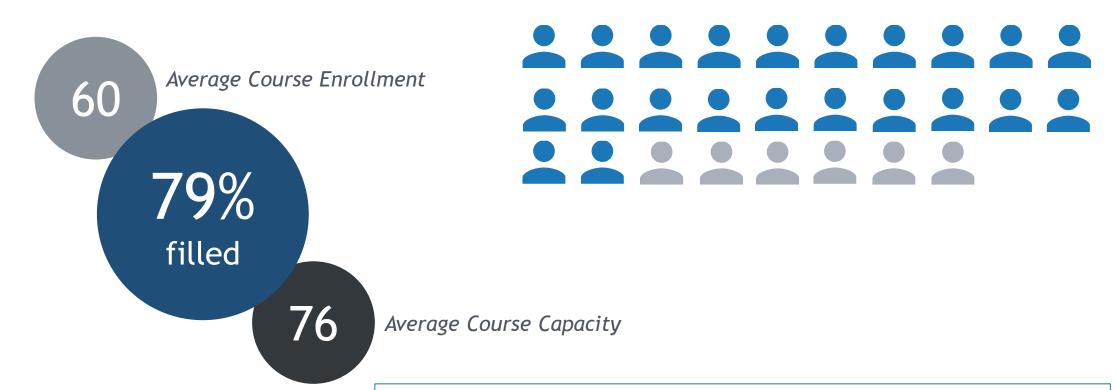


The Data

- Section data for Fall 2017-2021
- Eliminated the following:
 - Eliminated Actual Enrollments of 0
 - Eliminated graduate courses
 - Eliminated Section Status C
 - Eliminated the Following Sections:
 - Tutorials, Clinical, Correspondence, Directed Reading, Dissertation, Field Experience, Field Trip, Individual Directed Study, Internship, Independent Study, Performance, Research Evaluation, Research Paper, Review Paper, Studio, Thesis, and Workshop
- Capacity analysis ran using Fall 2019, Fall 2021 data, and Classroom/Lecture Hall room types

Course Offering Analysis

Enrollment Ratio - Fall 2021



Enrollment Ratio: Overall average fill rate for course offerings calculated as census enrollment divided by Enrollment Capacity.

Course Offering Summary - Fall 2021

Average Enrollment / Average Enrollment Capacity			
York U	Mean		
60 / 76	21 /27		

Course Offering Summary - Fall 2021

Measurement	Goal	Percent	Courses	All Institutions Percentile
Enrollment Ratio	85% Target	79%		61 st
Overloaded Course Ratio (>95% Enroll Ratio)	<10%	15%	202 of 1,338 courses	64 th
Balanced Course Ratio (>70% <95% Enroll Ratio)	>65%	50%	669 of 1,338 courses	95 th
Underutilized Course Ratio (<70% Enroll Ratio)	<30%	35%	467 of 1,338 courses	72 nd

Course Offerings by Level - Fall 2021

Course Level	Courses	Sections	Enrollment Ratio	Overloaded Course Ratio	Underutilized Course Ratio
1000 Level	160	316	81%	12%	26%
2000 Level	258	442	80%	13%	36%
3000 Level	500	667	78%	16%	38%
4000 Level	420	514	78%	17%	34%
Undergraduate Total	1,338	1,939	79%	15%	35%

Course Offerings by Section Count - Fall 2021

- 54% of the undergraduate schedule is offered as a single section per course (71% average)
- Single sections are balanced on average; more analysis is needed on requirement vs elective
- Higher offering courses tend to be the highest filled

Courses by number of Sections Offered	Fall 2021 Sections Offered	Fall 2021 Enrollment Ratio
1 Section	1,054	75%
2 Sections	308	81%
3-5 Sections	370	82%
6-10 Sections	182	86%
11+ Sections	25	88%

Course Offering Analysis - Fall 2022

Measurement	Percent	Sections	All Institution Percentile
Reduction Candidates	2%	50 sections	90 th
Addition Candidates	0.19%	4 sections	94 th

Addition Candidates: The percentage of total sections in a schedule that could potentially be added to the schedule based on sufficient student demand to justify one or more additional sections, limited to courses offered in the analyzed term.

