

COUNCIL OF THE FACULTY OF SCIENCE



NOTICE OF MEETING

April 14, 2026

3:00pm – 4:30pm

via Zoom

AGENDA

1. Call to Order and Approval of Agenda
2. Chair's Remarks
3. Approval of March 10, 2026 Minutes
4. Business Arising
5. Inquiries and Communications
 - a) [Senate Synopsis March 26, 2026](#)
6. Dean's Remarks
7. Associate Dean and Head of Bethune College Remarks
8. Reports from Science Representatives on Senate Committees
9. Science Student Caucus Items
10. Reports from Standing Committees of Council
 - a) Executive Committee
 - i. Vacancies report on the Standing Committees of FSc Council
 - b) Undergraduate Curriculum Committee
 - i. Consent agenda items: March 24
 - c) Petitions Committee
 - i. Consent agenda items: March 25
 - d) Committee on Examinations and Academic Standards
 - i. Faculty Level Review of 2024-2025 Departmental Grade Reports
 - ii. Motion to amend the Faculty of Science Policy on Grades
11. Other Business
 - a) Call for Expressions of Interest: Associate Dean Students – Dean Maydianne Andrade

COUNCIL OF THE FACULTY OF SCIENCE



MINUTES

March 10, 2026

3pm – 4:30pm

via Zoom

MINUTES

1. Call to Order and Approval of Agenda

Chair of Council, A. McEachern, called the meeting to order and a motion was moved, seconded and carried to approve the Agenda.

2. Chair's Remarks

There was none.

3. Approval of February 10, 2026 Minutes

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

4. Guest Speakers

a) Work and Priorities of the Division of Equity, People and Culture - Parissa Safai, Interim Vice-President Equity, People and Culture

Parissa Safai presented to Council an overview of the current structure and initiatives at the Division, and took questions.

5. Business Arising

There was none.

6. Inquiries and Communications

a) Senate Synopsis February 26, 2026

The Senate Synopsis of February 26, 2026 was noted, with no issues raised.

7. Dean's Remarks

Dean M. Andrade reported on a number of developing institutional matters:

Student Financial Impacts

The Dean mentioned upcoming impacts of provincial tuition and OSAP changes, noting that these may present increasing hardship for students. The Dean emphasized the importance of faculty awareness and reminded Council that 10% of tuition is set aside for student support. She shared a link to a report from 2024 on

York's extensive range of student support:

<https://www.yorku.ca/presidentsreport2024/from-access-to-success/>

University Budget Planning

York continues budget planning to eliminate the deficit over the next 3–4 years, and careful budgeting will remain essential. The Dean thanked colleagues who attended the recent budget consultation.

Call for Expressions of Interest for the role of Associate Dean, Students

The Dean expressed gratitude to M. Scheid, who is coming to the end of his term as Associate Dean, Students. A call for EOI will be circulated by the end of March.

Discover York Academics (DYA)

DYA is a site to profile research accomplishments of York faculty, for engagement and research. It will be integrated with Scopus and ORCID and will contribute to York's institutional rankings. Faculty members can request an initial profile by sending CVs to the DYA team. Profiles can be kept private. The Dean clarified that DYA is faculty-focused but encouraged graduate students to list York University on public research profiles such as Google Scholar.

Monthly drop-in gatherings

The March meet and greet social will focus on undergraduate students. An invitation will be sent out.

Discussion: There was discussion regarding provincial funding for York, and the net amount compared to previous years still being calculated. This could result in an increase or a decrease in funding in some categories, although a net benefit is expected, it may not be as significant as suggested by the announcement. The Government also asked institutions to increase student intake as gaining admission to University is becoming more difficult, especially in Ontario.

8. Associate Dean and Head of Bethune College Remarks

a) Associate Dean, Faculty Affairs

A. Skelton provided the following updates:

The Sub-Committee on Honorary Degrees and Ceremonials is seeking nominations for honorary degrees. Members are invited to consider potential high-profile Science nominees. Nomination packages require a 500-word description of the person and two internal letters of support. Contact A. Skelton for any questions about the process.

b) Associate Dean, Students

M. Scheid provided the following updates:

The Spring Open House is on March 21. M. Scheid thanked volunteers and invited those still interested to reach out.

A memo on the National Survey of Student Engagement (NSSE) toolkit was circulated. Instructors were encouraged to share a slide in class, and to consider providing brief in-class time for students, particularly in years 1 and 4, to complete the survey before the April 3 deadline.

c) Head of Bethune College

C. Jang provided the following updates:

Nominations for several student awards are open, with deadlines at the end of March. C. Jang shared the awards website:

<https://www.yorku.ca/colleges/bethune/awards/>

9. Reports from Science Representatives on Senate Committees

There was none.

10. Science Student Caucus Items

There was none.

11. Reports from Standing Committees of Council

a) Executive Committee

i. Ratification and Call for Nominations for Senate and Standing Committee of Council

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

ii. Vacancies report on the Standing Committees of FSc Council

The Chair, A. McEachern noted the vacancies that remain.

12. Other Business

a) Strategic Enrolment Management Working Group - Terms of Reference Overview – M. Andrade, Dean, Faculty of Science

An overview document with the Terms of Reference for the new SEM Working Group was shared ahead of the meeting. Formation of the working group expected for late April or early May. No questions were raised.

b) Concerns about student behaviors

An issue was formally raised to begin a discussion on increasing concerns regarding student conduct, including pressure around grading decisions. These inappropriate interactions, such as persistent emailing and use of emotionally manipulative language, are not clearly defined in the student code of conduct. The issue is widespread among faculty, staff, and teaching assistants across multiple Faculties at York.

Potential action items discussed included:

- A clear shared framework outlining the roles and responsibilities in supporting student success – graduate students/TAs, staff, faculty, senior administration and the students themselves.
- Identifying major sources of conflict across groups and addressing the top priorities.
- Improving the accessibility and clarity of student-facing policies, possibly through lay summaries.
- A Faculty-wide (or University-wide) guidebook on expectations and professional code of conduct with each other.

Meeting Adjournment

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

FACULTY COUNCIL ATTENDANCE FOR:

March 10, 2026



Maydianne Andrade
Taline Apelian-Sutor
Jade Atallah
Kyle Belozerov
Wendy Booth
Carol Bucking
Chris Caputo
Carmina Celeridad
Karyn Davies
James Elwick
Pamela Fernandes
Amy Gaukel
Michael Haslam
Delwar Hossain
Eva Hughes
Derek Jackson
Christopher Jang
Tamara Kelly
Tom Kirchner
Patricia Lakin-Thomas

Gino Lavoie
Jerusha Lederman
Neal Madras
Andrew McEachern
Robin Metcalfe
Alex Mills
Georges Monette
Natalie Moussa
Iain Moyles
Fatema Nakhuda
Mandy Ramnaraine
Martin Romero
Acacia Rose
Parissa Safai
Vivian Saridakis
Mike Scheid
Joanne Sequeira
Brad Sheeller
Valeriia Shvetsova
Andrew Skelton

Ayesha Tahir
Wendy Taylor
Robert Tsushima
Jennifer van Wijngaarden
Satyam Verma
Mark Vicari
Minglu Wang
Jeremy Webb
Aleksandra Wiscicka
Carl Wolfe
Elizaveta Yakubovskaya

2025-2026 FSc Report on vacancies for Senate and FSc Standing Committees

Committee	Rules of Faculty Council - membership	Meeting time / Membership	From	To
Senate	According to the York University Secretariat based on the Senate Rules and Procedures governing the size and composition of Senate, the Faculty of Science shall have twelve members, including a minimum of two Chairs. According to The Rules of Council (Science), Faculty representation shall include the Director of Natural Science, three Department Chairs, and terms shall be for three years.	As per Senate website		
	Dean, Ex officio	M. Andrade	Designated	
	Member at large	A. Skelton, Department of Mathematics & Statistics	2025	2028
	Member at large	E. Hamm, Department of Science, Technology & Society	2024	2027
	Member at large	R. Hill, Department of Chemistry	2025	2028
	Member at large	T. Kelly, Department of Biology	2024	2027
	Member at large	W. van Wijngaarden, Department of Physics and Astronomy	2025	2028
	Member at large	T. Kubiseski, Department of Biology	2023	2026
	Member at large	V. Saridakis, Department of Biology	2024	2027
	Member at large	N. Madras, Department of Mathematics & Statistics	2025	2028
	Department Chair	T. Kirchner, Department of Science, Physics & Astronomy	2024	2027
	Department Chair	J. van Wijngaarden, Department of Chemistry	2024	2027
	Department Chair	M. Haslam, Department of Mathematics & Statistics	2023	2026
	Director of NATS	R. Metcalfe, Division of Natural Science	Designated	
	Student representative	Taline Apelian-Sutor	2025	2027
	Student representative	Raman Mir Eshghi	2025	2027
Faculty Council Staff Representatives	Chair of Council	A. McEachern	2025	2026
	Vice-Chair of Council	J. Webb	2025	2026
		W. Booth	2025	2026
		D. Hossain	2025	2026
FSc Reps on Senate Committees		M. Xu	2025	2026
Senate Executive	1 member from FSc	T. Kelly	2024	2027
Academic Policy, Planning and Research Committee (APPRC)	1 member from FSc	G. Monette	2023	2026
ASCP (Academic Standards, Curriculum and Pedagogy Committee)	1 member from FSc	J. Elwick	2024	2027
Senate Tenure & Promotion	1 member from FSc	P. Wilson	2024	2027
Sub-Committee on Honorary Degrees & Ceremonials	1 member from FSc	A. Skelton	2025	2028
Executive Committee	The Executive Committee shall be chaired by the Chair of Council and include the Vice-Chair of Council, the Secretary of Council, and one member elected from each of Biology, Chemistry, Mathematics & Statistics, Physics & Astronomy, and Science, 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 normally meets the first Tuesday of each month (September to May) from 3pm - 430pm		
	Chair of Council	A. McEachern	2025	2026
	Vice-Chair of Council	J. Webb	2025	2026
	Dean, Ex officio	M. Andrade	Designated	
	Asst. Dean - SEM & SEP	E. Hughes	Designated	
	Staff representative	W. Booth	2025	2026
	Undergraduate Student Rep	Seyedeh Lilia Modarresi Saryazdi	2025	2026
	Biology	M. Vicari	2023	2026
	Chemistry	C. Caputo	2024	2027
	Math & Stats	G. Monette	2025	2028
	Physics & Astronomy	W. Taylor	2025	2028
	Science, Technology & Society	V. Pavri	2025	2028
APPC	The Academic Policy and Planning Committee shall include the Dean or designate (ex officio), the Master of Norman Bethune College and one member elected from each of Biology, Chemistry, Mathematics & Statistics, Physics & Astronomy, and Science, Technology & Society/Natural Science, one student member of Council, and one of the staff members elected to Council.	APPC will normally meet the last Thursday of each month (September to April) from 9:00 am - 10:30 am		
	Associate Dean, Faculty, (ex officio)	A. Skelton	Designated	
	Head of Bethune College	C. Jang	Designated	
	Undergraduate Student Representative	Parmida Khodrang	2025	2026
	Elected staff representative	M. Xu	2025	2026
	Biology	R. Schott	2023	2026
	Chemistry	R. Fournier	2023	2026
	Math & Stats	P. Szeptycki	2023	2026
	Physics & Astronomy	W. van Wijngaarden	2025	2026
	Science, Technology & Society	VACANT	2025	2028
Undergraduate Curriculum Committee	The Curriculum Committee shall include the Dean and an Associate Dean (ex officio), the Chair or nominee from each teaching Division or Department, three members elected by Council and two student members of Council.	The Curriculum Committee will normally meet every last Tuesday of each month (September to April) from 9:00 - 10:30 am		
	Member at Large	VACANT	2025	2028
	Member at Large	Paula Wilson	2023	2026
	Dean, Ex officio	M. Andrade	Designated	
	Undergraduate Student Rep	S. Paniz Hosseini	2025	2026
	Undergraduate Student Rep	Rachael Ajadi	2025	2026
	Biology	J. Atallah	2023	2026
	Chemistry	D. Jackson	2025	2028
	Math & Stats	M.W. Wong	2023	2026
	Physics & Astronomy	N. Blinov (F) / P. Hall (W)	2025/2025	2025/2029
	Science, Technology & Society	R. Metcalfe / ALT. J. Rogerson	2025	2027
	Member at Large	L. Robertson	2023	2026

