

Senate Graduate Council

Open Session

September 15, 2026

2:00 p.m. - 3:30 p.m.

Needles Hall

NH 3318

Waterloo Campus

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2026 09 15 Senate Graduate Council Meeting Book

AGENDA

	1. Governance Resources		
	1.1. Link to Governance Resources		
2:00 p.m.	2. Approval of the Agenda		
	2.1. Conflict of Interest		
	2.2. Approval of the Agenda and Consent Items	Decision	3
	2.3. Business Arising from the Minutes	Information	
	3. Consent Agenda		
	3.1. Minutes of May 25, 2026 Meeting	Decision	4
	3.2. Curricular Submissions		
	3.2.1. Faculty of Arts	Decision	7
	3.2.2. Faculty of Health	Decision	18
	3.2.3. Graduate Studies and Postdoctoral Affairs	Decision	57
	3.3. Graduate Awards and Scholarships	Decision	85
	4. Regular Agenda		
2:05 p.m.	5. Chair's Remarks [Wan]	Information	
2:10 p.m.	6. Introduction and Orientation [Wan]	Information	
2:20 p.m.	7. AQuE Membership [Wan]		
	7.1. AQuE Terms of Reference	Decision	88
2:25 p.m.	8. Waterloo Business [Weber]		
	8.1. Waterloo Business	Information	90
2:40 p.m.	9. Curricular Submissions		
	9.1. Faculty of Arts (Graduate Diploma in Accounting)	Decision	91
	9.2. Faculty of Health	Decision	110
	9.3. Faculty of Mathematics (Master of Cybersecurity and Privacy)	Decision	127
3:00 p.m.	10. New Program Approval Process [Christelis]		
	10.1. New Program Approval Process	Information	207
3:15 p.m.	11. Academic Calendar Dates for 2027-2028 [Coghlin]		
	11.1. Academic Calendar Dates for 2027-2028	Decision	208
3:20 p.m.	12. Items Removed from the Consent Agenda		
3:25 p.m.	13. Other Business		
3:30 p.m.	14. Adjournment		
	The next SGC meeting is scheduled on November 3, 2026.		

For Approval**Open Session**

To: Senate Graduate Council

From: Tony Kongly
Governance Officer

Date of Meeting: September 15, 2026

Agenda Item: **2. Approval of the Agenda**

2.1. Conflict of Interest

Members are invited to declare any conflicts related to the open session agenda at this time. Should a conflict of interest arise during discussion, members are asked to declare a conflict of interest as it arises. Information and guidance on conflicts of interest is provided on the Secretariat [website](#).

The Secretariat can provide guidance regarding potential conflicts of interest in advance of or during the meeting.

2.2. Approval of the Agenda and Approval of the Consent Agenda

Motion: To approve the agenda as presented/amended, and to approve or receive for information the items on the consent agenda, listed as items 3.1 – 3.3.

Members wishing to have an item removed from consent to the regular agenda are asked to contact the Secretariat in advance of the meeting. Members may also request to have items moved to the regular agenda immediately prior to the approval of the agenda.

2.3. Business Arising from the Minutes

None.

University of Waterloo
SENATE GRADUATE COUNCIL
Minutes of the May 25, 2026 Meeting

Present: Mike Beazely, Steven Bednarski, David Clausi, Rob de Loë, Brian Ingalls, Brian Laird, Christiane Lemieux, Tony Kongly [Secretary], Carter Neal, Christopher Nielsen, Brad Pomeroy, Ian Rowlands, Justin Wan [Chair], Clarence Woudsma

Resources/Guests: Sarah Brown, Angela Christelis, Diana Goncalves, Carrie MacKinnon Molson, Marianne Simm, Ian VanderBurgh, Richard Wikkerink

Regrets: Helen Chen, Charmaine Dean, Tom Duever, Vivek Goel, Abhishesh Homagain, Lilhac Medina, Tizazu Mekonnen, Nicholas Pelligrino, Meray Sadek

Organization of Meeting: Justin Wan took the chair and Tony Kongly acted as secretary. The secretary advised that a quorum was present.

1. Governance Resources

This item was provided for information only.

2. Approval of Agenda

Council heard a motion to approve or receive for information the items of the consent agenda. Nielsen and Ingalls. Carried.

2.1. Conflict of Interest

No conflicts of interest were declared.

2.2. Approval of the Agenda and Consent Items

Council approved the agenda as distributed.

2.3. Business Arising from the Minutes

There was no business arising from the minutes.

3. Consent Agenda

3.1. Minutes of the April 16, 2026 Meeting

Council approved the minutes of the meeting as distributed.

3.2. Curricular Submissions

Council approved all curricular submissions items 3.2.1. – 3.2.4. on behalf of Senate.

3.3. Graduate Awards and Scholarships

Council received for information and approved all new awards and scholarships.

3.4. SGC Annual Review

Council members were invited to send their comments and feedback about SGC membership composition, mandate, and responsibilities to the Secretariat.

4. Regular Agenda

5. Chair's Remarks

The Chair provided updates regarding the Canada Impact+ program, which included strong numbers for both PhD and postdoctoral applications, particularly from the Faculty of Engineering, Science, and Mathematics.

The Chair discussed ongoing efforts to improve the success rates of applications for the CREATE program. There will be a joint Senate Graduate Council and Senate Research and Innovation Council meeting scheduled on June 15 to discuss graduate funding, student financial support, and strategic priorities for graduate education at University of Waterloo. The Chair thanked council members and GSPA staff for their contributions throughout the academic year.

6. Curricular Submissions

6.1. Faculty of Arts

Pomeroy presented the School of Accounting and Finance plans to expand the Master of Accounting program to include a Toronto option that leverages existing educational space to enhance recruitment for both full-time and part-time students. The proposed changes will include admission intake for all three academic terms: Spring, Fall, and Winter. These modifications are intended to align with evolving CPA professional requirements, expand access to students in the Greater Toronto Area, and support long-term program sustainability. Council members discussed operational considerations related to delivering an academic program in Toronto and student admission requirements.

A motion was heard to recommend that Senate approves the major modifications to the Master of Accounting (MAcc) program for the School of Accounting and Finance, effective May 1, 2027, as presented. Pomeroy and Ingalls. Carried.

6.2. Faculty of Mathematics

Ingalls presented the major modifications from the Faculty of Mathematics. Following a cyclical review, there were recommendations to add a co-op option and reduce the number of courses required for the Master of Actuarial Science. The changes are intended to improve program flexibility while maintaining alignment with professional accreditation and examination requirements. Council members discussed the structure of the co-op pathway and confirmed that both co-op and non-co-op students will complete the same academic coursework.

A motion was heard to recommend that Senate approves the major modifications to the Master of Actuarial Science (MActSc) and the Master of Actuarial Science (MActSc) – Co-operative programs for the Faculty of Mathematics, effective January 1, 2027, as presented. Ingalls and Lemieux. Carried.

7. Transnational Education Programs

VanderBurgh provided a presentation about the Transnational Education Programs, which are being explored to support revenue generation, brand development, and market diversification to other countries. VanderBurgh highlighted new partnership opportunities in China and Singapore involving dual-degrees programs. The Global Engagement Steering Committee was recently created and includes the President and Provost. Council members discussed lessons learned from previous international initiatives, including governance oversight, market analysis, enrolment forecasting, exit strategies, research security, and academic freedom considerations. VanderBurgh indicated that further consultation is needed and council members were invited to share their feedback.

8. TA/RA Unionization Updates

The Chair confirmed that the collective agreement has been ratified and implementation planning is underway. GSPA has launched information sessions and online resources to support implementation efforts. New Workday hiring processes for GTAs, GRAs, and sessional instructors are currently being developed. The Chair advised that future GRA appointments will likely require public postings and more formal hiring procedures. Council members discussed the operational implications of these changes, including impacts on current hiring practices and the need for additional coordination between the Faculties.

9. Items Removed from the Consent Agenda

No item was removed from the consent agenda.

10. Other Business

de Loë informed council members that the Water Institute has transitioned from a university supported institute to a Faculty-level institute within the Faculty of Science. The Chair noted that the new Executive Director for the Water Institute is not solely affiliated with the Faculty of Science. The collaborative programs continue to be supported by the participating academic units.

11. Adjournment

The next meeting of the Senate Graduate Council will be held in Fall 2026.

Date 2026/08/10

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Meeting Information

Agenda Page Title

SGC - Faculty of Arts - Consent Agenda - September 15, 2026

Career Level

Graduate,

Faculty/Unit

Arts

Date

2026-09-15

Summary**Course Proposals:****1) School of Accounting and Finance (ACC)***4 new courses*

Attachment(s)

Course Proposals

Courses: Retire

No proposals have been added.

Courses: New

Code	Title	Type	Workflow Step
ACC 636	Management Decision Making	Courses	SGC, Senate Graduate Council (SGC)
ACC 637	CPA Leadership	Courses	SGC, Senate Graduate Council (SGC)
ACC 645	Special Topics for Accountants 1	Courses	SGC, Senate Graduate Council (SGC)
ACC 655	Special Topics for Accountants 2	Courses	SGC, Senate Graduate Council (SGC)

Courses: Changes

No proposals have been added.

Programs & Plans Proposals

Programs & Plans: Retire

No proposals have been added.

Programs & Plans: Major Modifications
No proposals have been added.

Programs & Plans: Minor Modifications
No proposals have been added.

Regulations Proposals

Regulations: Retire
No proposals have been added.

Regulations: New
No proposals have been added.

Regulations: Changes
No proposals have been added.

ACC 636 - Management Decision Making

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Effective Date & Career

Career
Graduate

Effective Term and Year
Winter 2027

Proposal Details

Proposal Type
New

Academic Unit Approval
2026-02-27

Rationale and Background for New Course

This course is a new course unique to the GDip in Accounting (a new program in development) program and will be offered in Spring 2027. It is designed to meet the program’s learning outcomes.