Reduction Candidates: The percentage of total sections/courses in a schedule that could potentially be removed based on insufficient demand.

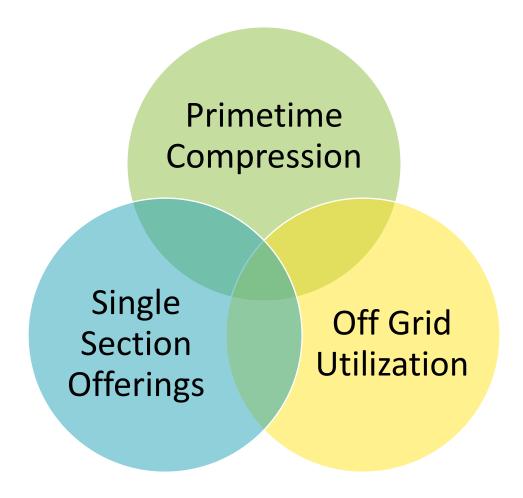
Course Offering Takeaways

- Review reallocation candidates to shift appropriate resources to high offering sections
- Review addition and overloaded courses for term-to-term bottlenecks, specifically in potential general education bottlenecks
- Review single section offerings
 - · Review for demand and timing
 - Utilize pathway analysis to further explore rotation options

Capacity Analysis

Keele Campus
Classroom and Lecture Hall
Room Type

Managing Scheduling Complexity

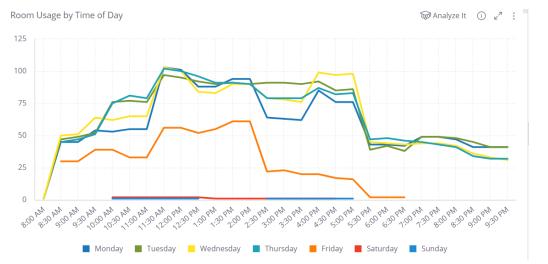


Space Utilization Parameters

Standard Week (67.5 hrs)

Monday	8:30 AM - 10:00 PM
Tuesday	8:30 AM - 10:00 PM
Wednesday	8:30 AM - 10:00 PM
Thursday	8:30 AM - 10:00 PM
Friday	8:30 AM - 10:00 PM

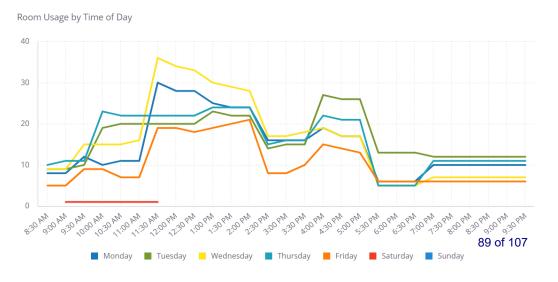
2019



Primetime Week (30 hrs)

Monday	11:30 AM - 5:30 PM
Tuesday	11:30 AM - 5:30 PM
Wednesday	11:30 AM - 5:30 PM
Thursday	11:30 AM - 5:30 PM
Friday	11:30 AM - 5:30 PM

2021



Space Utilization Summary

Measurement	2019 Percent	2019 Percentile	2021 Percent	2021 Percentile
Standard Utilization	51%	80 th	27%	19 th
Primetime Utilization	68%	65 th	39%	8 th
Primetime Compression	34%	83 rd	43%	67 th

Standard Utilization: The percentage of hours in a standard week (as defined by each institution's usage patterns) that a typical classroom is in use.

Primetime Utilization: The percentage of hours in the primetime subset of a standard week (as defined by each institution's usage patterns) that a typical classroom is in use.