2025-2026 FSc Report on vacancies for Senate and FSc Standing Committees

Committee	Rules of Faculty Council - membership	Meeting time / Membership	From	To
CEAS	The <u>Committee on Examinations and Academic Standards</u> shall consist of an Associate Dean (<i>ex officio</i>), five members elected by Council from each of Biology, Chemistry, Mathematics & Statistics, Physics & Astronomy and Science, Technology & Society/Natural Science, and one student member of Council.	CEAS will normally meet every alternate Thurs from 1:00 - 3:00 pm year round.		
	In addition to the above membership of the committee, Council shall elect an alternate member from each of the Departments specified above. The alternate member shall be the person polling the next highest number of votes to those elected to the committee from each Department. The alternate for the student member will be selected by the Science Student Caucus from one of its Members at Large. An alternate can only vote in the event that first elected members are not in attendance.			
	Associate Dean - Students, Ex officio	M. Scheid	Designated	
	Undergraduate Student Rep	Sophia Luzskov	2025	2026
	Undergraduate Student Rep	Madeline Blanco	2025	2026
	Biology	VACANT, VACANT / ALT. VACANT	2023/2025	2026/2028
	Chemistry	P. Johnson & T. Zeng / ALT. VACANT	2023/2023	2026/2026
	Math & Stats	VACANT, VACANT / ALT. VACANT	2025/2025	2028/2028
	Physics & Astronomy	S. Tulin, B. Howard / ALT. C. Story	2025/2025	2026/2026
	Science, Technology & Society	K. Birch / ALT. S. Domenikos	2025/2023	2028/2026
Petitions	The <u>Petitions Committee</u> for the purpose of hearing student petitions shall consist of an Associate Dean (<i>ex officio</i>), 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.	Each panel meets once a month on Wednesday or Thursday from 2:30 pm - 4:00 pm		
	Associate Dean, Ex officio	M. Scheid	Designated	
	Undergraduate Student Rep	Nadia Fatima	2025	2026
	Undergraduate Student Rep	Satyam Verma	2025	2026
	Undergraduate Student Rep	Precious Fagbenro	2025	2026
	Member at Large	E. McFarlane	2025	2028
	Biology	C. Jiang	2025	2028
	Chemistry	D. Jackson	2025	2028
	Physics & Astronomy	S. Jerzak	2025	2026
	Math & Stats	H. Jankowski	2025	2028
	Science, Technology & Society	C. Douglas	2025	2028
	Member at Large (STS)	J. Webb	2025	2026
	Member at Large (STS)	J. Rogerson	2025	2026
	Member at Large (Biology)	A. Mills	2023	2026
SRC T & P Committee	The <u>Committee on Tenure and Promotions</u> shall consist of one currently 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.	SRC T & P Committee will normally meet the last Friday of each month (September to May) from 9:00 am - 11:00 am in LUM 305B		
	In addition to the above membership of the committee, Council shall elect an alternate member from each of the Units mandated above. The alternate member shall be the person polling the next highest number of votes to those elected to the committee from each Department. The alternate for the student member shall be selected by the Science Student Caucus from one of its Members-at-Large on an annual basis. An alternate can only vote in the event that existing members are not in attendance.			
	Associate Dean - Faculty, Ex officio	A. Skelton	Designated	
	Undergraduate Student	Valeria Shvetsova	2025	2026
	Biology	M. Bayfield/ ALT. VACANT	2023/2025	2026/2028
	Chemistry	A. Orellana/ ALT. S. Krylov	2023/2024	2026/2027
	Physics & Astronomy	M. George (Fall), C. Bergevin (Winter) / ALT. R. Lewis	2025/2025	2026/2026
	Math & Stats	Y. Gao / ALT. E. J. van Rensburg	2024/2025	2027/2028
	Science, Technology & Society	S. Domenikos / ALT. D. Lunqu	2025/2023	2028/2026
	Currently, the Committee on Teaching and Learning shall consist of a minimum of two Faculty members from each department, the Associate Dean – Students, one Librarian, one staff member, one undergraduate student, and two graduate students, in addition to other members invited as provided for by the Rules. Graduate students and staff nominees will indicate their interest in serving on the committee in writing to the committee, who will then approve by majority vote.	CoTL normally meets every third Thursday of each month (September to May) from 10:00 am - 11:30 am		
CoTL	Associate Dean - Students, Ex officio	M. Scheid	Designated	
	Graduate Student Representative	Fatema Nakhuda	2025	2026
	Graduate Student Representative	Sanaz Gholizadeh	2025	2026
	Undergraduate Student Representative	Setareh Ghorbani Sini	2025	2026
	Stacie Science Library	M. Wang	Designated	
	IT Representative	VACANT	Designated	
	Teaching Commons Rep	Y. Su	Designated	
	Staff representative, Elected	D. Hossain	2025	2026
	Biology	L. Adriana Puentes Jacome	2024	2027
	Biology	J. Atallah	2023	2026
	Chemistry	H. Kouyoumdjian	2025	2026
	Chemistry	D. Wilson	2025	2028
	Physics & Astronomy	N. Blinov	2025	2026
	Physics & Astronomy	C. Boukare	2025	2026
	Math & Stats	W. Liu	2025	2028
	Math & Stats	VACANT	2025	2028
	Science, Technology & Society	C. Rozins	2024	2027
Committee on Research & Awards	The <u>Committee on Research and Awards</u> shall consist of one member elected by Council from each of Biology, Chemistry, Mathematics and Statistics, Science, Technology & Society/Natural Science, and Physics and Astronomy, one student member of Council and an Associate Dean (<i>ex officio</i>).	The Research & Awards Committee will meet when grants and awards need to be adjudicated.		
	Associate Dean - Research & Graduate Education, Ex officio	S. Moghadas	Designated	
	Undergraduate Student Representative	Ruth Igumbor	2025	2026
	Graduate Student	Aysa Tajeri Emamchaei	2025	2026
	Biology	D. Golemi-Kotra	2023	2026
	Chemistry	T. Baumgartner	2025	2028
	Physics & Astronomy	R. Kannan	2025	2026
	Math & Stats	H. Zhu	2023	2026
	Science, Technology & Society	H. Miale	2023	2026
	The <u>Appeals Committee</u> for the purpose of hearing student appeals shall consist of four elected faculty members from Science units, an Associate Dean (<i>ex officio</i>) and two student members of Council. A quorum shall consist of either (a) two faculty members and one student member or (b) three faculty members.	Meeting is held once a month and times are polled by the Committee Secretary.		
Appeals Committee	Associate Dean - Faculty, Ex officio	A. Skelton	Designated	
	Undergraduate Student Representative	Ayesha Tahir	2025	2026
	Undergraduate Student Representative	Abisola Anifowose	2025	2026
	Member at Large	VACANT	2025	2028
	Biology	L. Donaldson	2023	2026
	Chemistry	L. Hiscock	2023	2026
	Physics & Astronomy	P. Sholz	2025	2026
	Math & Stats	M.W. Wong	2023	2026
	Science, Technology & Society	D. Monaldi	2023	2026

2025-2026 FSc Report on vacancies for Senate and FSc Standing Committees

Committee	Rules of Faculty Council - membership	Meeting time / Membership	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 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 for a one-year term.	Meeting is held based on availability.		
		Associate Dean, Dean - Research & Graduate Education, Ex officio	S.Moghadas	Designated
		Biology	J. Paluzzi	2023 2026
		Chemistry	R. Hill	2023 2026
		Physics & Astronomy	D. Harris	2023 2026
		Math & Stats	D. Liang	2023 2028
		Science, Technology & Society	VACANT	
		Member from Faculty of Health OR Lassonde	VACANT	
		Member at Large	D. Golemi-Kotra	2023 2026
		Graduate student	Elizaveta Yakubovskaya	2025 2026
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, Faculty Affairs (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	Meeting is held the last Wednesday of every month.		
		Associate Dean - Faculty, Ex officio	A. Skelton	Designated
		Associate Dean, Dean - Research & Graduate Education, Ex officio	S.Moghadas	Designated
		Undergraduate Student Representative	Natalie Moussa	2025 2026
		Graduate Student	Katherine Myers	2025 2026
		Graduate Student	Emily Anacleto	2025 2026
		Biology	D. Golemi-Kotra	2024 2027
		Chemistry	C. Young	2023 2026
		Physics & Astronomy	A. Kumarakrishnan	2025 2026
		Math & Stats	M. Omar	2025 2028
		Science, Technology & Society	J. Lazenby (Fall)/D. Monaldi (Winter)	2025 2026

FACULTY OF SCIENCE

Science Curriculum Committee

AGENDA

Date: Tuesday, March 24 2026

Time: 10:00 a.m.

<https://yorku.zoom.us>

[/j/97107614353?pwd=](https://yorku.zoom.us/j/97107614353?pwd=7plg3asQOPbNJolsPdF4o2J8fNa6t.1)

[7plg3asQOPbNJolsPd](https://yorku.zoom.us/j/97107614353?pwd=7plg3asQOPbNJolsPdF4o2J8fNa6t.1)

[F4o2J8fNa6t.1](https://yorku.zoom.us/j/97107614353?pwd=7plg3asQOPbNJolsPdF4o2J8fNa6t.1)

Committee Members

- Associate Dean of Students: Professor Michael Scheid
- Chair: Professor Lisa Robertson
- Second Chair: Professor Robin Metcalfe
- Faculty Members:
 - Professor Jade Atallah
 - Professor Michael Haslam
 - Professor Derek Jackson
 - Professor Chris Jang
 - Professor Jesse Rogerson
 - Professor Patrick Hall
- Secretary: Tina Reddi (non voting member). Student Representatives: Paniz Hosseini and Rachael Ajadi
- Miranda Ramnarine, Manager, Science Academic Services (non-voting member)

1.1 MINUTES OF THE MEETING:

1.1.1 November 25 2025 Meeting

1.2 **New course proposal: SC/CHEM 4025 3.0 – Modern Approaches to Biomolecular Structure Determination.**

Notes: this proposal was submitted by Prof. Derek Jackson in consultation Biology - approval from Biology, Prof. Nicole Nivillac approved. This course is integrated with SC/CHEM 5025 3.0.

1.3 Minor Modification proposal: Change in Admission Requirements for the General Science Program, Bachelor and Honours designation.

Notes: this proposal was submitted by AD Mike Scheid.

1.4 New Course Proposal: SC/PDEV 2401 3.0 – Professional Development for Science Students: Project Management.

Notes: this proposal was submitted by AD Mike Scheid.

1.5 New Rubric Proposal: A request for Creation of the PDEV Course Rubric is included with item 1.4 proposal above.

Notes: this proposal was submitted by AD Mike Scheid.

1.6 Change in course description: HH/NRSC 2200 3.0 – change to correct clerical error in the course description.

Notes: This proposal was never submitted to the Faculty of Science for approval. However, the change has already been implemented in the Curriculum Management System to reflect the update. It is being brought to this committee now to ensure the change is formally approved and aligned with the standard workflow. (The CMS team notified Tina R. of this issue.).

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)

Chemistry, CHEM

Date of Submission:

Course Number:

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

SC/CHEM 4025 3.0

Var:

C

Academic Credit Weight:

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

AC=

3

Course Title:

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

Modern Approaches to Biomolecular Structure Determination

Short Title:

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

Biomolecular Structure Determination

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

**Brief Course
Description:**

**Maximum 2000
characters**

*(approximately 300 words
including spaces and
punctuation).*

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

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

This course introduces students to multiple experimental methods employed by structural scientists to determine and probe the structure and function of biological macromolecules. Students will obtain a theoretical and practical understanding of several methods used when examining macromolecular structure. Students will gain an advanced understanding of how biophysical analyses of macromolecules contribute to the understanding of biochemical processes, drug and vaccine design, and how to assess structural studies in literature and related databases.

Prerequisites: SC/CHEM 3051 3.00, SC/BIOL 3051 3.00, or SC/BCHM 3051 3.00

**Generic Course
Description:**

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

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

Expanded Course Description:

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

This course introduces students to multiple experimental methods employed by structural scientists to determine and probe the structure and function of biological macromolecules. Students will obtain a theoretical and practical understanding of several methods used when examining macromolecular structure. Students will gain an advanced understanding of how biophysical analyses of macromolecules contribute to the understanding of biochemical processes, drug and vaccine design, and how to assess structural studies in literature and related databases.

Many recent advances in structural science have led to significant advances in the field. For instance, the emergence of single-particle cryogenic electron microscopy (cryo-EM) has facilitated a rapid and in depth understanding of the virus associated with the COVID-19 pandemic, leading to rapid development of therapeutic strategies targeting the virus spike protein. Serial X-ray crystallography and other synchrotron-based methods, including free-electron lasers, have enabled researchers to engage in dynamic structural analyses of macromolecules, and observe chemical reactions from crystalline samples. The development of predictive methods, such as AlphaFold, have enabled researchers to forward hypothesis-driven studies. However, AlphaFold predictions are only as successful as the experiential data, mainly from the Protein Data Bank (PDB), it can use in it's training sets. Therefore, a knowledge of experimental structural determination methods is integral to the understanding of how AlphaFold and similar methods arrive at predictive structural models. This course will take a practical approach to foster students' understanding of the theory behind the methods employed by structural scientists in the field, and to critically assess research literature involving structural studies of biological macromolecules.

The learning objectives of the course include:

1. Describe the theory and practice underlying several biophysical methods employed by structural scientists.
2. Understand the role that multiple, often orthogonal, biophysical methods can contribute to the understanding of a macromolecule's structure and biochemical function.
3. Discuss examples of the application of structural science in current research and development pipelines.
4. Critically assess, understand, and communicate structural science data presented in current research literature.

Topics to be covered in the course include:

1. Structural determinants of macromolecules
2. Liquid Chromatography
3. Optical Spectroscopy and Multi-Angle Light Scattering
4. Mass Spectrometry
5. X-ray Crystallography
6. Small Angle X-ray Scattering
7. Electron Microscopy and Cryogenic-Electron Microscopy
8. Nuclear Magnetic Resonance
9. Current Software, structure prediction methods, and homology modelling
10. Structural databases and literature assessment

The course will include a Term Paper/Project wherein undergraduate students will be required to write a review paper based on a selection of structural biology topics.

Course Design:

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

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

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

The course will be a one-term, in-person (LECT) course, with three (3) lecture hours per week. In addition to the class assignments, mid-term test, and final exam, undergraduate students will be required to write a review paper based on a selection of structural biology topics. Graduate students will be required to develop an NSERC-style grant proposal on a structural biology topic and present that proposal in class. Student engagement and participation will include group discussion of current research, as well as contributing to peer assessment of review papers and research presentations. Office hours and eClass access will be available for student engagement outside lecture hours.

Instruction:

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

1. Planned frequency of instruction – yearly (though should the department determine a bi-annual offering, that works as well).
2. First offering of course: FW 2027-28
3. Departmental members competent to teach the course: Gerald Audette, Philip Johnson, Brian Kim, Derek Wilson
4. Other FSc faculty competent to teach the course: Vivian Saridakis (Biology), Logan Donaldson (Biology)
5. Departmental Instructor to teach the course in the upcoming year (FW2728): Gerald Audette
6. Contact hours: 3 lecture hours per week, one term
7. Course to be cross listed with SC/BCHM 4025
8. Course to be integrated with GS/CHEM 5025

Evaluation:

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

If the course is to be integrated, the additional requirements for graduate students are to be listed.

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

Evaluation – SC/CHEM 4025; SC/BCHM 4025

Assignment(s) = 10%

Midterm Test (In Class) = 20%

Term/Review Paper = 25%

Participation = 5%

Peer Evaluation = 10%

Final Exam = 30%

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

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

Also please list any online resources.

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

LIBRARY SUPPORT STATEMENT MUST BE INCLUDED.

There is no textbook required for the course.

Students should have access to an introductory Biochemistry textbook, such as from SC/BIOL 2020, SC/CHEM 2050 etc. An example is:

Nelson, D. L., Cox, M. M., Hoskins, A. A., & Lehninger, A. L. (2021). *Lehninger principles of biochemistry* (8th ed.).

There are several resources available through York Libraries:

1. Drenth, J., & Mesters, J. (2007). *Principles of protein X-Ray crystallography* (3rd ed). Springer.
2. Rupp, B. (2010). *Biomolecular crystallography: principles, practice, and application to structural biology*. Garland Science.
3. Lattman, Grant & Snell (2018). *Biological Small Angle Scattering: Theory and Practice*. Oxford University Press
4. Appasani, K. (Ed.). (2025). *Cryo-Electron Microscopy in Structural Biology: From Structural Insights to Tomography and Drug Discovery* (1st ed.). CRC Press.
5. Spence, J. C. H. (2017). *High-resolution electron microscopy* (4th ed.). Oxford University Press.
6. Podzimek, S. (2011). *Light Scattering, Size Exclusion Chromatography and Asymmetric Flow Field Flow Fractionation: Powerful Tools for the Characterization of Polymers, Proteins and Nanoparticles* (1. Aufl.). Wiley.

Students will also be provided with current examples from the literature through eClass.

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.

This is a lecture-based course. No major resources are required, other than standard projectors etc.

Course Rationale:

The following points should be addressed in the rationale:

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

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

The expected enrolment in the course.

This course will provide grounding and a framework for students to understand, in greater depth, the methodologies that are employed by active researchers in structural science, particularly structural biology & biochemistry. It is targeted at students interested in biochemistry, biological chemistry, biophysics, molecular biology, and other related programs. The course builds from courses such as SC/CHEM 3051, which focuses on the biomolecules themselves, and the recently deployed SC/CHEM 4055 that explores enzyme design. Indeed, neither SC/CHEM 3051 nor SC/CHEM 4055 could be taught without the fundamental methods of structure determination that this course will provide. The 240,000 plus structures in the Protein Data Bank that can be visualized by VR in SC/4055 and other courses, as well as the success in predictive algorithms such as AlphaFold, are a testament of the need to understand the methods behind the structures.

The course will begin with a (re)introduction of the structural determinants of macromolecules. Following this, the course will introduce students to the theory and practical aspects of multiple biophysical methods that are not covered in other courses in depth, including Liquid Chromatography, Multi-Angle Light Scattering (MALS), X-ray Crystallography, Small Angle X-ray Scattering (SAXS), and Cryogenic Electron Microscopy (cryo-EM). The course will include a discussion of appropriate structural databases and homology/predictive modelling methods.