Course Information

Faculty
Faculty of Arts

Academic Unit
School of Accounting and Finance

Subject Code ACC		Number 636	
Title Management Decision Making			
Abbreviated Title Management Decision Making			
Description This course reviews and integrates theory and analytical approaches to provide insight into the problems facing management and executives using cases designed to expose students to real world situations requiring qualitative and quantitative analysis. By the end of this course students will be able to identify and analyze strategic, operational, and/or financing issues faced by decision-makers and alternative solutions to address those issues by applying appropriate quantitative and qualitative analysis to support conclusion and recommended actions.			
Units 0.50		Exceptions to Fees or Academic Progress Units No	
Components Lecture		Primary Component Lecture	

Grading Information

Grading Basis Numerical Grading Basis

Cross-Listing Information

Is this course cross-listed? No

Repeatable Courses

Can this course be repeated for credit? No
--

Enrolment Rules

Consent to Add No consent required	Consent to Drop No consent required
Prerequisites	

Corequisites

Antirequisites

Course Notes

Workflow Information

Workflow Path
Committee approvals

Faculty/AFIW Path(s) for Workflow
Faculty of Arts

Dependencies

There are no dependencies

ACC 637 - CPA Leadership

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Effective Date & Career

Career
Graduate

Effective Term and Year
Winter 2027

Proposal Details

Proposal Type
New

Academic Unit Approval
2026-02-27

Rationale and Background for New Course

This course is a new course unique to the GDip in Accounting (a new program in development) program and will be offered in Spring 2027. It is designed to meet the program’s learning outcomes.

Course Information

Faculty Faculty of Arts	Academic Unit School of Accounting and Finance
Subject Code ACC	Number 637
Title CPA Leadership	
Abbreviated Title CPA Leadership	
Description This course will enhance students' technical and communication skills through the application and integration of their knowledge in a variety of cases. By the end of this course students will be able to assess the impact of ethical decisions and governance practices on organizational performance, the risks associated with non-compliance with standards, laws, and regulations, a company's financial risks and financial health, the feasibility of capital projects and appropriate financing alternatives, and value creation through an analysis of cost management, governance and controls, systems and strategy.	
Units 0.50	Exceptions to Fees or Academic Progress Units No
Components Lecture	Primary Component Lecture

Grading Information

Grading Basis Numerical Grading Basis

Cross-Listing Information

Is this course cross-listed? No

Repeatable Courses

Can this course be repeated for credit?
--

No	
Enrolment Rules	
Consent to Add No consent required	Consent to Drop No consent required
Prerequisites Accounting Graduate Students Only	
Corequisites	
Antirequisites	
Course Notes	
Workflow Information	
Workflow Path Committee approvals	Faculty/AFIW Path(s) for Workflow Faculty of Arts
Dependencies	
There are no dependencies	
ACC 645 - Special Topics for Accountants 1	
Effective Date & Career	
Career Graduate	Effective Term and Year Winter 2027
Proposal Details	
Proposal Type	Academic Unit Approval

Rationale and Background for New Course

This course is a new course unique to the GDip in Accounting (a new program in development) program and will be offered in Spring 2027.

Course Information

Faculty

Faculty of Arts

Academic Unit

School of Accounting and Finance

Subject Code

ACC

Number

645

Title

Special Topics for Accountants 1

Abbreviated Title

Special Topics Acc 1

Description

This course addresses special topics for accountants.

Units

0.50

Exceptions to Fees or Academic Progress Units

No

Components

Lecture

Tutorial

Primary Component

Lecture

Grading Information

Grading Basis

Numerical Grading Basis

Cross-Listing Information

Is this course cross-listed?
No

Repeatable Courses

Can this course be repeated for credit? Yes	Total Completions Allowed 03	Allow Multiple Enrol in a Term No
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Enrolment Rules

Consent to Add No consent required	Consent to Drop No consent required
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Prerequisites

- **Accounting Graduate Students Only**

Corequisites

Antirequisites

Course Notes

Workflow Information

Workflow Path Committee approvals	Faculty/AFIW Path(s) for Workflow Faculty of Arts
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Dependencies

There are no dependencies

Effective Date & Career	
Career Graduate	Effective Term and Year Winter 2027

Proposal Details	
Proposal Type New	Academic Unit Approval 2026-02-27

Rationale and Background for New Course

This course is a new course unique to the GDip in Accounting (a new program in development) program and will be offered in Spring 2027.

Course Information	
Faculty Faculty of Arts	Academic Unit School of Accounting and Finance
Subject Code ACC	Number 655
Title Special Topics for Accountants 2	
Abbreviated Title Special Topics Acc 2	
Description This course addresses special topics for accountants.	
Units 0.50	Exceptions to Fees or Academic Progress Units No
Components Lecture Tutorial	Primary Component Lecture

Grading Information

Grading Basis

Numerical Grading Basis

Cross-Listing Information

Is this course cross-listed?

No

Repeatable Courses

Can this course be repeated for credit?

Yes

Total Completions Allowed

03

Allow Multiple Enrol in a Term

No

Enrolment Rules

Consent to Add

No consent required

Consent to Drop

No consent required

Prerequisites

• Accounting Graduate Students Only

Corequisites

Antirequisites

Course Notes

Workflow Information

Workflow Path

Committee approvals

Faculty/AFIW Path(s) for Workflow

Faculty of Arts

Dependencies

There are no dependencies



Date 2026/08/10

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Meeting Information

Agenda Page Title

SGC - Faculty of Health - Consent Agenda - September 15, 2026

Career Level
Graduate,

Faculty/Unit
Health

Date
2026-09-15

Summary

Course Proposals:

1) School of Public Health Sciences

HLTH:

1 course being inactivated

2 course revisions

2) Kinesiology and Health Sciences

KIN:

4 new courses

1 course revision

Program Proposals:

1) Kinesiology and Health Sciences

1.1) PhD in Kinesiology and Health Sciences - Aeronautics

- a. Changing the admit terms of the PhD in Kinesiology and Health Sciences programs from Fall, Winter and Spring to only Fall.*

1.2) MSc in Kinesiology and Health Sciences - Aeronautics

- a. Changing the admit terms of the MSc in Kinesiology and Health Sciences programs from Fall, Winter and Spring to only Fall.*

2) School of Public Health Sciences

2.1) Master of Health Evaluation

- a. Removing HLTH 653 and HLTH 654 from the list of required courses and reducing the number of required courses from 10 to 9.*
b. Revising the program duration from 4 terms to 3 terms.

Other Business

Course Proposals

Courses: Retire

Code	Title	Type	Workflow Step
HLTH 653	Evaluation Practice and Management	Courses	SGC, Senate Graduate Council (SGC)

Courses: New

Code	Title	Type	Workflow Step
KIN 614	Clinical Exercise Physiology	Courses	SGC, Senate Graduate Council (SGC)
KIN 660	Health Research and Implementation Science Methodologies	Courses	SGC, Senate Graduate Council (SGC)
KIN 661	Theories and Models of Health Behaviour Change	Courses	SGC, Senate Graduate Council (SGC)
KIN 690	Advanced Clinical Kinesiology Practicum	Courses	SGC, Senate Graduate Council (SGC)

Courses: Changes

Code	Title	Type	Workflow Step
HLTH 619	Fundamental Data Analytics Methods in Python	Courses	SGC, Senate Graduate Council (SGC)
HLTH 651	Theory and Applications in Program Evaluation	Courses	SGC, Senate Graduate Council (SGC)
KIN 684	Selected Topics in Health and Behaviour	Courses	SGC, Senate Graduate Council (SGC)

Programs & Plans Proposals

Programs & Plans: Retire
No proposals have been added.

Programs & Plans: Major Modifications
No proposals have been added.

Programs & Plans: Minor Modifications

Code	Title	Type	Workflow Step
PhD in Kinesiology & Health Sciences-Aeronautics	Doctor of Philosophy (PhD) in Kinesiology and Health Sciences - Aeronautics	Programs	SGC, Senate Graduate Council (SGC)
MSc in Kinesiology & Health Sciences-Aeronautics	Master of Science (MSc) in Kinesiology and Health Sciences - Aeronautics	Programs	SGC, Senate Graduate Council (SGC)
Master of Health Evaluation (MHE)	Master of Health Evaluation (MHE)	Programs	SGC, Senate Graduate Council (SGC)

Regulations Proposals

Regulations: Retire
No proposals have been added.

Regulations: New

No proposals have been added.

Regulations: Changes
No proposals have been added.

HLTH 653 - Evaluation Practice and Management

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Effective Date & Career

Career	Effective Term and Year	Quest Course ID	Offering Number
Graduate	Proposed	15074	1
	Effective Term and Year Winter 2027		
	Existing		
	Effective Term and Year Fall 2023		

Proposal Details

Proposal Type Retire	Academic Unit Approval 2026-02-25
Last Offering of Course -	Retired Impact No

Rationale and Background for Change

This is a required course for the MHE program in the School of Public Health Sciences. The MHE program is being revised to amalgamate some of this course content into HLTH 614 and HLTH 651 making the program one year in length. This will attract more students to apply to a one year program and allow current students to complete the program one term earlier.

Course Information

Faculty Faculty of Health	Academic Unit School of Public Health Sciences
Subject Code HLTH	Number 653

Title

Evaluation Practice and Management

Abbreviated Title

Evaln Practice & Management

Description

Key concepts necessary for successful evaluation practice and management are discussed and applied using case examples. Evaluation practice examples that are discussed include learning to understand and incorporate consideration of diversity, societal, organizational and environmental context in the conduct of evaluations. Key project management concepts relevant to each step of the evaluation of intervention will be covered, including (but not limited to) selecting research questions and focusing design considerations, budgets, timelines, politics, and contingency plans as well as creating and working in teams.

Units

0.50

Exceptions to Fees or Academic Progress Units

No

Components

Lecture

Online

Primary Component

Lecture

Grading Information

Grading Basis

Numerical Grading Basis

Cross-Listing Information

Is this course cross-listed?

No

Repeatable Courses

Can this course be repeated for credit?