Classroom Utilization by Size Category - Fall 2019

Seats	Rooms	Standard Week Utilization	Prime Week Utilization	Primetime Compression
1 - 15	2	16%	22%	39%
16 - 25	6	32%	48%	50%
26 - 50	73	46%	63%	38%
51 - 100	81	51%	69%	36%
100+	42	63%	79 %	25%
Totals	204	51%	68%	34%

Classroom Utilization by Size Category - Fall 2021

Seats	Rooms	Standard Week Utilization	Prime Week Utilization	Primetime Compression
16 - 25	5	9%	19%	100%
26 - 50	58	24%	37%	55%
51 - 100	60	29%	41%	44%
100+	34	34%	43%	26%
Totals	157	27%	39%	43%

Classroom Utilization by Room Priority - Fall 2021

Seats	RAC Rooms	Non-RAC Rooms	RAC Prime Week Utilization	Non-RAC Prime Week Utilization
16 - 25	1	4	7 %	22%
26 - 50	44	14	44%	12%
51 - 100	53	7	46%	9%
100+	34	0	43%	-
Totals	132	25	44%	13%

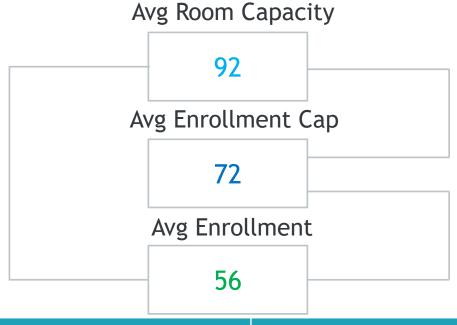
Enrollment Ratio Impact on Seat Fill Utilization

• Seat Fill Utilization - Enrollment: The percentage of seats in use (based on enrollment) in a classroom when it is scheduled (Average Enrollment divided by room capacity).

• Seat Fill Utilization - Enrollment Cap: The percentage of seats in use (based on section enrollment caps) in a classroom when it is scheduled (Average Enrollment Capacity divided by room capacity).

Enrollment Ratio Impact on Seat Fill Utilization - Fall 2019

61% Goal: 75% Seat Fill Enrollment



MeasurementFall 2019 PercentileSeat Fill (Enrollment) Ratio61stSeat Fill (Capacity) Ratio56th

78%

Goal: 90%

Seat Fill Enrollment Cap

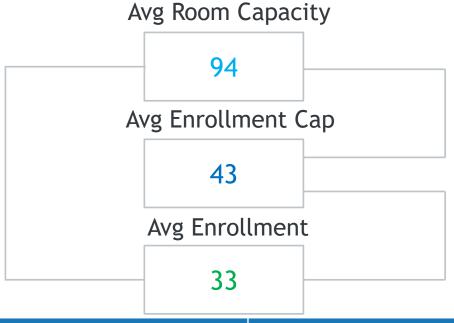
78%

Goal: 85%

Enrollment Ratio

Enrollment Ratio Impact on Seat Fill Utilization - Fall 2021

35% Goal: 75% Seat Fill Enrollment



Measurement	Fall 2021 Percentile
Seat Fill (Enrollment) Ratio	6 th
Seat Fill (Capacity) Ratio	2 nd

46%

Goal: 90%

Seat Fill Enrollment Cap

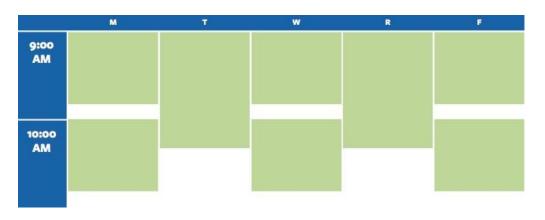
76%

Goal: 85%

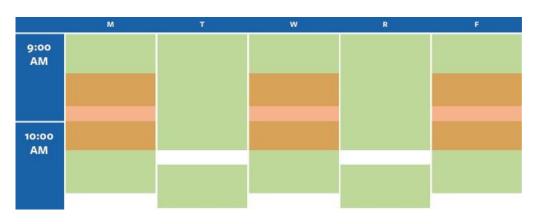
Enrollment Ratio

The Importance of On-Grid Scheduling

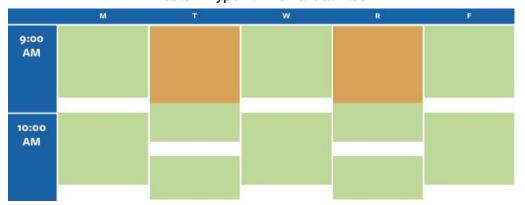
A Typical Primetime Meeting Pattern Grid