This course does not cover capillary electrophoresis (CE), which is a main topic of SC/CHEM 4050, nor methods such as Langmuir-Blodgett trough analysis, such as is covered in SC/CHEM 4093, for analysis of lipids monolayers at surfaces. Mass spectrometry is covered in SC/CHEM 4081, and this course looks to connect how MS methods such as Hydrogen-Deuterium Exchange Mass Spectrometry, ion mobility, and oxidative labelling/crosslinking can be coupled with methods noted above to provide a robust exploration of a molecule's structure and dynamics, and how this relates to biochemical function.

Students will gain insights and understanding of how those "pretty pictures" of biological macromolecules are generated, and how to assess them critically. The course takes a "look under the hood" approach for the methods that they will be asked to engage with in their future careers. Students will be tasked with a literature review style term paper and in-class participation.

This course is part of the Department's efforts to rejuvenate and revitalize its upper year, 4000-level, offerings for our students in the Chemistry and Biochemistry programs. It is also, in part, a revitalization of a previous course, SC/CHEM 4092/5092 (X-ray crystallography), which is being redesigned as a grad-only (6000 level) course exploring multiple X-ray diffraction methods pertinent to the chemical and biochemical sciences. This course is aimed at providing another option at the 4000-level for students in Chemistry, Biochemistry, and Biology programs. To this end, it is anticipated that this course will not be undersubscribed and will not take enrollments away from other 4000-level Chemistry/Biochemistry courses but rather engage across these programs and provide an extra 4000-level option for students who are finding other Biology courses over subscribed.

Enrollment is expected to be up to 50 students per year.

**Faculty and
Department
Approval for Cross-
listings:**

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

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

Accessible format can be provided upon request.

**STEACIE SCIENCE & ENGINEERING LIBRARY
YORK UNIVERSITY**

MEMORANDUM

To: Dr. Gerald F. Audette, Professor, Department of Chemistry
From: Minglu Wang, Science Librarian
Re: CHEM 4025 – Modern Approaches to Biomolecular Structure Determination
Date: September 5, 2025

I have reviewed the course proposal for **CHEM 4025 – Modern Approaches to Biomolecular Structure Determination** and can state that the York University Libraries have the required resources to support this course.

Please be aware that the library offers the following services to help students with their research:

- A librarian is also available for individual consultations, both face-to-face and online, with students to help them find the materials they need for their projects. Research appointments can be made at <https://yorku.libcal.com/appointments>
- A librarian can create a custom workshop tailored to the course. Content can include both introductory and in-depth instruction on searching for chemical information in SciFinder, Reaxys, Web of Science, Scopus, and elsewhere. Reference management using software such as Mendeley and Zotero can also be introduced. If needed, please fill out the [Library Class Request Form](#),
- A custom online research guide tailored to the course can be created upon request.

Copies of the following books mentioned in the course proposal are currently available through York University Libraries:

1. Drenth, J., & Mesters, J. (2007). *Principles of protein X-Ray crystallography* (3rd ed). Springer.
2. Rupp, B. (2010). *Biomolecular crystallography: principles, practice, and application to structural biology*. Garland Science.
3. Lattman, Grant & Snell (2018). *Biological Small Angle Scattering: Theory and Practice*. Oxford University Press
4. Appasani, K. (Ed.). (2025). *Cryo-Electron Microscopy in Structural Biology: From Structural Insights to Tomography and Drug Discovery* (1st ed.). CRC Press.
5. Spence, J. C. H. (2017). *High-resolution electron microscopy* (4th ed.). Oxford University Press.
6. Podzimek, S. (2011). *Light Scattering, Size Exclusion Chromatography and Asymmetric Flow Field Flow Fractionation: Powerful Tools for the Characterization of Polymers, Proteins and Nanoparticles* (1. Aufl.). Wiley.

In addition, students now have full text access to a comprehensive collection of chemistry ebooks and ejournals, including content from the following major publishers:

- American Chemical Society
 - 60 ACS journals

**STEACIE SCIENCE & ENGINEERING LIBRARY
YORK UNIVERSITY**

MEMORANDUM

- Nearly 1000 ACS journal archives volumes published by the society during the period 1879 to 1995
 - ACS In Focus ebooks
- Canadian Science Publishing
 - Canadian Journal of Chemistry (all issues)
 - Biochemistry and Cell Biology (all issues)
- Elsevier
 - Chemistry journals are included in Canadian Research Knowledge Network ScienceDirect journal package
 - Elsevier journal backfiles, including packages for:
 - Inorganic chemistry
 - Organic chemistry
 - Physical and analytical chemistry
 - Knovel Chemistry & Chemical Engineering Academic Collection
- Royal Society of Chemistry
 - All RSC journals with a starting year of 1997 plus access to the entire legacy archive
 - All ebook collections 1968-current
- Springer
 - Chemistry journals are included in Canadian Research Knowledge Network ScienceDirect journal package
 - Considerable collection of Springer ebook titles (about 60,000) that includes strong presence of chemistry-related content
- Wiley
 - Chemistry journals are included in Canadian Research Knowledge Network Wiley All Access collection
 - perpetual access to Wiley backfile collections for chemistry and for chemistry societies.
 - Complete access to Wiley monographs (about 25,000 titles) with strong presence of chemistry-related content

If later a more complete bibliography could be provided, our Collection Development and Analysis Department could search the bibliography against our library collection. We will try to ensure that we have at least one copy of every book listed in the bibliography. Where possible and affordable, eBooks will be purchased with unlimited users. If there are multiple articles from a journal in the required reading that we do not have, we will investigate a subscription.

E-resource permalinks can be embedded in the course learning management system, ex. Canvas or eClass. Please consult the library's [Creating Permalinks for EResources Guide](#) for more information.

The following electronic resources licensed by the library may be of help to the students in this course:

- **SciFinder**

**STEACIE SCIENCE & ENGINEERING LIBRARY
YORK UNIVERSITY**

MEMORANDUM

- **Reaxys**
- **Web of Science**
- **Scopus**

In summary, I state that we are well positioned to support this course. If you have any questions, please do not hesitate to contact me.

Sincerely,

Minglu Wang, Physical Sciences Librarian
Steacie Science & Engineering Library
mingluwa@yorku.ca



RE: New course proposal for cross-listing to BCHM: CHEM 4025

From updbiol <updbiol@yorku.ca>

Date Fri 2/27/2026 12:15 PM

To chemupd <chemupd@yorku.ca>

 1 attachment (213 KB)

Course_Proposal_Chem4025_Biomolecular_Structure (NN signed).pdf;

Hi Derek,

I have attached the signed document. The Biology Teaching Committee and Department have approved it.

Please let me know if anything else is needed.

Nicole

From: chemupd <chemupd@yorku.ca>

Sent: February 17, 2026 4:24 PM

To: updbiol <updbiol@yorku.ca>

Subject: Re: New course proposal for cross-listing to BCHM: CHEM 4025

Dear Nicole,

I don't think you need to take it to a departmental vote. According to the form: *"In the majority of the cases either the Undergraduate Director or Chair of a unit approves the agreement to cross-list."*

So I think just your signature on the form is all that's required.

Thanks,
Derek

Derek A. Jackson PhD
Associate Professor, Teaching Stream
Undergraduate Program Director
Department of Chemistry, Faculty of Science

T 416-736-2100 ext. 44553

derekj@yorku.ca | science.yorku.ca

Faculty of Science | YORK UNIVERSITY

452 Chemistry Building (CB)

4700 Keele Street Toronto ON, Canada M3J 1P3



**Ranked 33rd in the World in the
Times Higher Education 2020 Impact Rankings**

From: updbiol <updbiol@yorku.ca>
Sent: Sunday, February 15, 2026 10:24 PM
To: chemupd <chemupd@yorku.ca>
Subject: RE: New course proposal for cross-listing to BCHM: CHEM 4025

Hi Derek,

Just and updated the Biology Teaching Committee approved the proposal.

I am wondering if our Department needs to approve it as well as I cannot find a record of doing this last time. Since this is not a course offered by us or involving one of our instructors, I am not sure.

Do you if this is needed?

Nicole

From: chemupd <chemupd@yorku.ca>
Sent: February 1, 2026 1:28 PM
To: updbiol <updbiol@yorku.ca>
Subject: Re: New course proposal for cross-listing to BCHM: CHEM 4025

Hi Nicole,

Here are the forms again.

DJ

Derek A. Jackson PhD
Associate Professor, Teaching Stream
Undergraduate Program Director
Department of Chemistry, Faculty of Science

T 416-736-2100 ext. 44553

derekj@yorku.ca | science.yorku.ca

Faculty of Science | YORK UNIVERSITY

452 Chemistry Building (CB)

4700 Keele Street Toronto ON, Canada M3J 1P3



**Ranked 33rd in the World in the
Times Higher Education 2020 Impact Rankings**

From: updbiol <updbiol@yorku.ca>
Sent: Sunday, February 1, 2026 12:01 PM
To: chemupd <chemupd@yorku.ca>
Subject: RE: New course proposal for cross-listing to BCHM: CHEM 4025

Hi Derek,

Thank you for following up on this.

I don't recall receiving your email below. I did a search of my inbox and can't find your original email; did I respond to you at the time?

Would you be able to send me the proposal again and I will work on this asap.

Thank you and have a nice weekend,

Nicole

From: chemupd <chemupd@yorku.ca>

Sent: January 31, 2026 11:34 PM

To: updbiol <updbiol@yorku.ca>

Subject: Re: New course proposal for cross-listing to BCHM: CHEM 4025

Hi Nicole,

I was wondering if you had a chance to circulate this proposal with your teaching committee yet?

Thanks.
Derek

Derek A. Jackson PhD
Associate Professor, Teaching Stream
Undergraduate Program Director
Department of Chemistry, Faculty of Science

T 416-736-2100 ext. 44553

derekj@yorku.ca | science.yorku.ca

Faculty of Science | YORK UNIVERSITY

452 Chemistry Building (CB)

4700 Keele Street Toronto ON, Canada M3J 1P3



***Ranked 33rd in the World in the
Times Higher Education 2020 Impact Rankings***

From: chemupd

Sent: Wednesday, October 22, 2025 3:16 PM

To: updbiol <updbiol@yorku.ca>

Cc: Biology Chair <biochair@yorku.ca>

Subject: New course proposal for cross-listing to BCHM: CHEM 4025

Dear Nicole,

Greetings from chemistry!

In our department, we just approved a new course proposal called CHEM 4025: Modern Approaches to Biomolecular Structure Determination, with Gerald as the chief author. The new course is designed to replace CHEM 4092 (X-ray crystallography) as a way to modernize our 4th year offerings and hopefully increase our 4th year enrollment numbers. The course will also be integrated as CHEM 5025 which grad students can take.

We are hoping this new course could be cross-listed as BCHM 4025 in the calendar, which requires approval from Biology. Would you be able to pass this along to your teaching committee? As you may recall, we did this a couple years ago for the CHEM 4055 VR course.

I've attached the approved course proposal and the statement of support from the library.

Thanks,
Derek

Derek A. Jackson PhD
Associate Professor, Teaching Stream
Undergraduate Program Director
Department of Chemistry, Faculty of Science

T 416-736-2100 ext. 44553

derekj@yorku.ca | science.yorku.ca

Faculty of Science | YORK UNIVERSITY

452 Chemistry Building (CB)

4700 Keele Street Toronto ON, Canada M3J 1P3



***Ranked 33rd in the World in the
Times Higher Education 2020 Impact Rankings***

York University

Standard Minor Modifications to Existing Programs

TEMPLATE

Modifications to Existing Programs fall under Section 5 of the York University Quality Assurance Procedures (YUQAP).

Full YUQAP can be found here: <https://www.yorku.ca/unit/yuqap/>

STANDARD MINOR MODIFICATIONS USUALLY INCLUDE ONE OR MORE OF THE FOLLOWING FEATURES:

- Minor changes to degree or admission requirements
- The laddering or stacking of credentials or similar options
- Changes to the delivery mode in courses
- Substitutions or edits to course lists or requirements
- Minor changes to program titles
- Changes to existing emphasis, option or minor program
- Calendar copy corrections that are not editorial in nature, e.g., typos
- Revisions and/or updates to Program Learning Outcomes (PLOs) that do not change the substance of the PLOs
- Changes program name or nomenclature where there are no changes to PLOs
- Course changes – revisions, additions, deletions, repositioning, resequencing, etc. – where there are no changes to PLOs
- Changes in program requirements or sequencing where less than 1/3 of the program courses are affected
- Minor changes (changes to less than 1/3 of the program) to an existing minor, specialization, option, certificate, or WIL option (i.e., minor change to anything established through a major modification)
- Closure of any degree option, e.g. honours specialization

See the [YUQAP website](#) for further details, resources, and templates.

Minor Modification Proposal

Faculty: Science

Department: No specific department

Program: *Science* (as in, Bachelor of Science in *Science*)

Degree Designation: Bachelor of Science (Honours and Ordinary)

Type of Modification: Change to admission requirements

Location (*current campus and, if applicable, proposed*): Keele; Markham

Effective Date: Fall 2027

Approval Date at Faculty Council: TBD

1. Describe the proposed modifications to the program.

The Honours and Ordinary Bachelor of Science in *Science* (BSc Science) is an established program within the Faculty of Science and has been offered for more than 25 years.

BSc Science is a non-major program in which students complete the requirements of the BSc *degree learning expectations* by enrolling in courses designated as *Science* disciplines under Faculty Rules. Students can choose to select courses based on their interests, to explore a wider array of interdisciplinary science topics.

The proposed modification establishes high school admission requirements for the BSc Science.

Admission requirements for BSc Science will be:

Ontario Secondary School Diploma (OSSD)

ENG4U

MHF4U

SBI4U or SCH4U or SPH4U

And three additional 4U or M courses

2. Provide a rationale for the proposed modifications.

The proposed admission requirements bring BSc Science in line with other non-major BSc programs offered by Science, including Undecided Major, and First Year Science, Markham Campus. Students with an OSSD with one 4U Science course, one 4U Math (Functions), 4U English, and three other 4U courses are eligible to join the program,

3. How will the proposed modification support the achievement of Program Learning Outcomes?

There are no changes to the Program Learning Outcomes.

4. Describe how students currently enrolled in the program will be accommodated.

There would be no impact to currently enrolled students.

5. Describe any resource implications and how they are being addressed (e.g., through a reallocation of existing resources). If new/additional resources are required, provide a statement from the relevant Dean(s)/Principal confirming resources will be in place to implement the changes.

There are no resource implications.

6. If relevant, summarize the consultation undertaken with relevant academic units, including commentary on the impact of the proposed changes on other programs. Provide individual statements from the relevant program(s) confirming consultation and their support.

Not relevant.

APPENDIX

Attach a Side-by-Side Academic Calendar Copy Comparison

Ensure that deletions are indicated with strikethrough (e.g., ~~strikethrough~~) text and additions are made in a contrasting colour (e.g., **KINE 1000**)

Not applicable.