No

Enrolment Rules

Consent to Add

No consent required

Consent to Drop

No consent required

Prerequisites

- **Must have completed the following: PHS614**
 - **Enrolled in:**
 - **Master of Health Evaluation (MHE) - Master of Health Evaluation (MHE)**
 - **Master of Health Informatics & Analytics (MHIA) - Master of Health Informatics and Analytics (MHIA)**

- **Master of Public Health (MPH) - Master of Public Health (MPH)**
- **MSc in Public Health Sciences - Master of Science (MSc) in Public Health Sciences**
- **MSc in Public Health Sciences-Water - Master of Science (MSc) in Public Health Sciences - Water**
- **PhD in Public Health Sciences - Doctor of Philosophy (PhD) in Public Health Sciences**
- **PhD in Public Health Sciences-Aging, Health & Well-Being - Doctor of Philosophy (PhD) in Public Health Sciences - Aging, Health and Well-Being**
- **PhD in Public Health Sciences-Water - Doctor of Philosophy (PhD) in Public Health Sciences - Water**

Corequisites
Antirequisites

Course Notes

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Workflow Information

Workflow Path Committee approvals	Faculty/AFIW Path(s) for Workflow Faculty of Health
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Dependencies

There are no dependencies

KIN 614 - Clinical Exercise Physiology

Top

Effective Date & Career

Career Graduate	Effective Term and Year Winter 2027
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Proposal Details

Proposal Type New
Rationale and Background for New Course

With the recent revisions to our Master of Kinesiology coursework program, more students have been taking a graduate level version of KIN 314 in the form of a selected topics course. Given the number of students taking this course, we would like to formalize a held-with course for the graduate students. This is the first course in the clinical course pathway for students aiming to become certified as a Clinical Exercise Physiologist.

Course Information

Faculty

Faculty of Health

Academic Unit

Department of Kinesiology and Health Sciences

Subject Code

KIN

Number

614

Title

Clinical Exercise Physiology

Abbreviated Title

Clinical Exercise Physiology

Description

In this course, students will learn how impairments associated with chronic conditions influence decision making in assessment, exercise program design, and training. This course will utilize cases, guest lectures, and readings to guide class discussion and facilitate learning. An experiential learning component at the Centre for Community, Clinical and Applied Research Excellence (CCCARE) will support students' integration of theory and practice. The course requires participation for two hours per week for at least 12 weeks of the term.

Units

0.50

Exceptions to Fees or Academic Progress Units

No

Components

Lecture Clinic

Primary Component

Lecture

Grading Information

Grading Basis

Numerical Grading Basis

Cross-Listing Information

Is this course cross-listed?

No

Repeatable Courses	
Can this course be repeated for credit? No	
Enrolment Rules	
Consent to Add Instructor consent required	Consent to Drop No consent required
Prerequisites	
Corequisites	
Antirequisites • Not completed nor concurrently enrolled in: KIN314	
Course Notes	
Workflow Information	
Workflow Path Committee approvals	Faculty/AFIW Path(s) for Workflow Faculty of Health
Dependencies	
There are no dependencies	
KIN 660 - Health Research and Implementation Science Methodologies Top	
Effective Date & Career	

Career Graduate	Effective Term and Year Winter 2027
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Proposal Details

Proposal Type New	Academic Unit Approval 2026-03-25
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Rationale and Background for New Course

This course has historically been offered as a KIN 684 selected topics course. The course has proven to be very meaningful for graduate students who require an additional course focusing on health research methods. This course will be included in the list of elective options for the new Graduate Research Field in Health and Behaviour.

Course Information

Faculty Faculty of Health	Academic Unit Department of Kinesiology and Health Sciences
Subject Code KIN	Number 660
Title Health Research and Implementation Science Methodologies	
Abbreviated Title Health Resrch & Impl Sci Mthds	
Description The purpose of the Health Research and Implementation Science Methodologies course is to develop a student’s comprehension of concepts and steps used in the design and evaluation of randomized controlled trials, systematic reviews, clinical practice guidelines, and implementation science. A cross-cutting theme will be patient or knowledge user engagement in research and implementation. The focus will be study design, methods, interpretation, and evaluation of study quality and reporting, and not the “how to” of statistical analyses. After completing this course, students will understand key features in the design of, and be able to critically evaluate randomized controlled trials, systematic reviews, and guidelines. They will understand the steps in the Knowledge-to-Action framework, and describe example studies, methods, and theories or frameworks used at each step.	
Units 0.50	Exceptions to Fees or Academic Progress Units No
Components	Primary Component Lecture

Grading Information

Grading Basis
Numerical Grading Basis

Cross-Listing Information

Is this course cross-listed?
No

Repeatable Courses

Can this course be repeated for credit?
No

Enrolment Rules

Consent to Add
No consent required

Consent to Drop
No consent required

Prerequisites

Corequisites

Antirequisites

- **Not completed nor concurrently enrolled in: KIN684 (Topic 4: Health Research and Implementation Science)**

Course Notes

Workflow Information

Workflow Path

Faculty/AFIW Path(s) for Workflow

Committee approvals

Faculty of Health

Dependencies

There are no dependencies

KIN 661 - Theories and Models of Health Behaviour Change

Top

Effective Date & Career

Career

Graduate

Effective Term and Year

Winter 2027

Proposal Details

Proposal Type

New

Academic Unit Approval

2026-03-25

Rationale and Background for New Course

This course has historically been offered as a KIN 688 Selected Topics course. It has proven to be a critical course for the students performing research in the area of health and behaviour. This course will be included in the list of elective options to achieve the Graduate Research Field in Health and Behaviour.

Course Information

Faculty

Faculty of Health

Academic Unit

Department of Kinesiology and Health Sciences

Subject Code

KIN

Number

661

Title

Theories and Models of Health Behaviour Change

Abbreviated Title
Theory & Model Hlth Beh Change

Description
This course provides an in-depth examination of major theories and models of health behaviour change, with emphasis on understanding, critiquing, and applying theoretical frameworks used in research and practice. Students will explore key perspectives underpinning health behaviour change, including the social cognitive, humanistic/organismic, socioecological, and dual-process frameworks. Through engagement with current empirical literature, students will analyze the strengths, limitations, and methodological implications of these approaches, identifying gaps and opportunities for future inquiry. In addition to critically evaluating existing theories and models, students will facilitate scholarly discussions to foster peer learning and deepen collective understanding of emerging developments in health behaviour change science. By the end of the course, students will be equipped to interpret, critique, and generate research grounded in behavioural theories.

Units 0.50	Exceptions to Fees or Academic Progress Units No
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Components Lecture	Primary Component Lecture
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Grading Information

Grading Basis
Numerical Grading Basis

Cross-Listing Information

Is this course cross-listed?
No

Repeatable Courses

Can this course be repeated for credit?
No

Enrolment Rules

Consent to Add No consent required	Consent to Drop No consent required
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Prerequisites

Corequisites

Antirequisites

- **Not completed nor concurrently enrolled in: KIN688 (Topic 13: Theories and Models of Health Behaviour Change)**

Course Notes

Workflow Information

Workflow Path
Committee approvals

Faculty/AFIW Path(s) for Workflow
Faculty of Health

Dependencies

There are no dependencies

KIN 690 - Advanced Clinical Kinesiology Practicum

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Effective Date & Career

Career
Graduate

Effective Term and Year
Winter 2027

Proposal Details

Proposal Type
New

Academic Unit Approval
2026-03-25

Rationale and Background for New Course

With the recent revisions to our Master of Kinesiology coursework program, more students have been taking a graduate level version of KIN 492 in the form of a selected topics course. Given the number of students taking this course, we would like to formalize a held-with course for the graduate students. This course is part of the suite of critical courses for those aiming to become a Clinical Exercise Physiologist.

Course Information

Faculty

Faculty of Health

Academic Unit

Department of Kinesiology and Health Sciences

Subject Code

KIN

Number

690

Title

Advanced Clinical Kinesiology Practicum

Abbreviated Title

Adv Clin Kin Practicum

Description

This practicum offers students hands-on learning experiences in clinical exercise physiology through an intensive, supervised placement within the clinical exercise programs at the Centre for Community, Clinical, and Applied Research Excellence (CCCARE). This service-learning opportunity fosters civic responsibility and community engagement. This practicum utilizes work-integrated learning principles and incorporates weekly labs and up to 4 hours per week of work-integrated learning at CCCARE. Students will develop a high-level competency in cardiorespiratory and neuromuscular exercise assessment, program design, and training. By the end of the practicum, students will be equipped with the expertise and professional acumen necessary for certification as Clinical Exercise Physiologists through the Canadian Society for Exercise Physiology (CSEP-CEP). Recommend that students take KIN 614 prior to enrolling in this course.

Units

0.50

Exceptions to Fees or Academic Progress Units

No

Components

Practicum

Primary Component

Practicum

Grading Information

Grading Basis

Numerical Grading Basis

Cross-Listing Information

Is this course cross-listed?

No

Repeatable Courses

Can this course be repeated for credit?

No

Enrolment Rules

Consent to Add

Instructor consent required

Consent to Drop

No consent required

Prerequisites

Corequisites

Antirequisites

• Not completed nor concurrently enrolled in: KIN492

Course Notes

Workflow Information

Workflow Path

Committee approvals

Faculty/AFIW Path(s) for Workflow

Faculty of Health

Dependencies

There are no dependencies

HLTH 619 - Fundamental Data Analytics Methods in Python

Top

Effective Date & Career

Career

Graduate

Effective Term and Year

Proposed

Effective Term and Year

Winter 2027

Existing

Quest Course ID

15445

Offering Number

1

Proposal Details

Proposal Type
Change

Academic Unit Approval
2026-02-25

Unit Weight/Number Changes
No

Rationale and Background for Change

Updating the course title and description to reflect new content offered within the course. Roughly half of the course is Python Programming skills, and this was not captured in the description of the course when created. Python was introduced as this was a gap in our current curriculum that has emerged as methods in programming have evolved.

Note: The revised HLTH 619 course title will also be updated on the following program pages in the GSAC:
1) Master of Health Informatics and Analytics (MHIA)
2) Master of Science (MSc) in Public Health Sciences
3) Master of Science (MSc) in Public Health Sciences - Water

Course Information

Faculty
Faculty of Health

Academic Unit
School of Public Health Sciences

Subject Code
HLTH

Number
619

Title
Proposed
Title Fundamental Data Analytics Methods in Python
Existing
Title Fundamental Research Methods in Health Informatics

Abbreviated Title
Proposed
Abbreviated Title Fund Analytics Methods Python

Existing
Abbreviated Title Fund Method Health Informatics

Description

Proposed
Description This course focuses on the fundamental methods that are commonly employed in modern health data analytics to collect, organize, process, analyze, and communicate data/information/knowledge. An introduction to programming in Python is provided during the first half of the course, which is then applied using machine learning techniques to examine public health data. Students will gain both theoretical knowledge and practical Python programming skills so that they can apply the learned methods in practice after completing this course.
Existing
Description This course focuses on the fundamental methods that are commonly employed in modern health informatics research to collect, store, organize, process, analyze, and communicate data/information/knowledge. An introduction to programming in Python is provided during the first half of the course, which is then applied through the use of machine learning to examine public health data. Students will gain both theoretical knowledge and practical experience so that they can apply the learned methods in practice after completing this course.