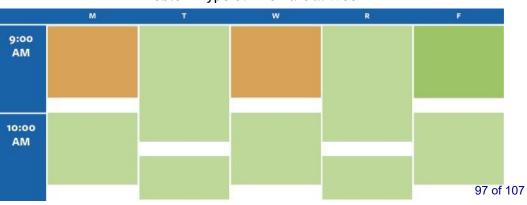
Problem Type 1: The Overlap



Problem Type 2: The Partial Block



Problem Type 3: The Partial Week



Meeting Pattern Analysis - Fall 2019

Meeting Pattern	On-Grid Utilization	Off-Grid Utilization	Off Grid Waste
M 11:30 AM - 02:30 PM	36%	38%	14%
M 02:30 PM - 05:30 PM	28%	39%	17%
T 11:30 AM - 02:30 PM	39%	39%	8%
T 02:30 PM - 05:30 PM	35%	35%	12%
W 11:30 AM - 02:30 PM	41%	37%	13%
W 02:30 PM - 05:30 PM	40%	35%	11%
R 11:30 AM - 02:30 PM	39%	40%	11%
R 02:30 PM - 05:30 PM	33%	38%	14%
F 11:30 AM - 02:30 PM	24%	33%	17%
F 02:30 PM - 05:30 PM	12%	11%	10%
Total	33%	35%	13% 98 of 107

Meeting Pattern Analysis - Fall 2021

Meeting Pattern	On-Grid Utilization	Off-Grid Utilization	Off Grid Waste
M 11:30 AM - 02:30 PM	17%	23%	21%
M 02:30 PM - 05:30 PM	13%	19 %	19%
T 11:30 AM - 02:30 PM	17%	22%	19%
T 02:30 PM - 05:30 PM	16%	17%	21%
W 11:30 AM - 02:30 PM	20%	23%	21%
W 02:30 PM - 05:30 PM	16%	19%	18%
R 11:30 AM - 02:30 PM	20%	19%	18%
R 02:30 PM - 05:30 PM	13%	19%	23%
F 11:30 AM - 02:30 PM	18%	18%	20%
F 02:30 PM - 05:30 PM	3%	8%	7 %
Total	15%	19%	19% 99 of 107

Meeting Pattern Analysis

Measurement	Percent (Fall 2019)	Percentile (Fall 2019)	Percent (Fall 2021)	Percentile (Fall 2021)
Off Grid Usage	35%	15 th	19%	45 th
Off Grid Waste	13%	44 th	19%	14 th

Off-Grid Utilization: The percentage of scheduling using non-standard meeting patterns during Primetime Hours.

Off-Grid Waste: The percentage of capacity wasted by scheduling non-standard meeting patterns during Primetime Hours.

Analysis Takeaways

- Low-to-Moderate Classroom utilization
- Opportunities to enhance the schedule to decrease conflicts will require collaboration in the following areas:
 - Gen ed spread on higher demand course offerings
 - Continued adherence to on-grid meeting patterns
 - Decreasing the amount of unique meeting patterns

Recommendations

Policy & Process Recommendations



Create an academic scheduling policy



Include priority room scheduling parameters and guiding principles in an academic scheduling policy



Establish and adhere to standard meeting patterns



Consider additional course demand analyses



Utilize data to support student-centric course scheduling through pathways

Existing Software & Service Recommendations



Conduct a business process review and audit use of room scheduling software.



Continue implementing current plan for SIS and optimize to support course scheduling business processes

Ad Astra Software & Service Recommendations



Implement Monitor for registration monitoring and tracking



Partner with Ad Astra to do a deep dive meeting pattern analysis service



Partner with Ad Astra to do a pathways analysis

Next Steps