Program: Science – Bachelor of Science Degree Program: Please Select Applicable Degree Program Specialized Honours Honours Ordinary (90-credit) Double Major Major/Minor Minor Other: Effective Date: Fall 2027	
Please note that only those fields applicable to the relevant program need to be completed.	
Current Calendar Copy (~~Strikethrough~~ items to be removed)	New Calendar Copy (<u>Underline</u> items to be added in revisions to existing programs)
Admission Requirements “Applicable to Future Students Page Only” Admission requirements for BSc Science will be: Ontario Secondary School Diploma (OSSD) ENG4U MHF4U SBI4U or SCH4U or SPH4U And three additional 4U or M courses	Admission Requirements “Applicable to Future Students Page Only” Admission requirements for BSc Science will be: Ontario Secondary School Diploma (OSSD) ENG4U MHF4U SBI4U or SCH4U or SPH4U And three additional 4U or M courses

Please use the checklist to ensure that your submission has includes the following items:

- ☐ Relevant areas of Calendar Copy (Or complete if new proposal)
- ☐ Courses – Please Ensure the following:
 - ☐ All courses have an ‘Active Status’
 - ☐ Written Faculty Associations for each course
 - ☐ Correct Credit Value
 - ☐ Correct Course Rubric
 - ☐ Correct Course Number
 - ☐ Cross-listings (If applicable)
 - ☐ Integrations (only if application)
 - ☐ Confirmed updated information on courses / listings offered by another Faculty
- ☐ Effective Date
- ☐ All Degree Designation (s) / Credential (s) Changes clearly indicated for changes / new proposals
 - ☐ Please use a separate template for each degree designation for clarity purposes
- ☐ You have referenced the Current Published Academic Calendar
- ☐ Grand Total Credit Count Reflection (Equals the approved amount of credits required for graduation, for e.g., Grand Total Credit Count = 90 credits, etc.)
- ☐ Category Credit Values Requirements Clearly Outlined
- ☐ Supporting Documentation

Types of Requirements:

1) Admission Requirements:

Future Student: This is a generic text which will not be edited.

Current Students: This is the type for requirement that a currently enrolled student will need to get admitted into the program.

- 2) Continuing Requirements: This is the type of requirement that a student is required to stay enrolled in the program.
- 3) Graduation Requirements: This is the type of requirements that a student needs to complete to achieve that degree program.
- 4) General Education: The student is required to fulfill a specific number of courses from general education categories.
- 5) Major Requirements: A structured set of courses specifically designated for inclusion in the undergraduate program requirements, either mandatory or among a list of options for students to choose. May include or be in addition to core courses.
 - a. Core Courses: Mandatory specified courses within an undergraduate program that provide a solid theoretical foundation and / or convey a common body of disciplinary knowledge and skills.
- 6) Streams – A structured set of courses with a particular focus within an Honours undergraduate degree program, to provide additional depth within the Major. Appears on the academic transcript but does not appear on the degree parchment.
- 7) Science Breath – Specific to the Faculty of Science and Faculty of Health
- 8) Practical – Practical requirements that a student needs to complete.
- 9) Outside the Major – This is the type of requirement that a student needs to complete with courses listed outside of the major program.
- 10) Elective – Also referred to as Free electives. Course(s) outside the prescribed set of program requirements, chosen by students and which count towards the total number of credits required for the degree
- 11) Bilingual – This is the type of language requirement that a student needs to fulfill within the above-mentioned credits (General Education, Major Requirements, etc).
- 12) Upper-level Requirement – This is the type of requirement that clearly states from the above-mentioned requirements, how many need to be from the 3000 and/ or 4000 level.

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)

No Department, as this will be
offered by the Faculty and will
use a new rubric: PDEV

Date of Submission:

March 12, 2026

Course Number:

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

2401

Var:**Academic Credit Weight:**

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

3.0

Course Title:

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

Professional Development for Science Students: Project Management

Short Title:

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

N/A

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

Brief Course Description:

Maximum 2000 characters

(approximately 300 words including spaces and punctuation).

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

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

This course will introduce concepts of project management while providing access to accelerated completion of a post-graduate certificate. A core component of the course will be the curriculum of the course CSBA2401 - Project Management, offered by the School of Continuing Studies.

Project management topics will cover strategic planning while balancing risk, time and costs, and application of next generation AI-supported project management software to deliver value. Students will learn technology for predictive analytics and automation to confidently emerge as a project manager.

Students who complete this course will have completed 1 of 5 requirements for the *Certificate of Business Administration* offered by the School of Continuing Studies.

Generic Course Description:

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

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

N/A

Expanded Course Description:

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

The course will be one term (12 weeks in length) and the primary curriculum will consist of eight modules that teach the principles of project management, distributed throughout the term:

- Module 1: Introduction to Project Management
- Module 2: Planning and Managing Scope, Time, and Cost
- Module 3: Risk Identification and Problem-Solving
- Module 4: Team Leadership, Communication, and Change Management
- Module 5: Stakeholder Engagement and Relationship Management
- Module 6: Integrating Technology in Project Management
- Module 7: Project Review, Evaluation, and Closure
- Module 8: Building a Career in Project Management

Course learning outcomes:

By the end of the course, students will be able to:

1. Describe the phases of the project lifecycle and their significance in achieving project objectives.
2. Define clear project objectives that align with organizational strategic priorities and demonstrate measurable business impact.
3. Apply project management principles to define project scope, create realistic timelines, and develop budgets by leveraging project management tools.
4. Synthesize risk identification, impact evaluation, and mitigation strategies to adapt to changing business environments and technological opportunities.
5. Demonstrate the application of effective communication strategies to foster collaboration and facilitate conflict resolution within team dynamics.
6. Develop stakeholder engagement plans that ensure alignment with project goals and facilitate ongoing communication throughout the project lifecycle.
7. Reflect on their initial perception of project management.

Course Design:

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

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

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

This course is instructor-led and in-person. The PDEV2401 course director, a FSC Faculty member, will assign an initial project management reflection in the first week. In the following weeks, the students will meet with the SCS instructor who will teach the primary curriculum. A final activity will have the students reflect on their learning experience and contrast with their initial reflection. As a team-taught course, the FSC instructor will be responsible for the initial and final reflection assignments, and the SCS instructor will deliver the module curriculum (see below).

On Demand Content: students will review content and activities in eClass, spending 3 - 4 hours per week on reading, interactive content, and learning activities.

Assessments: Students will complete various assessments to demonstrate their learning and mastery of course outcomes. These assessments are designed to prepare students for real-world challenges, culminating in a comprehensive Project Management Plan.

This course balances individual study with live interaction with instructors and peers, ensuring students gain comprehensive understanding and practical skills.

The course will be one term (12 weeks in length) and the curriculum will consist of eight modules:

- Module 1: Introduction to Project Management
- Module 2: Planning and Managing Scope, Time, and Cost
- Module 3: Risk Identification and Problem-Solving
- Module 4: Team Leadership, Communication, and Change Management
- Module 5: Stakeholder Engagement and Relationship Management
- Module 6: Integrating Technology in Project Management
- Module 7: Project Review, Evaluation, and Closure
- Module 8: Building a Career in Project Management

Weekly Topics

Each week key concepts, skills, and activities will be covered each week throughout the course to help students understand how the course content progresses and how each week's learning supports the overall development of project management knowledge and skills.

CLASS 1**Introduction to Project Management**

- Explain the phases of the project lifecycle and their role in achieving project objectives.
- Differentiate between project management principles and general management practices.
- Recognize the influence of stakeholder engagement on the project

CLASS 2

Planning, Managing Scope Time, and Cost

- Define the core elements of project planning and scope
- Create Work Breakdown Structures (WBS) and schedules to plan project deliverables and milestones.
- Estimate and monitor project budgets aligned with project objectives.

CLASS 3

Risk Identification and Problem-Solving

- Define clear project objectives that align with organizational priorities.
- Identify and evaluate risks using tools such as a Risk Breakdown Structure (RBS) and a risk matrix.
- Develop risk response and contingency plans to address risks proactively.
- Construct and maintain a risk register to support decision-making.

CLASS 4

Team Leadership, Communication and Change Management

- Identify effective team leadership by aligning roles, fostering collaboration, and resolving conflict.
- Outline communication strategies to build trust, clarity, and alignment within project teams.
- Explain change management frameworks to guide teams through organizational transitions.

CLASS 5

Stakeholder Engagement and Relationship Management

- Identify, analyze, and document stakeholders for a project.
- Apply tools such as personas and empathy maps to understand stakeholder needs and perspectives.
- Develop stakeholder engagement plans that align project goals with stakeholder expectations.

CLASS 6

Integrating Technology in Project Management

- Differentiate between traditional and modern digital project management landscapes.
- Select the appropriate software tools (Waterfall vs. Agile) to support specific stakeholder needs.
- Recognize how different tools and strategies can be used to streamline project workflows and decision-making.

CLASS 7

Procurement and Vendor Management

- Explain the role of procurement planning and vendor selection in supporting successful project delivery.
- Evaluate vendor proposals and contracts using defined project requirements and selection criteria.
- Apply basic vendor management practices to monitor performance and maintain effective supplier relationships throughout a project.

CLASS 8

Project Review, Evaluation, and Closure

- Identify lifecycle techniques to evaluate project performance at closure, using key success metrics.
- Select structured change control processes to manage project adjustments.
- Identify project closure activities, including documentation, stakeholder feedback, and lessons learned.

Instruction:

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

1. Once per year.
2. Any Faculty of Science teaching or research faculty could serve as the course director.
3. See 2.
4. 36 hours (3 hours per week x 12 weeks; FSC course director minimum 3 hours, maximum 12 hours).

Evaluation:

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

If the course is to be integrated, the additional requirements for graduate students are to be listed.

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

To demonstrate learning and achievement of the course learning outcomes (CLOs), students will need to complete a series of assessments.

Course Assessments and Classes**1. Project Charter (10%)**

Using a selected business case, you will develop a project charter for a strategic initiative. This document aligns the project with the organization's strategic objectives, defining the purpose, high-level description, stakeholders, requirements, risks, milestones, and success criteria.

2. Project Scope Statement & WBS (10%)

Building on the Charter, you will create a detailed scope statement and a Work Breakdown Structure (WBS). This assignment requires defining the project boundaries, deliverables, constraints, and exclusions, and hierarchically breaking down work into manageable tasks.

3. Project Schedule (20%)

You will develop a project schedule considering resource constraints and dependencies reflecting your WBS. This includes creating a task list, defining dependencies, estimating durations, identifying the critical path, and visualizing the timeline using a Gantt chart.

4. Resource and Budget Plan (20%)

This assessment requires creating a resource and budget plan aligned with the project schedule. You will provide a resource breakdown (human, equipment, technology), cost estimates, a consolidated budget, and financial metrics for cost control and contingency planning.

5. Change Management Plan (20%)

For the final component of your Project Management Plan, you will develop a change management plan addressing the organizational impact of the project. You will apply frameworks such as Kotter's 8-Step Model to address resistance, communication, and stakeholder engagement.

6. Reflections (10%)

Reflection assignments encourage you to connect your personal experiences and prior knowledge with course concepts. You'll begin with an initial reflection in Week 1 and conclude with a final reflection that contrasts their early insights with what they learned throughout the course.

7. Participation and engagement (10%)**Bibliography:**

A READING LIST MUST BE INCLUDED FOR ALL NEW COURSES

The Library has requested that the reading list contain complete bibliographical

N/A

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

Also please list any online resources.

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

LIBRARY SUPPORT STATEMENT MUST BE INCLUDED.

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.

No resources are required. No equipment or space is required.

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.

Science undergraduate students are increasingly seeking ways to complement their STEM education with practical, career-focused credentials that strengthen their competitiveness in the labour market. This new course PDEV2401 offered by the Faculty of Science will introduce concepts of project management. It is designed in collaboration with the School of Continuing Studies (SCS) in which students will complete the curriculum of the SCS course CSBA2401 – Project Management. CSBA2401 is one course required of five for the *Certificate in Business Administration*. Once students complete PDEV2401, they will have satisfied this partial requirement of the Certificate. PDEV2401 is an elective open to all undergraduate science students.

Expanding access in this way enables students to intentionally build applied business skills during or after their degree. PDEV2401 provides foundational and practical training in project planning, budgeting, risk management, implementation strategies, and the use of AI-supported project management tools. Designed for learners with no prior background in the field and delivered by industry practitioners, the course equips students with immediately relevant, workplace-ready competencies. Successful completion satisfies one requirement toward the *Certificate in Business Administration*, and students may continue with the remaining courses either concurrently with their undergraduate studies or following graduation, supporting flexible, stackable credential pathways and ongoing professional development.

This initiative aligns with the Government of Ontario's priority to strengthen workforce readiness and economic competitiveness by developing graduates with in-demand, transferable skills. Provincial policy emphasizes practical competencies in business operations, digital literacy, project management, and applied problem-solving. Providing undergraduate students—particularly those in science and other non-business disciplines—with access to industry-recognized business education directly supports these objectives and contributes to broader goals related to productivity and innovation.

By integrating a School of Continuing Studies credential course into the science undergraduate experience, the proposal offers a scalable pathway to applied business expertise and credentialing without altering core degree requirements or requiring the commitment to a minor in business administration. Students graduate with both disciplinary knowledge and formal business training, enhancing their ability to transition into roles that require cross-functional collaboration, operational coordination, and project oversight. PDEV2401 will be one of several in a series of professional development courses offered by the Faculty of Science.

PDEV2401 does not replace discipline-specific BSc degree learning expectations, and it will not count towards either major or science breadth requirements.

Overall, this proposal strengthens the connection between undergraduate education and workforce-relevant professional certification, advancing institutional priorities while supporting provincial objectives and student career success.

**Faculty and
Department
Approval for Cross-
listings:**

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

N/A



Date: March 12, 2026

Subject: Request for Creation of the PDEV Course Rubric (Professional Development)

**FACULTY OF
SCIENCE**

Office of the Dean

Mike Scheid
Associate Dean -
Students

355 LUMBERS BLDG
4700 KEELE ST.
TORONTO ON
CANADA M3J 1P3
T 416 736 5051

sciadstu@yorku.ca

We are requesting the creation of the course rubric “PDEV” (Professional Development). This rubric will designate a series of degree-credit courses offered by the Faculty of Science that are designed to strengthen students’ professional competencies and enhance career readiness alongside their science disciplinary studies. PDEV courses will intentionally integrate elements of professional development programming currently offered through the School of Continuing Studies, allowing undergraduate science students to develop applied workplace skills while progressing through their academic programs.

Professional development has become an increasingly important component of career preparation for science graduates. In addition to strong disciplinary knowledge, employers consistently seek graduates who possess competencies such as project management, communication, collaboration, and leadership. Expanding structured opportunities for professional development within the undergraduate curriculum directly supports student success in diverse career pathways in science and beyond. Aligning with the *York University Forward Action Plan*, which prioritizes experiential learning, skills development, and improved career readiness for graduates, the PDEV rubric represents a strategic step toward embedding these outcomes within Faculty of Science programs.

PDEV courses will also support a stackable credentialing framework by incorporating components of professional development certificates offered by the School of Continuing Studies. This approach enables students to build complementary credentials while completing their undergraduate degrees, thereby increasing the value and relevance of their academic experience.

The first course proposed under this rubric, SC/PDEV 2401, will introduce students to the principles and practices of project management. The course will integrate curriculum from the School of Continuing Studies course CSBA 2401, enabling curricular alignment between undergraduate and continuing education offerings. Upon successful completion of PDEV 2401, students will receive a waiver for CSBA 2401 toward the remaining requirements of the *Certificate in Business Administration*, thereby supporting the stackable credential pathway.