Units	Exceptions to Fees or Academic Progress Units
0.50	No

Components	Primary Component
Lecture	Lecture

Grading Information

Grading Basis
Numerical Grading Basis

Cross-Listing Information

Is this course cross-listed?
No

Repeatable Courses

Can this course be repeated for credit?
No

Enrolment Rules

Consent to Add	Consent to Drop
-----------------------	------------------------

No consent required

No consent required

Prerequisites

Corequisites

Antirequisites

Course Notes

Workflow Information

Workflow Path

Committee approvals

Faculty/AFIW Path(s) for Workflow

Faculty of Health

Dependencies

Prerequisites

HLTH 719 - Advanced Research Methods in Health Data Science

HLTH 658M - Machine Learning Techniques in Health

HLTH 657M - Application of Artificial Intelligence in Health

HLTH 718M - Natural Language Processing Algorithm and Application in Health

HLTH 717M - Advanced Artificial Intelligence in Health I

[View Program](#)

[View Program](#)

[View Program](#)

[View Program](#)

[View Program](#)

HLTH 651 - Theory and Applications in Program Evaluation

Top

Effective Date & Career

Career

Graduate

Effective Term and Year

Proposed

Effective Term and Year

Winter 2027

Existing

Quest Course ID

15072

Offering Number

1

Proposal Details

Proposal Type
Change

Academic Unit Approval
2026-02-25

Unit Weight/Number Changes
No

Rationale and Background for Change

We are building a new version of HLTH 651 that incorporates content from HLTH 653, which is a course that will be inactivated and no longer be offered. Thus, the course description for HLTH 651 must be revised to include the new content from HLTH 653.

Course Information

Faculty
Faculty of Health

Academic Unit
School of Public Health Sciences

Subject Code
HLTH

Number
651

Title
Theory and Applications in Program Evaluation

Abbreviated Title
Theory and Apps in Prgm Evaln

Description

Proposed
Description An advanced course exploring and framing evaluation as theory-informed and contextually embedded practice. Students will examine theory-driven and other advanced evaluation approaches, including realist, contribution analysis, developmental, culturally responsive and equity-centered, Indigenous, policy, environmental, and economic evaluation. The course will also strengthen students' competencies in evaluation use and influence, reflexive and professional practice (or managing evaluations), and the effective communication of evaluation findings.
Existing
Description An advanced program and policy evaluation course that provides theoretical knowledge, skills, and application of program evaluation approaches, including organizational and program planning. A more in-depth coverage of topics

will be presented, including case studies and the understanding and use of program and policy intervention theory. This includes the creation of logic models, the identification of the purpose of the evaluation, the development of an appropriate evaluation design, and consideration of factors associated with knowledge use.

Units

0.50

Exceptions to Fees or Academic Progress Units

No

Components

Lecture

Online

Primary Component

Lecture

Grading Information

Grading Basis

Numerical Grading Basis

Cross-Listing Information

Is this course cross-listed?

No

Repeatable Courses

Can this course be repeated for credit?

No

Enrolment Rules

Consent to Add

No consent required

Consent to Drop

No consent required

Prerequisites

- **Must have completed at least 1 of the following: HLTH614 or PHS614**
 - **Enrolled in:**
 - **Master of Health Evaluation (MHE) - Master of Health Evaluation (MHE)**
 - **Master of Health Informatics & Analytics (MHIA) - Master of Health Informatics and Analytics (MHIA)**
 - **Master of Public Health (MPH) - Master of Public Health (MPH)**
 - **MSc in Public Health Sciences - Master of Science (MSc) in Public Health Sciences**
 - **MSc in Public Health Sciences-Water - Master of Science (MSc) in Public Health Sciences - Water**
 - **PhD in Public Health Sciences - Doctor of Philosophy (PhD) in Public Health Sciences**
 - **PhD in Public Health Sciences-Aging, Health & Well-Being - Doctor of Philosophy (PhD) in Public Health Sciences - Aging, Health and Well-Being**
 - **PhD in Public Health Sciences-Water - Doctor of Philosophy (PhD) in Public Health Sciences - Water**

Corequisites

Antirequisites
Course Notes

Workflow Information	
Workflow Path	Faculty/AFIW Path(s) for Workflow
Committee approvals	Faculty of Health

Dependencies
There are no dependencies

KIN 684 - Selected Topics in Health and Behaviour

[Top](#)

Effective Date & Career			
Career	Effective Term and Year	Quest Course ID	Offering Number
Graduate	Proposed Effective Term and Year Winter 2027 Existing Effective Term and Year Fall 2023	10542	1

Proposal Details	
Proposal Type Change	Academic Unit Approval 2026-03-25
Unit Weight/Number Changes No	

Rationale and Background for Change

We are requesting a revision to the course title for KIN 684 from Selected Topics in the Social Science of Sport to Selected Topics in Health and Behaviour to align with the title of the Graduate Research Field. All Graduate Research Fields in KHS have their own designated selected topics course. We have recently developed a new Graduate Research Field in Health and Behaviour and this course is necessary for the research field. It will be included in the list of required electives to achieve the research field. Department consent has been added to match the formatting of the other selected topics courses.

Course Information

Faculty

Faculty of Health

Academic Unit

Department of Kinesiology and Health Sciences

Subject Code

KIN

Number

684

Title

Proposed

Title

Selected Topics in Health and Behaviour

Existing

Title

Selected Topics in the Social Science of Sport

Abbreviated Title

Proposed

Abbreviated Title

Topics in Health & Behaviour

Existing

Abbreviated Title

Topics in the Soc Sci of Sport

Description

Consult the schedule of classes for specific topics being offered.

Units

0.50

Exceptions to Fees or Academic Progress Units

No

Components

Reading

Primary Component

Reading

Grading Information

Grading Basis

Numerical Grading Basis

Cross-Listing Information

Is this course cross-listed?

No

Repeatable Courses

Can this course be repeated for credit?

Yes

Total Completions Allowed

03

Allow Multiple Enrol in a Term

Yes

Enrolment Rules

Consent to Add

Proposed

Consent to Add

Department consent required

Existing

Consent to Add

No consent required

Consent to Drop

No consent required

Prerequisites

Corequisites

Antirequisites

Course Notes

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Workflow Information

Workflow Path

Committee approvals

Faculty/AFIW Path(s) for Workflow

Faculty of Health

Dependencies

There are no dependencies

PhD in Kinesiology & Health Sciences-Aeronautics - Doctor of Philosophy (PhD) in Kinesiology and Health Sciences - Aeronautics

Top

Effective Date and Career

Career

Graduate

Effective Term and Year

Proposed

Effective Term and Year

Winter 2027

Existing

Effective Term and Year

Fall 2025

Proposal Details

Proposal Type

Change

Academic Unit Approval

2026-03-25

Quality Assurance Designation

Minor Modification Qad

Is there an impact to existing students?

No

Is the credential name changing?

No

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Graduate Co-operative Requirements
Not Applicable

Change to Learning Outcomes
No

Rationale and Background for Change(s)

Changing the admit terms of the Ph D in Kinesiology and Health Sciences programs from Fall, Winter and Spring to only Fall. A note will be added to the website to indicate that if applicants would like to apply for Winter or Spring admission they will need to contact the Graduate Program Coordinator. The rationale is that this aligns with other programs in our Faculty and reduces administrative burden. Additionally, supervisors do not tend to take on students in the Winter or Spring terms very often.

General Program/Plan Information

Faculty	Academic Unit
Faculty of Health	Department of Kinesiology and Health Sciences
Graduate Field of Study	Faculty
Kinesiology and Health Sciences	Faculty of Health
Program/Plan Name	
Doctor of Philosophy (Ph D) in Kinesiology and Health Sciences - Aeronautics	
Graduate Credential Type	Accelerated Program
PhD	Not applicable
Program Types	Admit Term(s)
Collaborative	Proposed
	Admit Term(s)
	Fall
	Existing
	Admit Term(s)
	Fall, Winter, Spring

Delivery Mode

On-campus

Length of Program

- Must be completed within 12 terms (full time) from completion of the Master's degree.
- Students must have permission of the Department Graduate Committee to continue enrolment beyond term limits.
- Students are expected to devote as much time as is necessary to complete their thesis within this timeline.
- Students must be continuously enrolled at the University to the end of the term in which they complete the degree requirements.

Registration Option(s)

Full-time, Part-time

Admissions

Admission Requirements: Minimum Requirements

- A Master's degree with a minimum 75% average in a relevant field (normally Kinesiology or a discipline related to their area of concentration).
- Letter stating research interests and why the student wishes to pursue graduate studies.
- [English language proficiency \(ELP\)](#) (if applicable)

Admission Requirements: Application materials

- Curriculum vitae
- Program-specific questions (PSQ)
- Transcript(s)
- Writing sample
 - Submit one copy of a term paper, research project, or thesis written during the students last year of Master's studies.

Admission Requirements: References

- Number of references: 3
- Type of references: from faculty members who taught the student while in a Master's program. Normally, 1 must be from the Master's supervisor.

Requirements Information

Graduate Degree Requirements

- Students must complete the course and milestone requirements listed below in addition to the [Graduate Academic Integrity Module \(Graduate AIM\)](#).