The creation of new course rubrics is typically associated with new program

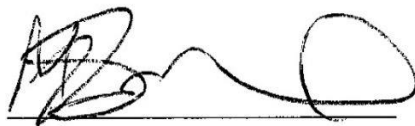


proposals. However, where a new program is not being introduced, Senate policy on “Criteria for Approval of Course Rubric” states that *“in a limited number of cases, discrete course rubrics have been developed for specialized programs which offer degree credit courses which are not a degree program or major (e.g., GER, GK, and WRIT).”*

In a manner similar to the creation of the COOP and CAPS rubrics, which represent a collection of courses supporting experiential and capstone education, the PDEV rubric will identify a coordinated set of courses focused on professional skill development. These courses will be accessible to all Faculty of Science students, providing broad opportunities for career readiness, experiential learning, and credentialing that complement their major programs.

A review of the York University course repository indicates that PDEV is not currently in use as a course rubric. The term is, however, used at several other institutions in Canada and internationally, where it consistently denotes professional development, making it a clear and widely recognized designation for this purpose.

Kindest regards,

A handwritten signature in black ink, appearing to read 'MScheid', written over a horizontal line.

Michael Scheid, PhD
Associate Dean, Students
Faculty of Science
York University, Canada
sciadstu@yorku.ca

School/Department: _____

Course Information:

Faculty: **Rubric:** **Course #:** **Weight:**
(i.e. HLST) (i.e. 3.00, 6.00 or 0.00)

Course Title:

Effective Session for Change: **Term:** **Year:**
(i.e Fall, Fall/Winter, Winter) (i.e 2024-25, 2025)

Type of Change ('x' all that apply):

☐	in course number/level	☐	in pre/co-requisite(s)
☐	in credit value	☒	in calendar description
☐	in cross-listing*	☐	retire/expire course
☐	in course credit exclusion(s) †		

☐ **in short title** (maximum 40 characters)
Proposed short title:

☐ **in full title** (maximum 60 characters)
Proposed full title:

Other (please specify)

Rationale for Change:

To correct the "open to" section of the course to Students registered in the Neuroscience program as per the original senate approved new course proposal.

* Cross-listed courses are offered jointly by two or more teaching units (such as departments or divisions), or teaching units in two or more different Faculties. Regardless of the offering Faculty or discipline identified by the course prefix of a cross-listed course, every offered section of a cross-listed course is substantially the same as every other and all are therefore recognized as instances of the "same" course.

† "Course Exclusion" is a formal status accorded to pairs of courses that are recognized as having sufficient overlap in content to warrant specifically excluding students from obtaining credit for both. Course exclusion status requires the same curricular approval process required for establishing cross-listings. Course exclusions will be recognized by all Faculties and programs.

If this change affects the degree requirements, please provide an operational plan to accommodate the affected students who require this course to fulfill their degree requirements.

N/A

Learning Outcomes:

Will there be a change to the learning outcomes?	YES		NO	
If yes, please describe the changes in a side by side comparison below. <i>Denote additions in bold, underlining, and ~~strike through~~ for deletions.</i>				
Existing Learning Outcomes (Change From):	Proposed Learning Outcomes (Change To):			
Will the change in learning outcomes require additional assessment? If yes, provide any resource implications. If there are no additional assessments, why not?				
YES NO				

Calendar Copy:

The Faculty of Health Curriculum Committee requires that the course description, as listed in the course repository be included below in its entirety.

Please adhere to the format and order below for course description submissions:

- **Course Number** (credit value should be taken to two decimal places (i.e. 6.00 and 3.00))
- **Course Title** (maximum 40 characters)
- **Course Description** (maximum 60 words. For editorial consistency, verbs should be in present tense.)
- **Integrated with** (list the graduate level courses that the course is integrated with. Do not include if the course is not integrated.)
- **Prerequisite** (list of prerequisite courses etc. Only include if there are prerequisites.)
- **Corequisite** (list of corequisite courses etc. Only include if there are corequisites.)
- **Pre/Corequisite** (list of courses etc. which can be taken as pre- or corequisites.)
- **Course Credit Exclusion(s)** (list of exclusions)
- **Open to** (should only be used if this course is limited to a specific group of students)
- **Not open to** (should only be used if the course is closed to a specific group of students)
- **Notes** (includes any other information which is necessary for students to know before enrolling in the course)
- **Previously offered as** (list any other version of the course)

*Denote additions in **bold, underlining**, and ~~strike through~~ for deletions.*

Existing Calendar Copy (Change From):	Proposed Calendar Copy (Change To):
Provides students with an overview of and exposure to experimentation techniques and methodologies in the fields of systems and cognitive, cellular and molecular, and computational and theoretical neuroscience. These could include any of the following: EEG, fMRI, behavioural methods such as psychophysics and eye/body tracking, electrophysiology, patch and dynamic clamp, transgenic mouse technology, molecular imaging, neuronal coding and communication, neuronal networks, and brain-machine interfaces. Prerequisites: HH/NRSC 2000 3.00 or SC/NRSC 2000 3.00; HH/NRSC 2100 3.00 or SC/NRSC 2100 3.00. Corequisites: HH/NRSC 2100 3.00 or SC/NRSC 2100 3.00. Open to: ~~Honours and Specialized~~	Provides students with an overview of and exposure to experimentation techniques and methodologies in the fields of systems and cognitive, cellular and molecular, and computational and theoretical neuroscience. These could include any of the following: EEG, fMRI, behavioural methods such as psychophysics and eye/body tracking, electrophysiology, patch and dynamic clamp, transgenic mouse technology, molecular imaging, neuronal coding and communication, neuronal networks, and brain-machine interfaces. Prerequisites: HH/NRSC 2000 3.00 or SC/NRSC 2000 3.00; HH/NRSC 2100 3.00 or SC/NRSC 2100 3.00. Corequisites: HH/NRSC 2100 3.00 or SC/NRSC 2100 3.00. Open to: Students registered in

Honours BSc students Cross-listed to: SC/NRSC 2200 3.00.	the Neuroscience program. Cross-listed to: SC/NRSC 2200 3.00.
--	---

Confirmation of Consultation/Approval:

If the proposed course is to be cross-listed, integrated, listed as a course credit exclusion with another course, or listed as a major/minor course option in an interdisciplinary program, the proposal must be accompanied by a statement from the collaborating unit signaling agreement to the proposal.

Indicate the consultation, approval, and additional documentation applicable to the proposal:	YES	NO
Approval by Department/School's Curriculum Committee	X	
Statement(s) from the collaborating unit		

March 25, 2026

Faculty of Science Petition Committee

Consent Agenda Item: *Administrative review of certain petition types*

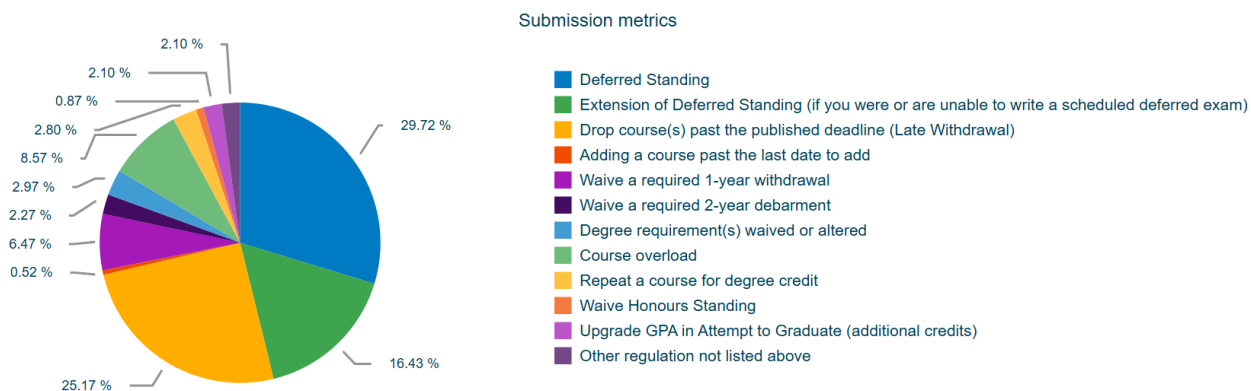
On March 18, the Faculty of Science Petition committee heard a motion brought forward by Associate Dean Michael Scheid that the Faculty of Science extend administrative review to include the following three categories of student petitions:

1. Deferred standing petitions supported by an Attending Physician's Statement (APS)
2. Requests for extensions of deferred standing supported by an APS
3. Requests to add a course after the deadline, where departmental approval has been provided

And that the administrative decisions would be made by the Associate Dean of Students, or by the Manager of Student Advising in the Associate Dean's absence.

Context: Petition volume has grown, and our panels cannot keep up with that volume. It is unsustainable, and students must wait too long to receive their decisions. A significant proportion of petitions are relatively straightforward and do not require extensive committee deliberation, yet they are subject to the same delays. Administrative review (as opposed to committee review) is currently used for course overload requests that meet GPA criteria. This motion is modeled on a similar initiative introduced by the Faculty of Liberal Arts & Professional Studies last year, which has significantly improved processing times, increased student satisfaction, reduced student anxiety and stress, while also reducing both faculty and staff workload and committee burden.

The motion was ratified by committee 11-0.



**COMMITTEE ON EXAMINATIONS
AND ACADEMIC STANDARDS**

FACULTY OF SCIENCE
sciceas@yorku.ca

Memorandum

On April 2, the Committee on Examinations and Academic Standards met to consider the Faculty of Science Policy on Grades, which was passed by Faculty Council in 2017. Since the policy states that it should be evaluated after three years, CEAS deemed it necessary to proceed with this overdue process as part of its regular duties in receiving and evaluating reports from departments regarding courses with grade distributions falling outside faculty guidelines.

At this meeting, a motion was put forth to amend the current policy with two changes:

1. Course sections with grade distributions outside established faculty guidelines (at their current level) would require a rationale provided by the course instructor to their department and approved by the department before grades could be posted.
2. Course sections with grade distributions far outside established faculty guidelines ("super-anomalous") would require a rationale provided by the course instructor and approval by both their department and CEAS before grades could be posted. A super-anomalous grade distribution is defined as >50% A/A+ at the 1000 and 2000 levels, >65% A/A+ at the 3000 and 4000 levels, or >50% E/F at the 1000 level.

This motion was voted on and passed 4-0.

Attached to this memorandum is the CEAS grades report from 2024-2025 to provide context for this motion.



Sean Tulin, CEAS Chair



April 4, 2026

Faculty Level Review of 2024-2025 Departmental Grade Reports

As per policy and toward a consistent and fair application of grading practices across the Faculty of Science, the Committee on Examinations and Academic Standards (CEAS) has conducted a faculty-level review of the departmental grade distributions for the 2024–2025 academic year.

COMMITTEE ON EXAMINATIONS
AND ACADEMIC STANDARDS

FACULTY OF SCIENCE
sciceas@yorku.ca

The Faculty of Science has established guidelines for identifying grade distributions in courses that require departmental review. The following table summarises the conditions under which a course falls outside faculty guidelines.

	A/A+	E/F
1000- and 2000-level courses	> 35%	> 25%
3000- and 4000-level courses	> 50%	> 20%
Multi-section courses in same term	Section grade point averages > 1 grade point or 5% variation in class average	

Course grade distributions outside guidelines trigger departmental review. Departmental reports were solicited from each departmental chair in November 2025 and were reviewed by CEAS committee members at a meeting on April 2, 2026. In addition, CEAS was also tasked with assessing historical trends within the Faculty within the context of grade inflation.

The following is a summary report of the committee's discussion.

High A/A+ percentage courses:

According to York University's established grading scheme:

- The A+ grade denotes *exceptional* achievement: *thorough knowledge, exceptional skill, and great originality in satisfying course requirements*.
- The A grade denotes *excellent* achievement: *thorough knowledge, a high degree of skill, and some elements of originality*.

These descriptors make clear that earning an A or A+ grade entails not merely meeting course requirements, but demonstrating a meaningfully higher level of mastery.

Most departments have a small number of courses with A/A+ percentages outside guidelines. Among these, the most frequently cited rationales include:

- Course structure: Assessments weighted heavily toward projects, take-home assignments, or other non-invigilated work; policies permitting students to drop low-scoring components; high levels of student–instructor engagement.
- Strong, motivated cohorts: Particularly common in small-enrolment, upper-year elective courses where students are more self-selected.
- Generative AI use: Acknowledged or suspected use of AI tools in assignments, online tests, and other at-home assessments.

Historical trends for all courses flagged in 2024 are shown in Appendix A. Department-specific reflection from CEAS is provided here.

Biology (BIOL): CEAS noted the large number of BIOL courses with A/A+ percentages outside guidelines. This is a systemic issue: it has been flagged in prior CEAS reviews and is clearly visible in the historical trend data (Appendix A). Grade inflation is a concern for several reasons, including diluting the distinction of genuinely top-performing students, and disadvantaging students in other Faculty of Science programs in GPA-based award competitions.

Among the flagged courses, the Department of Biology cited rationales consistent with the general list above: course design, e.g., application of Universal Design for Learning (UDL) principles, high levels of student engagement and instructor support, highly motivated cohorts, and assessment structures that provide multiple pathways to success. CEAS is pleased to note departmental awareness of this issue and acknowledges recent efforts to address it, including:

- Reintroducing in-person assessments (midterms, in-lab work) in courses such as BIOL 1001, BIOL 2040, and BIOL 3120 to mitigate the influence of generative AI on grade distributions.
- Removing or reducing assessment components identified as contributing to grade inflation.

The historical trend data in Appendix A suggest these efforts are beginning to have an effect: several BIOL courses show a downward trend in A/A+ percentages in 2024 relative to recent peak years. The BIOL department has also noted that routinely receiving course-level historical trend data from CEAS would assist in assessing the impact of such changes more accurately. CEAS is willing to provide these data annually and strongly encourages the department's corrective efforts to continue.

CEAS was troubled to learn that several BIOL courses with high A/A+ percentages were taught by contract faculty for whom no rationale was sought by the department. This includes courses in which A/A+ percentages reached levels well beyond the guidelines — in one case, 97% in a 3000-level course — with no departmental explanation obtained or provided to CEAS. This undermines the requirement for departmental reflection. It is expected that departments will perform reflection on all courses outside guidelines, including those taught by contract faculty.

BIOL instructors also drew attention to a structural feature of York's grading system: the A and A+ categories together span 20 percentage points (80–100%), compared with the 10-point ranges used for B/B+, C/C+, and D/D+ grades.

Chemistry (CHEM): The inaugural offering of first-year chemistry at the Markham campus (CHEM1000E, CHEM1001Q) produced A/A+ percentages of 39% and 45% respectively, with section-average GPAs more than one grade point above comparable Keele sections. The department attributes this to smaller class sizes enabling more frequent and high-quality student–instructor interaction, as well as the use of separate assessments at Markham.

Natural Science (NATS): NATS reports that the fraction of courses with A/A+ grades above faculty guidelines declined modestly (from 29% in 2023–2024 to 25% in 2024–2025).

The NATS division notes a structural factor relevant to grade interpretation: although NATS courses are 1000-level offerings, they are taken by students at all stages of their degree. The presence of upper-year students who bring greater academic experience is likely to raise class averages, even when the material is taught at an appropriately introductory level. CEAS acknowledges this as a legitimate contextual factor.

Generative AI was identified as the explicit or likely cause of anomalously high grades in several NATS courses in 2024–2025, including cases where students used AI to complete online assessments and at least one instance in which exam questions were inadvertently shared between sections, allowing AI-assisted preparation. In several courses, instructors have already responded by switching to in-person or invigilated assessment formats. CEAS also notes that inconsistencies in TA marking were identified as a contributing factor in at least two NATS courses (NATS 1750 and NATS 1880); appropriate TA oversight and moderation are the responsibility of course directors and must be maintained.