Graduate Course Requirements

No Rules

Graduate Course Requirements

- Since students' backgrounds are expected to differ considerably, course requirements will vary. However, a minimum of 3.00 units of graduate courses (e.g., 6 courses each at a 0.50 unit weight) beyond an Honours Bachelor degree is required. Of these, at least 0.50 units must be related to quantitative or qualitative analysis, such as research methods, modelling, mathematics, or statistics.
- Students must successfully complete the following courses:
 - AVIA 601 Interdisciplinary Aeronautics
 - AVIA 802 Interdisciplinary Aeronautics Project - Ph D Level
 - 1 KIN graduate level elective
- Students who have already completed AVIA 601 and AVIA 602 as part of their Masters Aeronautics degree, must complete the following course requirements:
 - AVIA 802 Interdisciplinary Aeronautics Project - Ph D Level or 1 elective graduate course that is applicable to aeronautics (approved by their supervisor with support from the Director of the Collaborative Aeronautics Program)
 - 1 KIN graduate level elective
- The course requirements will be determined in consultation with the candidate's supervisor and Advisory Committee.
- All graduate courses must be assigned a numerical grade. Students must obtain an average of at least 75% in the set of courses which they present in fulfilment of course requirements. A grade below 70% on any individual course or an average below 75% on the set of courses for the degree will result in a review of the student's status by the Department Graduate Committee. If a student receives a grade in any individual course below 60%, the Department Graduate Committee review may result in the requirement to withdraw from the program. If the student is permitted to proceed, any course with a grade below 60% will not be eligible towards the degree requirements, thus requiring the course to be repeated or additional course work to be completed.
- This degree is offered through the Collaborative Aeronautics Program. This program, jointly offered by a range of departments/schools across several academic faculties, promotes the development of interdisciplinary perspectives on aeronautics. Collaborative Aeronautics Program students complete their specialist training in their respective home departments/schools, while working with colleagues from a variety of other departments/schools in core interdisciplinary courses (AVIA 601 and AVIA 602/802).

Milestone Requirements

Ph D Seminar

- Students are required to complete a series of academic and discipline-specific seminars throughout their program of

study.

Ph D Professional Development Seminar

- Students are required to complete a series of professional development seminars and workshops throughout their program of study.

Ph D Comprehensive Examination

- Students are required to meet the University-level Ph D [Comprehensive Examination](#) minimum requirements, with certain noted differences that are specific to the Faculty of Health Comprehensive Examination minimum requirements:
 - Comprehensive examination purpose: Consistent with University-level minimum requirements. Note: In the Faculty of Health, the novel research topic is tested through a separate thesis proposal process.
 - Timing: Consistent with University-level minimum requirements.
 - Committee: Consistent with University-level minimum requirements with the exception that in the Faculty of Health, the composition of the comprehensive examining committee will be approved by the Associate Chair or Director, Graduate Studies for the student's Department/School, as delegated by the Associate Dean, Graduate Studies.
 - Who Chairs an examination: Consistent with University-level minimum requirements.
 - Format / Content: Consistent with University-level minimum requirements.
 - Academic integrity: Consistent with University-level minimum requirements.

Ph D Thesis

- Thesis Proposal: Following successful completion of the comprehensive exam, each student will be required to compete a Ph D thesis proposal. The proposal involves a written document related to the student's thesis area. The thesis project and proposal must be applicable to Kinesiology and Aeronautics and are developed in consultation with the supervisor. Each student must orally defend the thesis proposal to the Advisory Committee consisting of the supervisor (or co-supervisors), and two other members (one of which must be from the home Department). A chair to oversee the oral thesis proposal defense will be appointed by the Department.
- Thesis Defence: Each student is required to submit a thesis embodying the results of original research carried out under the direction of an Advisory Committee headed by the supervisor. The candidate defends the thesis before an Examining Committee approved by the Department Graduate Committee. The Examining Board should consist of the Advisory Committee (see thesis proposal above), an additional member that is external to the Department (referred to as the internal-external), and finally an additional member that is external to the University (referred to as the external examiner).

Other requirements

- Student evaluation: A review of each student's progress by both the supervisor and Department Graduate Committee takes place each year. Students are evaluated on several criteria, including performance in courses, progress towards course and milestone completion, thesis progress, scholarly activity, and research and teaching assistantship activity.

Notes

- [Department of Kinesiology and Health Sciences website](#)
- [Doctor of Philosophy \(Ph D\) in Kinesiology and Health Sciences - Aeronautics future graduate students program page](#)

Specializations

Undergraduate Plan Guidelines

Workflow Information

Workflow Path Committee approvals	Faculty/AFIW Path(s) for Workflow Faculty of Health
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Dependencies

Prerequisites - KIN 605 - Nutrition and Exercise in Health and Performance - KIN 750 - Fundamentals of Aging, Health and Well-being - REC 750 - Fundamentals of Aging, Health and Well-being - HLTH 750 - Fundamentals of Aging, Health and Well-being	View Program View Program View Program View Program
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MSc in Kinesiology & Health Sciences-Aeronautics -
Master of Science (MSc) in Kinesiology and Health
Sciences - Aeronautics

Top

Effective Date and Career

Career Graduate	Effective Term and Year Proposed Effective Term and Year Winter 2027 Existing Effective Term and Year Fall 2025
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Proposal Details

Proposal Type Change	Academic Unit Approval 2026-03-25
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Quality Assurance Designation
Minor Modification Qad

Is there an impact to existing students?
No

Is the credential name changing?
No

Graduate Co-operative Requirements
Not Applicable

Change to Learning Outcomes
No

Rationale and Background for Change(s)

Changing the admit terms of the Ph D in Kinesiology and Health Sciences programs from Fall, Winter and Spring to only Fall. A note will be added to the website to indicate that if applicants would like to apply for Winter or Spring admission they will need to contact the Graduate Program Coordinator. The rationale is that this aligns with other programs in our Faculty and reduces administrative burden. Additionally, supervisors do not tend to take on students in the Winter or Spring terms very often.

General Program/Plan Information

Faculty Faculty of Health	Academic Unit Department of Kinesiology and Health Sciences
Graduate Field of Study Kinesiology and Health Sciences	Faculty Faculty of Health
Program/Plan Name Master of Science (MSc) in Kinesiology and Health Sciences - Aeronautics	

Graduate Credential Type
Master's

Accelerated Program
Not applicable

Study Options (New)
Thesis

Program Types
Collaborative

Admit Term(s)
Proposed
Admit Term(s)
Fall
Existing
Admit Term(s)
Fall, Winter, Spring

Delivery Mode
On-campus

Length of Program

- Must be completed within 6 terms full time or 12 terms part time.
- Students must have permission of the Department Graduate Committee to continue enrolment beyond term limits.
- Students are expected to devote as much time as is necessary to complete their thesis within this timeline.
- Students must be continuously enrolled at the University to the end of the term in which they complete the degree requirements.

Registration Option(s)
Full-time, Part-time

Admissions

Admission Requirements: Minimum Requirements

- An Honours Bachelor’s degree (or equivalent) with at least a 75% average.
- Letter indicating why the student wishes to pursue graduate studies.
- [English language proficiency \(ELP\)](#) (if applicable)

Admission Requirements: Application materials

- Curriculum vitae
- Program-specific questions (PSQ)
- Transcript(s)
- Writing sample
 - Submit one copy of a term paper, research project or senior essay written during the last two years of undergraduate studies.

Admission Requirements: References

- Number of references: 2
- Type of references: from faculty members who taught the student as an undergraduate.

Requirements Information

Graduate Degree Requirements

- Students must complete the course and milestone requirements listed below in addition to the [Graduate Academic Integrity Module \(Graduate AIM\)](#).

Thesis Option: Course Requirements

Thesis Option: Course Requirements

- Students must successfully complete a minimum of 2.50 units of graduate courses (e.g., 5 courses each at 0.50 unit weight), including AVIA 601 Interdisciplinary Aeronautics, AVIA 602 Interdisciplinary Aeronautics Project, and KIN 630 Research Design and Statistical Analysis (0.50 unit weight) or an equivalent course (related to quantitative or

qualitative analysis, such as research methods, modelling, mathematics, or statistics), with the approval of the Department Graduate Officer. All graduate courses must be assigned a numerical grade. Students must obtain an average of at least 75% in the set of courses which they present in fulfilment of course requirements. A grade below 70% on any individual course or an average below 75% on the set of courses for the degree will result in a review of the student's status by the Department Graduate Committee. If a student receives a grade in any individual course below 60%, the Department Graduate Committee review may result in the requirement to withdraw from the program. If the student is permitted to proceed, any course with a grade below 60% will not be eligible towards the degree requirements, thus requiring the course to be repeated or additional course work to be completed.

- This degree is offered through the Collaborative Aeronautics Program. This program, jointly offered by a range of departments/schools across several academic faculties, promotes the development of interdisciplinary perspectives on aeronautics. Collaborative Aeronautics Program students complete their specialist training in their respective home departments/schools, while working with colleagues from a variety of other departments/schools in core interdisciplinary courses (AVIA 601 and AVIA 602).
- Students must also complete (and receive credit for) the following credit/no credit granted (CR/NCR) graduate seminar courses:
 - KIN 670A Seminar in Kinesiology and Health Sciences 1
 - KIN 670B Seminar in Kinesiology and Health Sciences 2

Thesis Option: Milestone Requirements

Master's Seminar

- Students are required to complete a series of academic and discipline-specific seminars throughout their program of study.

Master's Thesis

- Thesis Proposal: Following successful completion of coursework, each student will be required to compete a Master's thesis proposal. The proposal involves a written document related to the student's thesis area. The thesis project and proposal must be applicable to Kinesiology and Aeronautics and is developed in consultation with the supervisor. Each student must orally defend the thesis proposal to the Advisory Committee, consisting of the supervisor (or co-supervisors), and two other members (one of which must be from the home Department).
- Thesis Defence: Each student is required to submit a written thesis embodying the results of original research carried out under the direction of an Advisory Committee headed by the supervisor. The candidate defends the thesis before an Examining Committee approved by the Department Graduate Committee. The Examining Board should consist of the Advisory Committee, which is normally the same Advisory Committee as the thesis proposal.

Other requirements

- Student evaluation: A review of each student's progress by both the supervisor and the Department Graduate Committee takes place each year. Students are evaluated on several criteria, including performance in courses, progress towards course and milestone completion, thesis progress, scholarly activity, and research and teaching assistantship activity.

Notes

- [Department of Kinesiology and Health Sciences website](#)
- [Master of Science \(MSc\) in Kinesiology and Health Sciences - Aeronautics future graduate students program page](#)

Specializations

Undergraduate Plan Guidelines	
Workflow Information	
Workflow Path Committee approvals	Faculty/AFIW Path(s) for Workflow Faculty of Health
Dependencies	
Prerequisites KIN 605 - Nutrition and Exercise in Health and Performance	
View Program	
Master of Health Evaluation (MHE) - Master of Health Evaluation (MHE) Top	
Effective Date and Career	
Career Graduate	Effective Term and Year Proposed Effective Term and Year Winter 2027 Existing Effective Term and Year Fall 2025
Proposal Details	
Proposal Type Change	Academic Unit Approval 2026-02-25
Quality Assurance Designation Minor Modification Qad	
Is there an impact to existing students?	