Physics and Astronomy (PHYS): PHYS reported a relatively small number of courses with high A/A+ percentages, generally consistent with Faculty-wide rationales given above. Also, parallel to experiences in CHEM, PHYS 1422 Section N at Markham campus achieved a section average more than two grade points above the corresponding Keele section. The department intends to monitor differences between multi-campus courses going forward.

Science and Technology Studies (STS): Six of STS's 22 courses were above faculty guidelines for A/A+ courses in 2024–2025 — a high rate proportionally. Three courses exceeded the A/A+ threshold substantially, including STS 3400 at 79% in Fall and STS 3561 at 72% in Winter. In both cases, and in STS 2010 and STS 2411, instructors acknowledged that permitting or encouraging the use of generative AI on assignments contributed to the high grades. CEAS is pleased to note that the STS has already introduced corrective measures for 2025–2026: the courses in question have moved to fully in-class, handwritten assessments.

Mathematics and Statistics (MATH): MATH reported a small number of courses with A/A+ percentages outside guidelines. Rationales were generally consistent with the Faculty-wide list above.

High E/F percentage courses:

CEAS noted the large number of MATH courses exceeding the E/F threshold. Most other departments have relatively few courses with E/F percentages outside guidelines. However, persistent high-failure courses in CHEM and PHYS also remain a concern. Historical trends for E/F flagged courses are shown in Appendix B. A discussion of these courses and their context and rationales is provided here.

CEAS notes that student disengagement is a persistent concern across many departments. The faculty-wide adoption of the Early Alert system to identify and support low-performing students at risk of failing earlier in the term is an encouraging initiative to improve outcomes and help students make proactive decisions about their courses.

Mathematics and Statistics (MATH): The MATH department provided an extensive account of high E/F rates across its 1000- and 2000-level offerings. Contributing factors, as reported by the department's Academic Standards Committee, can be broadly categorised as follows:

- *Student non-participation and disengagement:* Lecture attendance in some sections fell below 40% of enrolled students. Large numbers of students failed to complete required assessments, including the final examination, or remained enrolled without meaningfully participating (ghost students).
- *Over-reliance on a single high-stakes assessment:* Course policies that redirect weight from missed components to the final exam leave many students dependent on a single cumulative evaluation for which they are ill-prepared.
- *Weak prerequisite preparation:* Inadequate prior knowledge, including gaps attributable to pandemic-era disruptions, and difficulties with the transition to in-person, invigilated assessment.
- *External pressures:* Students balancing full-time study with substantial employment commitments.
- *Over-reliance on AI tools:* Students who used generative AI to complete term work found themselves unable to solve problems independently during invigilated examinations.

CEAS welcomes the department's adoption of the Early Alert system to identify and support at-risk students earlier in the term. Proactive outreach is strongly encouraged.

Chemistry (CHEM): CHEM 2020 (Organic Chemistry) recorded E/F rates of 44–64% across its three Fall sections — among the highest failure rates observed Faculty-wide. The department attributes this to a deliberate shift toward closed-book examinations and away from low-stakes formative assessments, combined with lecture attendance across all sections of approximately 25%. The department is monitoring the situation and has introduced curricular changes for 2025–2026.

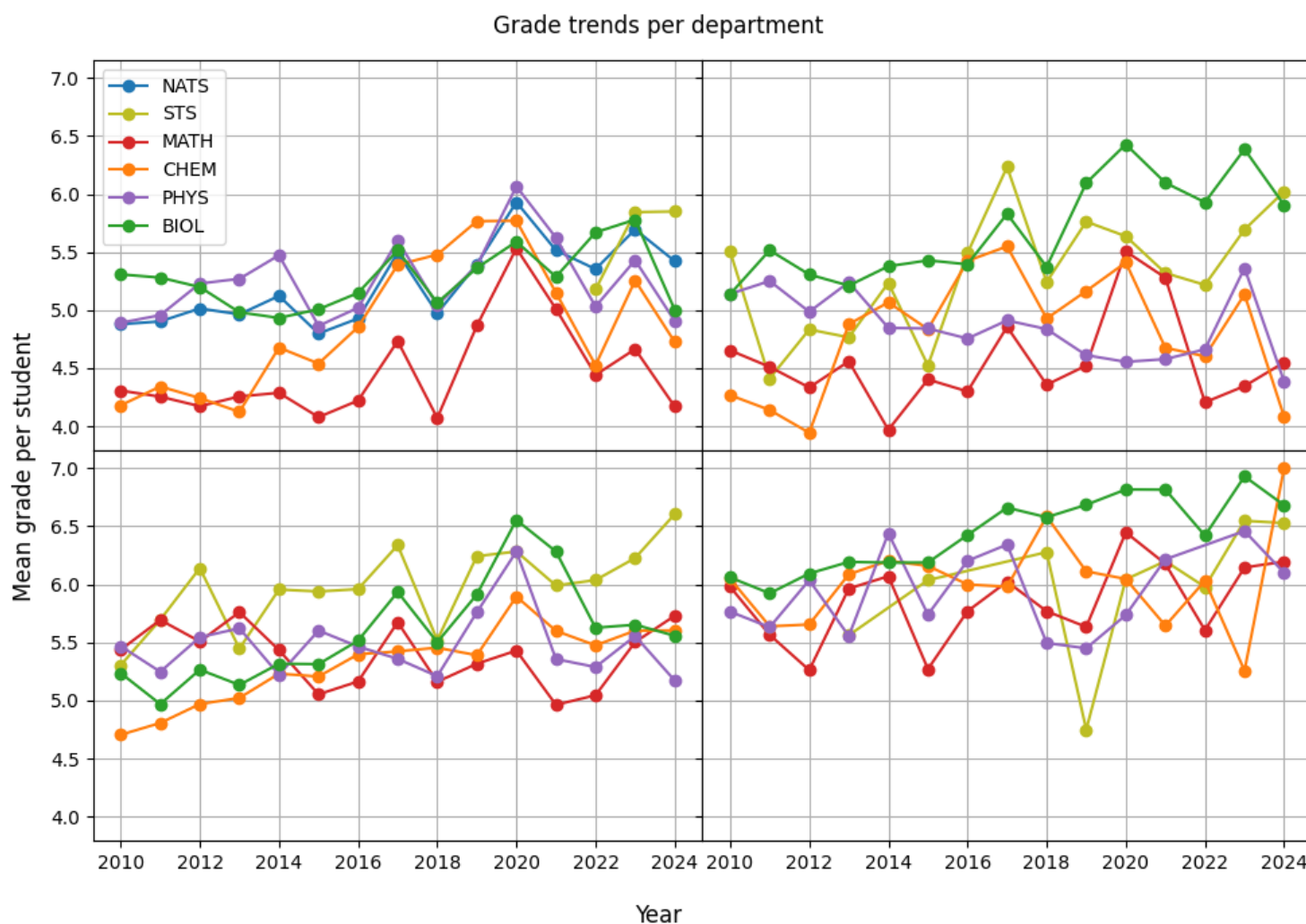
In addition, several other CHEM courses (CHEM 2011, CHEM 2080, CHEM 3010) showed elevated E/F rates driven primarily by low student engagement. The CHEM department has called for broader Faculty-level communication to students about the importance of lecture attendance and use of academic support resources.

Physics and Astronomy (PHYS): PHYS identified several courses with elevated E/F rates driven largely by non-participating students who remained enrolled despite consistent failure on term assessments. The department notes that if ghost students are excluded, failure rates in several courses fall within or near the guidelines. The department has committed to more proactive identification of at-risk students and to reminding students of the option to withdraw before the deadline. CEAS supports this approach and encourages all departments to make better use of available intervention tools.

PHYS also reported an instructive result from a pilot of an intensive block format delivery of PHYS 1800 (Engineering Mechanics): students completing the course in a focused three-week period — free from competing academic commitments — achieved an average GPA of 6.11, compared with 4.73-5.14 for sections delivered in the standard format with similar assessment structures. This finding is of interest to CEAS as evidence of how structural delivery formats may affect student outcomes.

Faculty-wide grade trends

The following figure shows mean grade per student among Faculty courses, averaged over each department and year. Only courses with 15 or more students and 3 or more credits are included.



CEAS notes:

- Covid-era changes in pedagogy lead to a spike in higher grades in 2020, which for many courses normalized to pre-Covid levels afterwards.
- There has been a substantial upward trend in grades in BIOL at the 2000 and 4000 levels, although the most recent year does show downward movement which may be due course adjustments within the department, as discussed above.
- There was a substantial upward trend in CHEM at the 4000 level in 2024, due to two courses with high A/A+ percentages.

CEAS recommendations

1. We propose that if a course grade distribution is outside established guidelines, a rationale must be provided and approved by the department before grades are released. This policy would give departments greater ownership and supervision of grade distributions, within a more sensible timescale compared to the current procedure. It would also ensure that the reflection exercise is completed for all courses falling outside guidelines, which is especially pressing for limited-contract faculty whose obligations may end after grades are submitted.
2. We propose a new category of “super-anomalous” grades:
 - >50% A/A+ at the 1000/2000 level
 - >65% A/A+ at the 3000/4000 level
 - >50% E/F at the 1000 levelCourse section grade distributions falling into this category must be approved by CEAS before grades are released though the submission of a rationale provided by the course instructor and approved by the corresponding department.
3. Historical data are to be provided to departments by CEAS so that departments are easily able to situate grade distributions in their historical context.
4. Courses move away from highly-weighted assessments that can be easily completed with generative AI, a direction which many course directors have already taken.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Sean Tulin". The signature is fluid and cursive, with the first name "Sean" and last name "Tulin" clearly distinguishable.

Sean Tulin, Chair CEAS

Philip Johnson
Tao Zeng
Bruce Howard
Kean Birch
Sophia Luzskov
Madeline Blanco

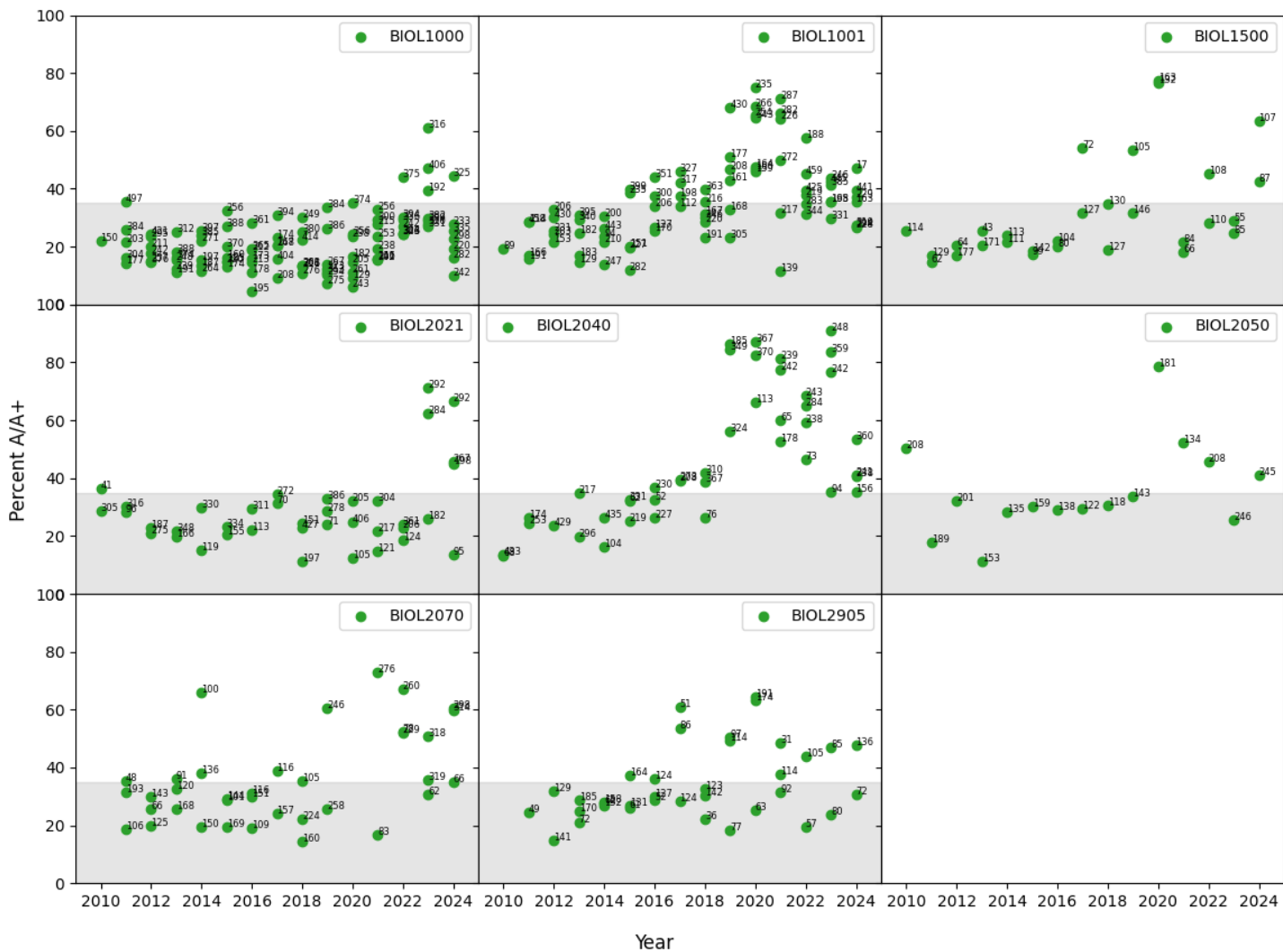
Appendix A:

Faculty guidelines trigger a review for courses with:

- >35% A/A+ at the 1000 and 2000 levels
- >50% A/A+ at the 3000 and 4000 levels

Figures below show historical trends for courses which triggered review in 2024. Each panel represents a single course number, with each dot corresponding to one section of a given course in a given year. Gray-shaded region represents A/A+ percentage within faculty guidelines. Numerical values indicate the number of enrolled students per section.

Courses (2024) with percentages > 35%/50% A/A+



Courses (2024) with percentages > 55%/50% AA+

BIOL3030

BIOL3095

BIOL3120

BIOL3140

BIOL3150

BIOL3380

BIOL4000

BIOL4005

BIOL4120

BIOL4150

BIOL4154

BIOL4245

BIOL4270

BIOL4285

BIOL4305

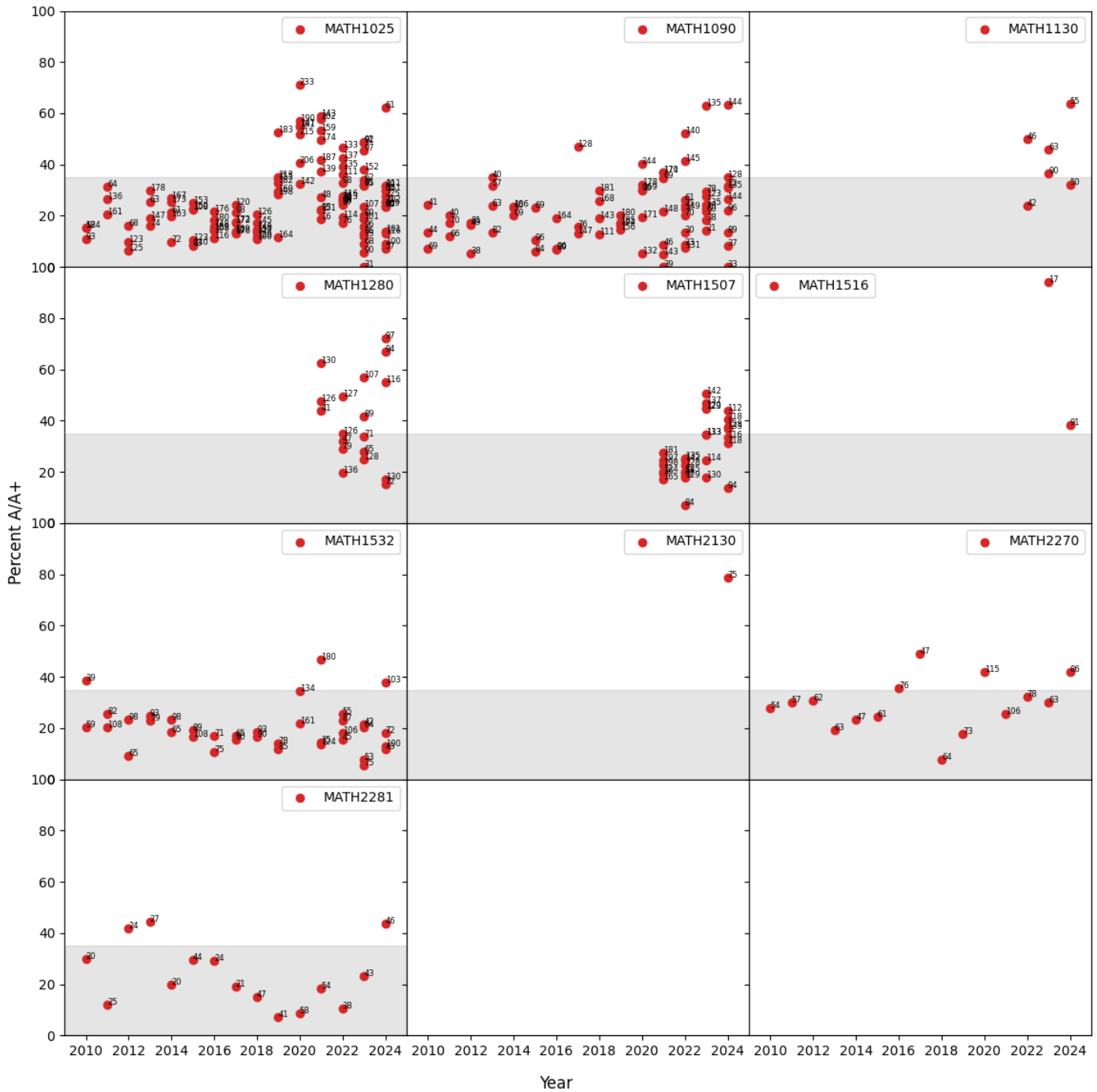
BIOL4310

BIOL4380

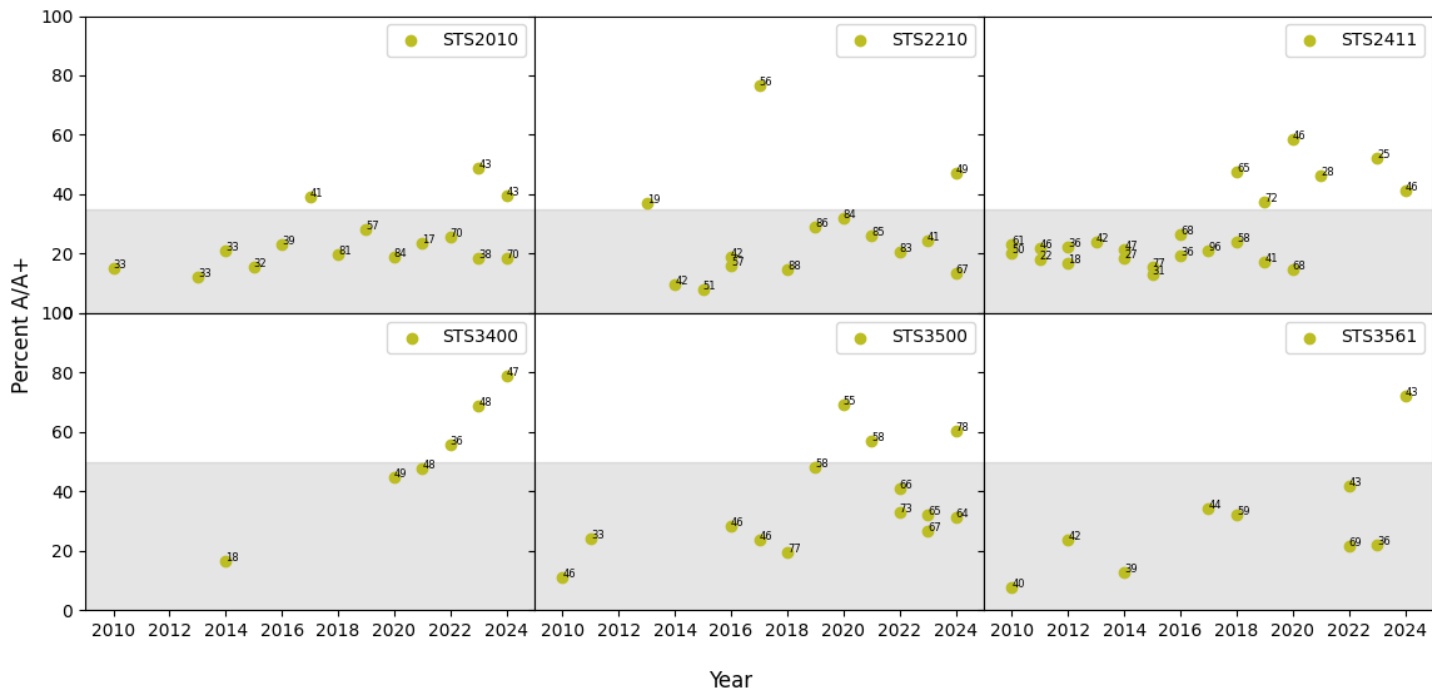
Year

Year

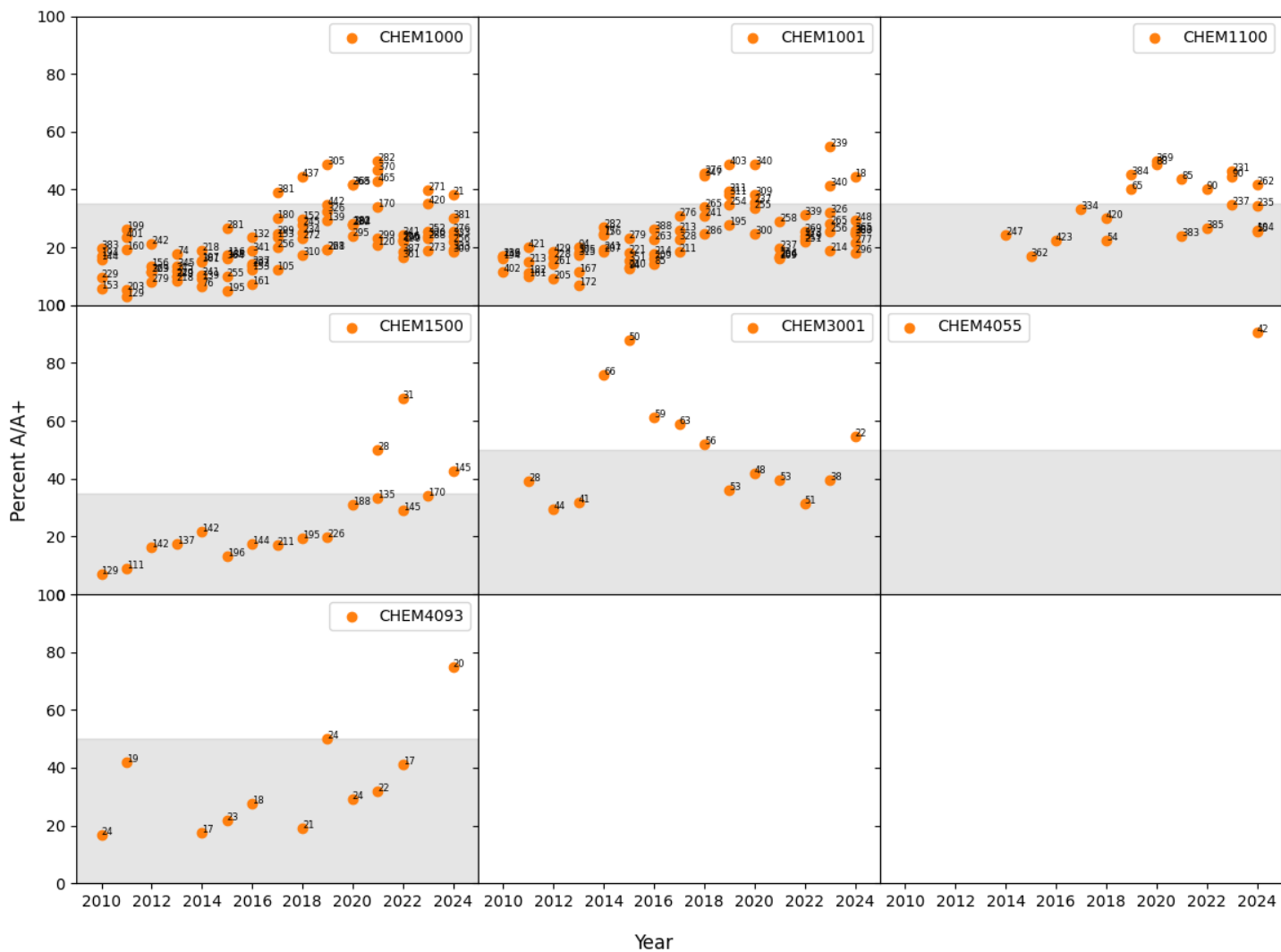
Courses (2024) with percentages > 35%/50% A/A+



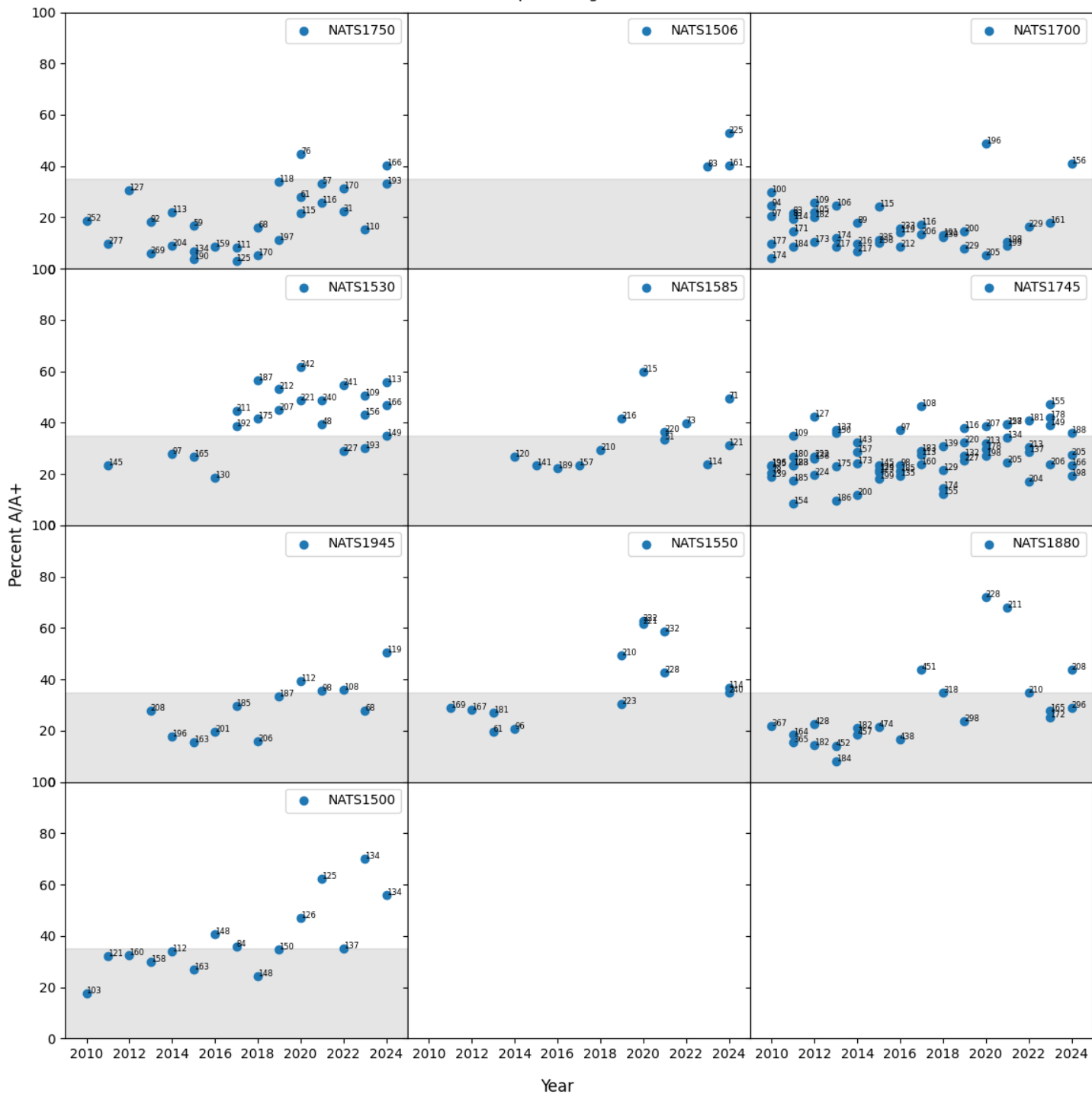
Courses (2024) with percentages > 35%/50% A/A+