Yes

Impact on Existing Students

This change in program requirements will allow current students to complete the program one term earlier. If they have taken a course already, they are permitted to use the course(s) towards their course requirements.

Is the credential name changing?

No

Graduate Co-operative Requirements

Not Applicable

Change to Learning Outcomes

No

Rationale and Background for Change(s)

- 1) Removing HLTH 653 and HLTH 654 from the list of required courses and reducing the number of required courses from 10 to 9.
- 2) Revising the program duration.

The MHE program is being revised to amalgamate some of the course content from HLTH 653 into HLTH 614 and HLTH 651, making the program one year in length. This change will decrease the course requirements by one course which allows students to complete the program in one year as opposed to 4 terms and may attract more students to a one-year program. The number of courses for the program is similar to other course-based Master’s programs. HLTH 654 was inactivated in Spring 2025 and as such, is being removed from the list of courses.

General Program/Plan Information

Faculty

Faculty of Health

Academic Unit

School of Public Health Sciences

Graduate Field of Study

Public Health Sciences

Faculty

Faculty of Health

Program/Plan Name

Master of Health Evaluation (MHE)

Graduate Credential Type

Accelerated Program

Master's

Not applicable

Study Options (New)

Coursework

Admit Term(s)

Fall

Delivery Mode

Online

Delivery Mode Information

The program is also offered on-campus or in a mix of online and on-campus formats.

Length of Program

Proposed

Length of Program

- Full-time: 3 terms (12 months)
- Part-time: 9 terms (36 months)

Existing

Length of Program

- Full-time: 4 terms (16 months)
- Part-time: 10 terms (40 months)

Registration Option(s)

Full-time, Part-time

Admissions

Admission Requirements: Minimum Requirements

- An overall 75% average in a four-year undergraduate degree program in a health or related field from a recognized university. Examples of backgrounds would include, but not be limited to, nursing, social science (e.g., psychology, social work), environmental health, medicine, physical and occupational therapy, pharmacy, optometry, and public health.
- Minimum of one year work or volunteer experience in an area relevant to public health, health promotion, health care, health systems, or program evaluation.
- Students must have a suitable background in statistics to meet prerequisite standards for all graduate level courses, before beginning coursework. An undergraduate course in statistical methods completed within the past five years with a minimum grade of 75% is required. Exceptions to this requirement may be made on occasion by admission committees considering student background and demonstrated analytic abilities.
- A statement of interest explaining the student’s goals, aspirations, and potential for future leadership in the field.
- [English language proficiency \(ELP\)](#) (if applicable)

Admission Requirements: Application materials

- Program-specific questions (PSQ)
- Résumé/Curriculum vitae
 - Indicating past academic and professional experience.
- Transcript(s)

Admission Requirements: References

- Number of references: 2
- Type of references:
 - 1 from an academic source, unless more than 5 years have elapsed since the applicant last registered in a university course, in which case both references can be from the professional sources. At least one of the professional referees must be asked to comment specifically on the applicant's academic abilities.
 - 1 from a relevant paid or volunteer work experience.

Requirements Information

Graduate Degree Requirements

- Students must complete the course requirements listed below in addition to the [Graduate Academic Integrity Module \(Graduate AIM\)](#).

Coursework Option: Course Requirements

Coursework Option: Course Requirements

Proposed

Coursework Option: Course Requirements

- The MHE program includes the completion of 9 graduate-level courses. 7 (including the practicum course) of the 9 courses are required core courses plus 2 electives.
- Required courses
 - HLTH 605B Quantitative Methods and Analysis
 - HLTH 611 The Health Care System
 - HLTH 614 Foundations of Program Evaluation
 - HLTH 640 Professional Experience Practicum
 - HLTH 651 Theory and Applications in Program Evaluation
 - HLTH 652 Qualitative Methods and Analysis
 - HLTH 655 Health Measurement and Survey Methods
- Elective courses
 - Students must also complete 2 elective courses. The following is a list of possible elective courses offered by the School of Public Health Sciences:
 - HLTH 603 Health Systems and Policy
 - HLTH 606B Principles of Epidemiology for Public Health
 - HLTH 608 Health and Risk Communication in Public Health
 - HLTH 609 Management and Administration of Public Health Services
 - HLTH 617 Population Intervention for Disease Prevention and Health Promotion
 - HLTH 632 Health Economics and Public Health
 - HLTH 638 Special Topics in Public Health: Public Health and Social Justice
- At a minimum, students must obtain an average of 75% or higher in aggregate on the courses presented in fulfillment of the degree requirements. Grades on all courses presented to fulfill the degree requirements must be 70% or higher. A grade below 70% in any course or failing to maintain an average of 75% will necessitate a review of the student's status by the School and may result in a student being required to complete additional coursework or being required to withdraw from the program. The School reserves the right to stipulate additional coursework if it is necessary for the student's preparation.

Existing

Coursework Option: Course Requirements

- The MHE program includes the completion of 10 graduate-level courses. 8 (including the practicum course) of the 10 courses are required core courses plus 2 electives.
- Required courses
 - HLTH 605B Quantitative Methods and Analysis
 - HLTH 614 Foundations of Program Evaluation
 - HLTH 640 Professional Experience Practicum
 - HLTH 651 Theory and Applications in Program Evaluation
 - HLTH 652 Qualitative Methods and Analysis
 - HLTH 653 Evaluation Practice and Management
 - HLTH 654 Systems Thinking and Analysis in Health Program Planning and Evaluation or HLTH 611 The Health Care System
 - HLTH 655 Health Measurement and Survey Methods
- Elective courses
 - Students must also complete 2 elective courses. The following is a list of possible elective courses offered by the School of Public Health Sciences:
 - HLTH 603 Health Policy in Public Health
 - HLTH 606B Principles of Epidemiology for Public Health
 - HLTH 608 Health and Risk Communication in Public Health
 - HLTH 609 Management and Administration of Public Health Services
 - HLTH 611 The Health Care System
 - HLTH 617 Population Intervention for Disease Prevention and Health Promotion
 - HLTH 632 Health Economics and Public Health
 - HLTH 638 Special Topics in Public Health: Public Health and Social Justice
- At a minimum, students must obtain an average of 75% or higher in aggregate on the courses presented in fulfillment of the degree requirements. Grades on all courses presented to fulfill the degree requirements must be 70% or higher. A grade below 70% in any course or failing to maintain an average of 75% will necessitate a review of the student's status by the School and may result in a student being required to complete additional coursework or being required to withdraw from the program. The School reserves the right to stipulate additional coursework if it is necessary for the student's preparation.

Notes

- [School of Public Health Sciences website](#)
- [Master of Health Evaluation \(MHE\) future graduate students program page](#)

Specializations

Undergraduate Plan Guidelines

Workflow Information

Workflow Path

Committee approvals

Faculty/AFIW Path(s) for Workflow

Faculty of Health

Dependencies

Prerequisites

- HLTH 741 - Advanced Practicum
- HLTH 641 - Practicum
- HLTH 603 - Health Systems and Policy
- HLTH 606B - Principles of Epidemiology for Public Health
- HLTH 637 - Public Health Informatics
- HLTH 608 - Health and Risk Communication in Public Health
- HLTH 605B - Quantitative Methods and Analysis
- HLTH 607 - Social, Cultural and Behavioural Aspects of Public Health I
- HLTH 634 - Environmental Epidemiology for Public Health
- HLTH 604 - Public Health and the Environment
- HLTH 609 - Management and Administration of Public Health Services
- HLTH 635 - Public Health, Environment and Planning
- HLTH 638 - Selected Topics in Public Health
- HLTH 624 - Environmental Toxicology in Public Health
- HLTH 632 - Health Economics and Public Health
- HLTH 640 - Professional Experience Practicum
- HLTH 614 - Foundations of Program Evaluation
- HLTH 663 - Human Development and Health
- HLTH 662 - Global Health
- HLTH 661 - Geographic Information Systems and Public Health
- HLTH 616 - Decision Making and Systems Thinking in Health Informatics
- HLTH 615 - Requirements Specification and Analysis in Health Systems
- HLTH 653 - Evaluation Practice and Management

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• HLTH 655 - Health Measurement and Survey Methods	View Program
• HLTH 652 - Qualitative Methods and Analysis	View Program
• HLTH 656 - Quantitative Methods and Analysis for Program	View Program
• HLTH 642 - Interdisciplinary Perspectives on Aging	View Program
• HLTH 627 - Advanced Dementia Care	View Program
• HLTH 629 - Information Visualization	View Program
• HLTH 630 - Advanced Geriatric Medicine and Healthcare	View Program
• HLTH 626 - Analysis and Management of Health Information in Aging Populations	View Program
• HLTH 633 - Digital Health	View Program
• HLTH 618 - Research Tools for Public Health Practice	View Program
• HLTH 639 - Experiential Learning in Evaluation	View Program
• HLTH 623 - Risk and Exposure Assessment in Public Health	View Program
• HLTH 651 - Theory and Applications in Program Evaluation	View Program
• HLTH 617 - Population Intervention for Disease Prevention and Health Promotion	View Program
• HLTH 631 - Public Health Surveillance	View Program
• HLTH 654 - Systems Thinking and Analysis in Health Program Planning and Evaluation	View Program
• HLTH 613 - Information Technology for the Health Professional	View Program

Memo

DATE: September 8, 2026

TO: Tony Kongly, Governance Officer

FROM: Justin Wan, Associate Vice-President, Graduate Studies and Postdoctoral Affairs (GSPA)
Marianne Simm, Director, GSPA

RE: Graduate Studies Academic Calendar (GSAC) updates

Consent agenda items for approval:

- 1) Section 3.1 General admission
- 2) Section 5.2 Inactive student status
- 3) Section 7.4.5 Minimum requirements for PhD degree: Thesis examination
- 4) Section 11.1 Graduate Certificates
- 5) Section 11.2 Graduate Certificate of Participation
- 6) Section 11.3 Certificate in University Teaching
- 7) Section 13.2.3 Academic progression: Conditional standing
- 8) Section 13.3 Residence requirements
- 9) Section 16.1 Courses and assessments: Grades and grading

1) Section 3.1 General admission

Description and rationale for proposed changes:

This section is being updated to clarify admission regulations and procedures, codify existing admissions practices, enhance language related to accessibility, admissions integrity, and research security, and improve the transparency and consistency of graduate admissions processes for both internal and external audiences.

Key changes include:

- Clarifying the principles that guide graduate admissions, including academic preparedness, student success, and the University's commitment to equity, diversity, inclusion, accessibility, and decolonization.
- Updating language related to non-standard admission to better recognize diverse forms of evidence of applicant success and potential.
- Adding a Deferral of Admission subsection to establish clear expectations regarding admission deferrals, timelines, approval requirements, and reapplication processes.
- Adding a Withdrawing an Offer of Admission subsection to outline the circumstances under which an admission offer may be withdrawn and the processes used to review such cases.
- Introducing language referring to disability-based admission accommodations and consideration of disability-related circumstances in admissions decisions.
- Clarifying admissions decision-making authority and related procedures.
- Updating and strengthening language related to fraudulent or falsified application information, including investigation processes, consequences, and information-sharing practices.
- Incorporating language related to the Policy on Sensitive Technology Research and Affiliations of Concern (STRAC) to support compliance with current research security requirements.

Proposed effective date: Term: Winter Year: 2027

Current **Graduate Studies Academic Calendar (GSAC)** page:

<https://uwaterloo.ca/academic-calendar/graduate-studies/catalog#/policy/HJnzKI1C6>

Current Calendar copy	Proposed Calendar copy
3.1 General admission Graduate programs at the University of Waterloo uniquely offer student-centric pathways that provide exceptional academic, research and professional outcomes. Programs catalyze graduate student opportunities in making a positive impact on the world with their innovation, collaboration and discovery. Graduate admission is a rigorous and competitive process with limited space in	3.1 General admission Graduate programs at the University of Waterloo offer student-centric pathways that provide exceptional academic, research and professional outcomes. <u>Through innovation, collaboration, and discovery, these programs enable graduate students to make a positive impact on the world.</u> Graduate admission is a rigorous and competitive process with limited space in many programs of study. In the admissions

many programs of study. ~~The primary purpose of the admissions process is to ensure that admitted students have a high likelihood of being successful in graduate studies at the University of Waterloo.~~ In the admissions process, the University seeks evidence that the applicant has the appropriate academic foundation, skills, and competencies ~~necessary~~ for their intended program of study.

Special consideration is given to evidence of the capacity to conduct research ~~when reviewing applicants to research-based programs.~~ Each [program outlines the criteria for standard admission](#). Prospective applicants are encouraged to review these criteria prior to ~~submitting an application.~~

~~Within the admissions process, the University of Waterloo is committed to supporting a diverse graduate community, which begins with admissions processes that support equity, diversity, inclusion, accessibility, and decolonization.—~~

~~To these ends, the University considers nonstandard admissions. In some cases, offers of admission may be made to students for whom evidence of potential success exists, but is different from the traditional criteria defined in the standard admission process. A typical example is when applicants have substantive professional experiences that may demonstrate capacity for success in a program. If applicants are unsure whether their experience is suitable for non-standard admission, they are encouraged to contact the~~ [Associate Director, Graduate Admissions](#).

Fraudulent information

It is an applicant's responsibility to ensure that all application information is truthful, complete, and ~~correct~~. If there is suspicion that an admissions file contains fraudulent or falsified documents, Graduate Studies and Postdoctoral Affairs will work with the department/school to confirm authenticity. If evidence of falsified information and/or omission is found in the submission of an application for admission or readmission, the

process, the University seeks evidence that the applicant has the appropriate academic foundation, skills, and competencies for their intended program of study ensuring that admitted students have a high likelihood of success in graduate studies at the University of Waterloo.

When reviewing applicants to research-based programs, special consideration is given to evidence of the capacity to conduct research. Each [program outlines the criteria for standard admission](#). Prospective applicants are encouraged to review these criteria prior to applying.

The University of Waterloo is committed to fostering a diverse graduate community. That effort begins with admissions processes that are equitable, inclusive, accessible, and support decolonization.

Offers of admission may be made to applicants for whom evidence of potential success is different from the traditional criteria defined in the standard admission process, e.g. applicants may have substantive professional experiences that demonstrates capacity for success in a program. Applicants who are unsure whether their experience is suitable for such non-standard admission are encouraged to contact the [Associate Director, Graduate Admissions](#).

Applicants may request disability-based graduate admission accommodation for any part of the admission process.

All decisions regarding admission are confirmed through the office of the Associate Vice-President Graduate Studies and Postdoctoral Affairs. Decisions are considered final; they are not subject to petition, grievance or appeal.

Deferral of admission

Offers of admission are valid only for the academic term and year specified in the letter of admission. Applicants admitted to a graduate program are expected to commence their studies in that term.

University of Waterloo reserves the right to deny admission, ~~revoke~~ any offer of admission, residence, and/or financial support. ~~Previous~~ submission of falsified or fraudulent documentation ~~may~~ be considered in future applications made to Waterloo.

~~Should~~ evidence of admissions fraud be discovered after registration, students are subject to [Policy 71 - Student Discipline](#).

~~Graduate Studies and Postdoctoral Affairs~~ admission staff may disclose evidence of any misrepresentation, fraudulent or falsified documentation to all Canadian universities, to Citizenship and Immigration Canada, and to law enforcement personnel when appropriate.

Admitted applicants who are unable to begin their program as scheduled may request a deferral of admission. Deferral requests are considered on a case-by-case basis, and approval is not guaranteed. Deferrals may be approved for at most 12 months from the original commencement term.

If an admitted applicant does not begin studies within 12 months of the original admission term, their offer of admission will be withdrawn. To be considered for admission, the admitted applicant must then submit a new application for admission. Exceptions to this 12-month limit require recommendation by the admitting program and final approval by the Associate Director, Graduate Admissions (Graduate Studies and Postdoctoral Affairs).

Students who undertake additional post-secondary studies during the deferral period may be required to reapply for admission if those studies materially alter the basis on which admission was granted.

Withdrawing an offer of admission

The University may withdraw a conditional or unconditional offer of admission, including any associated residence offer and/or offer of financial support for any of the following reasons:

- Admitted applicant has failed to meet offer of admission conditions, including minimum academic requirements, English language proficiency requirements, degree completion by stated timelines, or any other condition listed in the offer.
- Admitted applicant's academic performance has significantly declined between the time of application and final degree completion (as assessed by the admitting program and/or the Graduate Studies and Postdoctoral Affairs (GSPA) admissions team). Applicants who have been impacted by an unaccommodated disability (as defined by AccessAbility Services), are advised to review the process for requests for disability-based graduate

	<u>admission accommodation. All cases will be reviewed within the context of the circumstances by the admitting program and GSPA.</u> • <u>Admitted applicant is unable to obtain the necessary immigration documentation to gain entry into Canada by the academic term and year specified in the offer of admission.</u> • <u>Admitted applicant receives and accepts an offer of admission to another academic program for the same period of study. Graduate students at UW cannot be enrolled in more than one program at a time.</u> • <u>Misrepresentation of information or fraud in any part of the application (including falsified, altered, or omitted information/documentation), as referenced below under Fraudulent information.</u> • <u>Evidence has arisen that the admitted applicant has exhibited behaviour calling into question honesty, maturity, or professional suitability, or conduct that violates University policy, including Policy 33 - Ethical Behaviour.</u> <u>The University reserves the right to correct administrative errors in admission decisions, including withdrawing an offer if it was issued in error. Researchers at the University of Waterloo holding federal government grants must attest to alignment with the Policy on Sensitive Technology Research and Affiliations of Concern (STRAC). Admitted students who have been issued an offer of admission and are subsequently identified as high risk of being in contravention of STRAC by the Safeguarding Research team may have their offer of admission withdrawn.</u> <u>If, subsequent to an offer of admission being made, concerns arise regarding admissibility, GSPA and the admitting program will review the matter. Admitted applicants may be notified by GSPA and invited to submit additional information within a reasonable timeline. In such cases, a decision will be communicated in writing.</u>
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Any recommendation to withdraw an offer of admission must be made jointly by the Associate Director, Graduate Admissions (GSPA), the Graduate Officer (of the department, school or program to which the applicant has been admitted), and the supervisor(s) (where appropriate). The Associate Dean (Graduate Studies) of the appropriate Faculty, and the Associate Vice-President, GSPA must approve the decision.

Fraudulent information

It is an applicant's responsibility to ensure that all application information is truthful, complete, and accurate. If there is credible evidence that raises suspicion that an admissions file contains fraudulent or falsified documents, Graduate Studies and Postdoctoral Affairs (GSPA) will work with the department/school/program to confirm authenticity. If evidence of falsified information and/or omission is found in the submission of an application for admission or readmission, the University of Waterloo reserves the right to deny admission or withdraw any offer of admission, residence, and/or financial support. Submission of falsified or fraudulent documentation will be considered in any future applications made to the University of Waterloo by the applicant.

If evidence of admissions fraud is discovered after registration, students are subject to [Policy 71 - Student Discipline](#).

GSPA admission staff may disclose evidence of any misrepresentation, fraudulent or falsified documentation to all Canadian universities, to [Immigration, Refugees and Citizenship Canada \(IRCC\)](#), and to law enforcement personnel when appropriate.

2) Section 5.2 Inactive student status

Description and rationale for proposed changes:

This section is being updated to clarify eligibility, approval requirements, and the consequences of inactive student status; improve consistency and precision of language; and provide clearer guidance for students, departments, and Faculties regarding leave requests and administration.