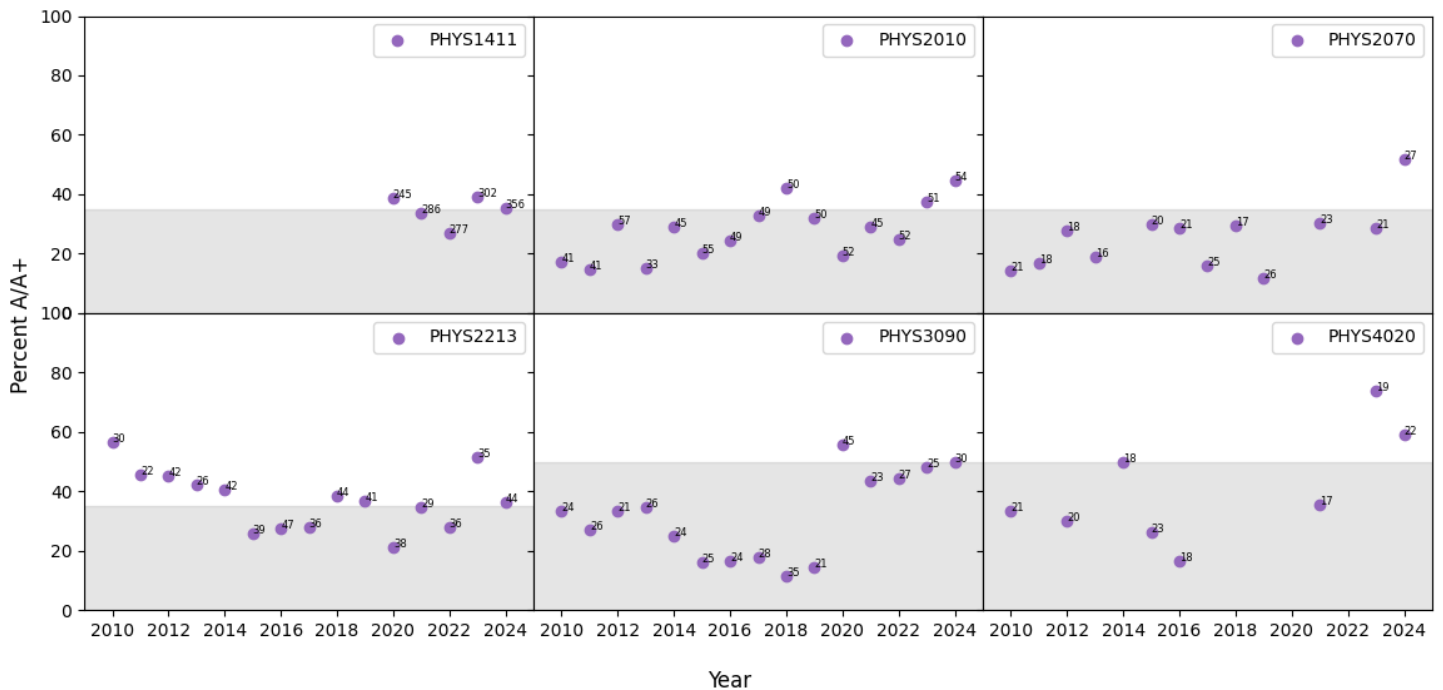
Courses (2024) with percentages > 35%/50% A/A+



Courses (2024) with percentages > 35%/50% A/A+



Courses (2024) with percentages > 35%/50% A/A+



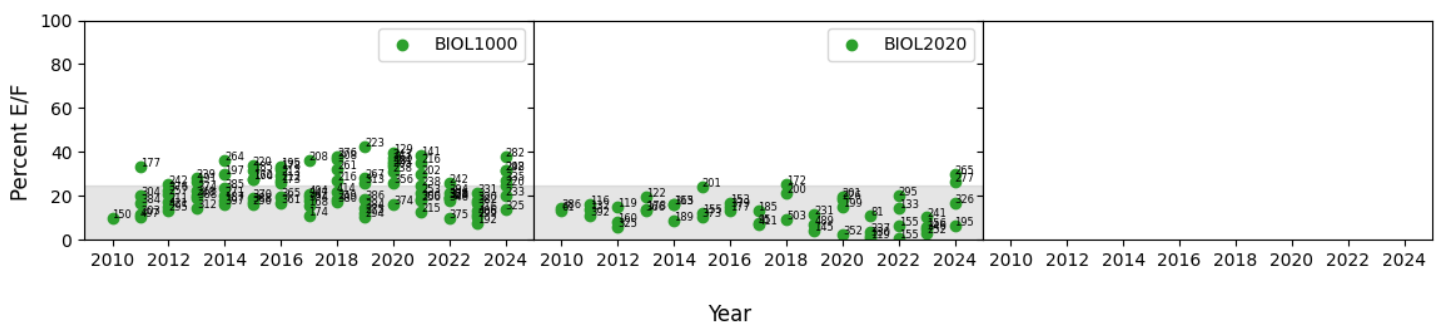
Appendix B:

Faculty guidelines trigger a review for courses with:

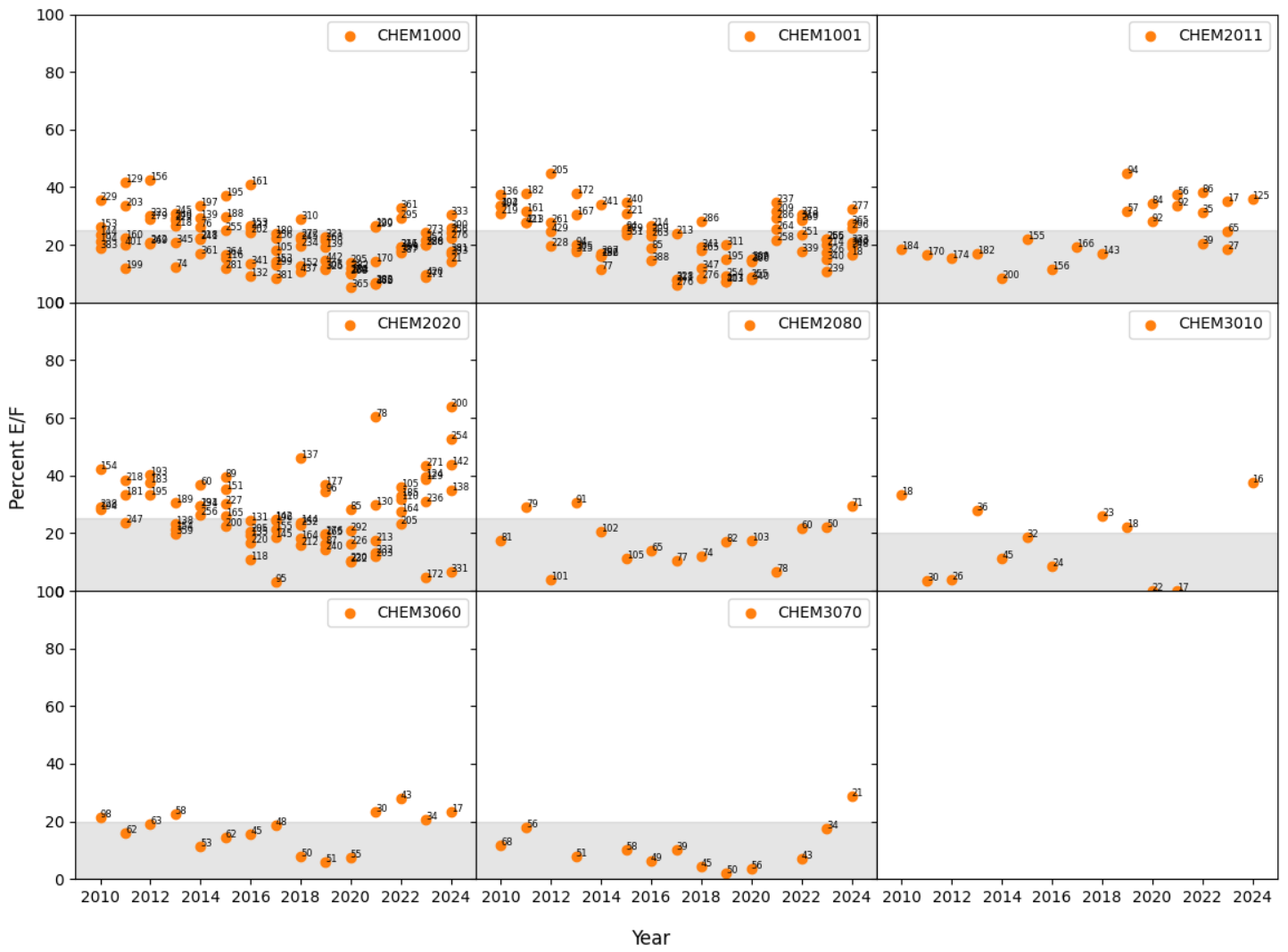
- >25% E/F at the 1000 and 2000 levels
- >20% E/F at the 3000 and 4000 levels

Figures below show historical trends for courses which triggered review in 2024. Each panel represents a single course number, with each dot corresponding to one section of a given course in a given year. Gray-shaded region represents E/F percentage within faculty guidelines. Numerical values indicate the number of enrolled students per section.

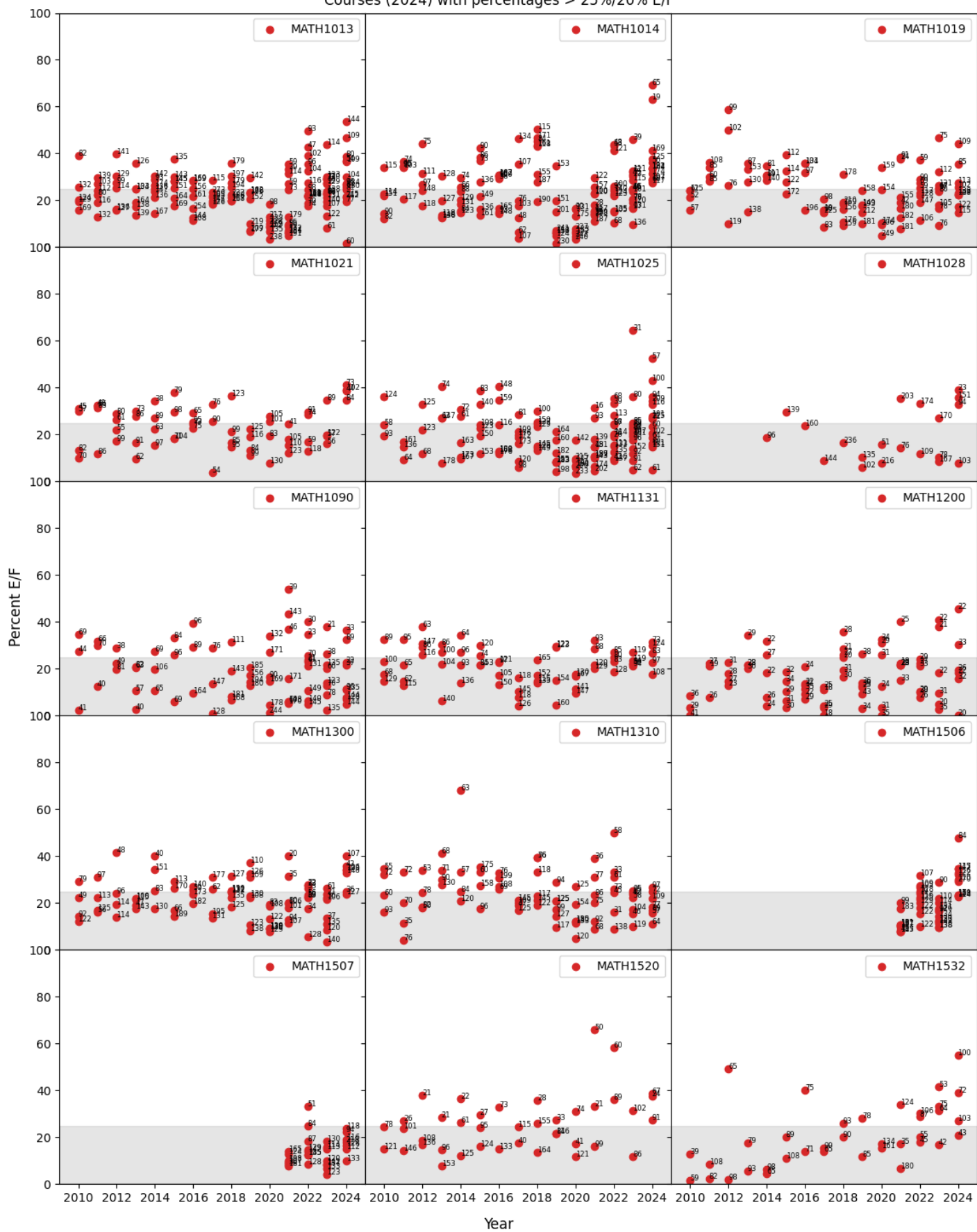
Courses (2024) with percentages > 25%/20% E/F



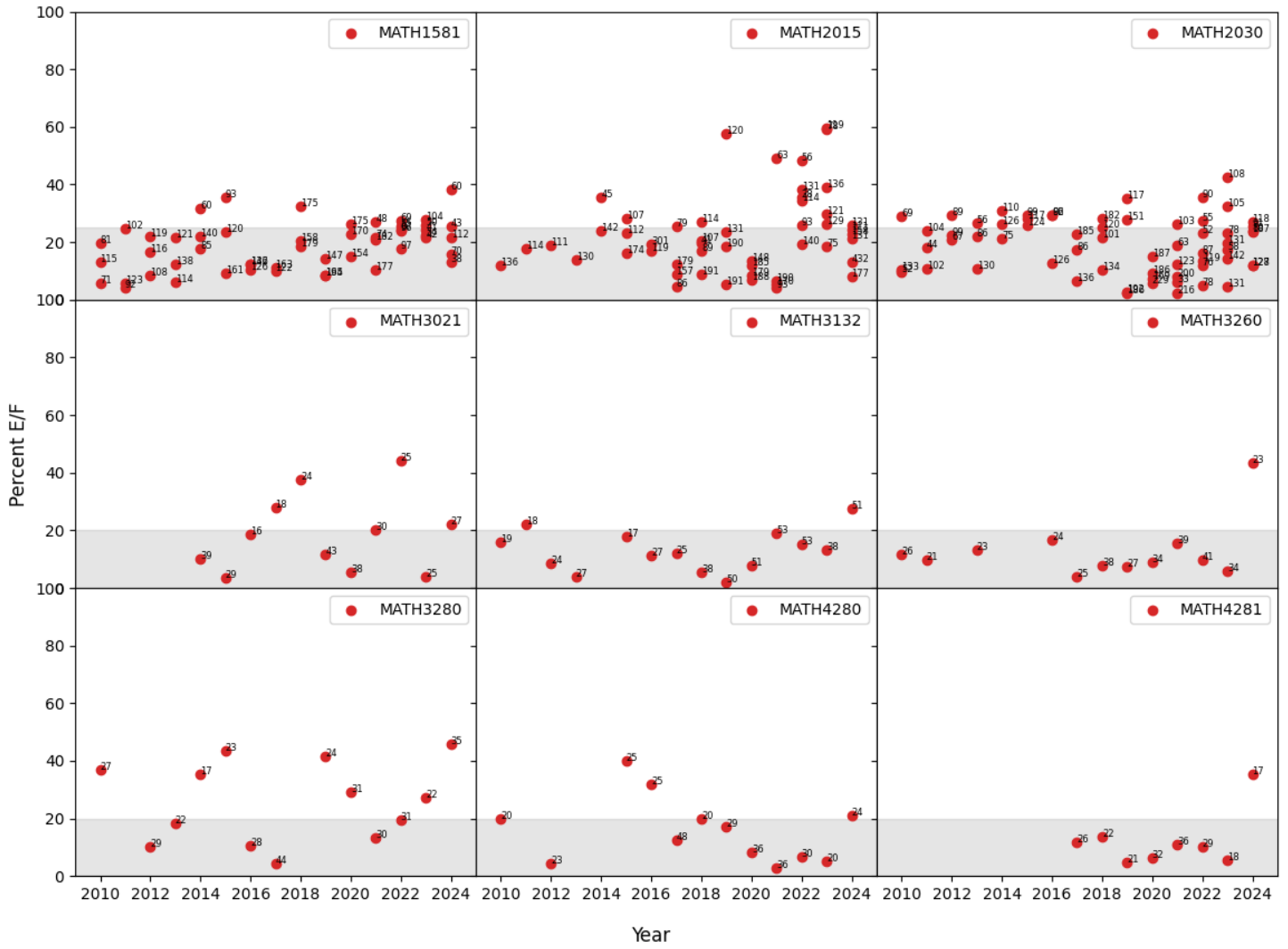
Courses (2024) with percentages > 25%/20% E/F



Courses (2024) with percentages > 25%/20% E/F



Courses (2024) with percentages > 25%/20% E/F



Courses (2024) with percentages > 25%/20% E/F