Proposed effective date: Term: Winter Year: 2027

Current **Graduate Studies Academic Calendar (GSAC)** page:

<https://uwaterloo.ca/academic-calendar/graduate-studies/catalog#/policy/rJS6fNw06>

Current Calendar copy	Proposed Calendar copy
5.2 Inactive student status A graduate student proceeding to a degree must maintain continuous enrolment in each successive term from the time of initial admission until the end of the term during which the requirements for the degree are completed. A student may be active, pursuing their degree as a full or part-time student, or a student may seek to hold inactive status— an approved, temporary, and defined-duration pause in the student's pursuit of satisfying the requirements of a degree program. Students who are granted inactive status: • will be referred to as being on a "Leave"; • continue to be students at the University of Waterloo, meaning that there is no need to apply for readmission to the University; • are not entitled to the University's funding commitment made in the student's offer of admission, though in some instances (e.g., parental leaves or health leaves) alternative funding may be provided for qualifying students; • shall not expect access to university academic resources (e.g., research support from their supervisors). International students who seek inactive status are responsible for understanding the	5.2 Inactive student status A graduate student proceeding to a degree must maintain continuous enrolment in each successive term from the time of initial admission until <u>either the actual date of degree completion (for research-based programs) or the end of the term during which the requirements for the degree are completed (for course-based programs).</u> <u>An enrolled student has either an enrolment status of active or inactive. Inactive status is an approved, temporary, and defined-duration pause in the student's pursuit of completion of the requirements of a degree program. Any request to change to inactive status must be approved by the student's department/school/program and Faculty's Associate Dean, Graduate Studies.</u> Students <u>with</u> inactive status: • will be referred to as being on 'leave'; • continue to be students at the University of Waterloo, meaning that there is no need to apply for readmission to the University <u>at the end of the leave</u>; • <u>will not have their term count advance</u>; • <u>will automatically continue at the same academic load (i.e. full or part-time) that they had prior to the leave upon returning to active status</u>; • are not entitled to the University's funding commitment made in the

impacts of an inactive status related to immigration regulations / conditions (R220.1 (1)) pertaining to their Study Permit and eligibility for the Post Graduation Work Permit Program. Individual circumstances may vary. International students should meet with an Immigration Consultant in the Student Success Office for advice. Students may request up to two consecutive terms of inactive status by completing a Change of enrolment status form. Inactive status for Parental leave or Medical leave is not restricted to two consecutive terms. Valid reasons to request Inactive status include: • Parental leave; • Personal/family obligations; • Temporary financial difficulties; • Medical/illness; or • No suitable courses available (for students in course-based programs only). Students who are Canadian Citizens or Permanent Residents may also seek inactive status to pursue a limited external research or work opportunity which is not related to their University of Waterloo program. Students should not request inactive status to work on their thesis or any other activity related to their graduate program. Students who request more than two consecutive terms of inactive status because they have other commitments, such as a full time job or travel plans, should voluntarily withdraw from their program and may reapply when they are prepared to resume their studies. Students who are seeking inactive status should consult with their home program regarding any incomplete courses on their academic record. Exceptions to inactive status process	student's offer of admission, though in some instances (e.g., parental leaves or <u>medical</u> leaves) alternative funding may be provided for qualifying students; • shall not expect access to university academic resources (e.g., research support from their supervisors). International students who seek inactive status are responsible for <u>any</u> impacts of inactive status <u>on</u> immigration regulations / conditions (R220.1 (1)) pertaining to their Study Permit and eligibility for the Post Graduation Work Permit Program. Individual circumstances may vary. International students <u>considering leave</u> should <u>consult</u> an Immigration Consultant in the Student Success Office for advice. Students may request up to two consecutive terms of inactive status by completing a Change of enrolment status form. Inactive status for Parental leave or Medical leave is not restricted to two consecutive terms. Valid reasons to request Inactive status include: • Parental leave; • Personal/family obligations; • Temporary financial difficulties; • Medical <u>concerns</u>/illness; or • No suitable courses available (<u>usually</u> for students in course-based programs only). <u>In addition</u>, students who are Canadian Citizens or Permanent Residents may seek inactive status to pursue a limited external research or work opportunity <u>that</u> is not <u>required as part of</u> their University of Waterloo program. Students <u>will not be granted</u> inactive status to <u>pursue</u> their thesis <u>research</u> or any other activity related to their graduate program. Students who <u>require</u> more than two consecutive terms of inactive status (<u>e.g.</u> because <u>of</u> full-time jobs or travel plans), should voluntarily withdraw from their
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Students in the Mathematics for Teachers (MMT) program who do not enrol in a course by the end of the third week of classes will be considered to be taking an inactive term and will automatically be changed to inactive status for a maximum of two consecutive terms. ~~Students who have not enrolled in at least one course for three or more~~ consecutive academic terms will be discontinued from their program and must apply for readmission to continue studies in their academic program. Note: students who need to take a third inactive term for one of the permitted reasons (e.g. medical leave or parental leave) must complete a [Change of enrolment status form](#) prior to the third week of classes.

program and may reapply when they are prepared to resume their studies.

Students who are seeking inactive status should consult with their home program regarding any incomplete courses on their academic record.

Exceptions to inactive status process

Students in the Mathematics for Teachers (MMT) program who do not enrol in a course by the end of the third week of classes will be considered to be taking an inactive term and will automatically be changed to inactive status, for a maximum of two consecutive terms. If a MMT student does not enrol in at least one course over three consecutive academic terms, they will be discontinued from their program and must apply for readmission to continue studies in the program. Note, as an exception, students who need to take a third inactive term for one of the permitted reasons (e.g. medical leave or parental leave) must complete a [Change of enrolment status form](#) prior to the third week of classes.

3) Section 7.4.5 Minimum requirements for PhD degree: Thesis examination

Description and rationale for proposed changes:

This section is being updated to improve consistency of terminology, enhance readability, and better align Calendar language with current practices.

Updates have also been made to the Internal-External Member requirements in response to the Faculty of Arts reorganization to ensure that departments, schools, and academic programs are represented appropriately. In addition, the title "Other Member" within the PhD Thesis Examining Committee has been changed to "Regular Member" to clarify that all committee members hold equal status.

Proposed effective date: Term: Winter Year: 2027

Current **Graduate Studies Academic Calendar (GSAC)** page:

<https://uwaterloo.ca/academic-calendar/graduate-studies/catalog#/policy/r1OoTvwRT>

Current Calendar copy	Proposed Calendar copy
7.4.5 Minimum requirements for PhD degree: Thesis examination The PhD thesis examination is the culmination of the candidate's research program. The examination is intended to allow the candidate to demonstrate their mastery and expertise in the chosen area of study through a presentation of their research. The examination also presents an opportunity for the candidate's work to be subject to scholarly criticism by members of the academic community. Through the process of defending the thesis, the candidate further demonstrates their capacity to engage meaningfully in scholarly discourse in their chosen area. Based on an evaluation of the written thesis and the candidate's performance in the thesis examination, the examining committee will render a decision as to whether the candidate's work has satisfied the requirements for a PhD. Thesis submission When the thesis is accepted by the department and Faculty, and all other requirements for the degree have been met, the student must provide the University with	7.4.5 Minimum requirements for PhD degree: Thesis examination The PhD thesis examination is the culmination of the candidate's research program. The examination <u>allows</u> the candidate to demonstrate their mastery and expertise in the chosen area of study through a presentation of their research. The examination also presents an opportunity for the candidate's work to be subject to scholarly criticism by members of the academic community. Through the process of defending the thesis, the candidate further demonstrates their capacity to engage meaningfully in scholarly discourse in their chosen area. Based on an evaluation of the written thesis and the candidate's performance in the thesis examination, the examining committee will render a decision as to whether the candidate's work has satisfied the requirements for a PhD. Thesis submission When the thesis is accepted by the department/<u>school/program</u> and Faculty, and all other requirements for the degree have been met, the student must provide the

an electronic copy, ~~as appropriate,~~ of their approved thesis as a final University degree requirement. Theses must be prepared and submitted as outlined on the [Graduate Studies and Postdoctoral Affairs thesis submission page](#).

Prior to defence

Prior to submitting the thesis, it is recommended that the candidate meet with their supervisor and the advisory committee. The candidate should seek endorsement that the research is of sufficient quality to proceed to defence and that the candidate is able to meet the requirements of the oral defence. Although a negative assessment does not prohibit the candidate from proceeding to defence, this should occur only in rare cases and is not recommended.

The responsibility for identifying possible external examiners lies with the supervisor ~~or the co-supervisors~~. In no cases should a student be asked to lead that effort.

The Graduate Officer of the department ~~in which the candidate is enrolled~~ will recommend to the Faculty Associate Dean, Graduate Studies a PhD Thesis Examining Committee for approval. Sufficient information should be supplied ~~in order~~ to facilitate the Associate Dean's decision, including notes on adjunct appointments and declarations of any conflicts of interest.

A date and location for the examination will be set according to availability of Examining Committee members. The candidate should be prepared to defend the thesis within 4 - 6 weeks of depositing it in the Faculty Graduate Studies Office (see Display Period below).

PhD thesis examining committee

The PhD Thesis Examining Committee evaluates the quality of the student's written and oral communications related to the thesis relative to the standards of the discipline, the state of the practice in the field, and the degree expectations at the University of Waterloo. The committee consists of a minimum of five voting members comprised

University with an electronic copy of their approved thesis as a final University degree requirement. Theses must be prepared and submitted as outlined on the [Graduate Studies and Postdoctoral Affairs thesis submission page](#).

Prior to defence

Prior to submitting the thesis, it is recommended that the candidate meet with their supervisor and the advisory committee. The candidate should seek endorsement that the research is of sufficient quality to proceed to defence and that the candidate is able to meet the requirements of the oral defence. Although a negative assessment does not prohibit the candidate from proceeding to defence, this should occur only in rare cases and is not recommended.

The responsibility for identifying possible external examiners lies with the supervisor(s). In no cases should a student be asked to lead that effort.

The Graduate Officer of the candidate's department/school/program will recommend to the Faculty Associate Dean, Graduate Studies a PhD Thesis Examining Committee for approval. Sufficient information should be supplied to facilitate the Associate Dean's decision, including notes on adjunct appointments and declarations of any conflicts of interest.

A date and location for the examination will be set according to the availability of Examining Committee members. The candidate should be prepared to defend the thesis within 4 - 6 weeks of depositing it in the Faculty Graduate Studies Office (see Display Period below).

PhD thesis examining committee

The PhD Thesis Examining Committee evaluates the quality of the student's written and oral communications related to the thesis relative to the standards of the discipline, the state of the practice in the field, and the degree expectations at the University of Waterloo. The committee consists of a

of an external examiner, and a minimum of four voting members who have an appointment with the University of Waterloo:

- External Examiner
- Supervisor or Co-supervisors
- Internal Member (from the student's home Department/School or Academic Program)
- Internal-external Member (external to the student's home Department/School or Academic Program)
- Other Member(s)

The PhD Thesis Examination is chaired by an impartial faculty member with Sole-Supervisory Privilege Status (SSPS2) from outside the candidate's department. The Chair is appointed by Graduate Studies and Postdoctoral Affairs (GSPA). The Chair is responsible for proper conduct of the examination and does not vote.

External Examiner

The external examiner must hold a doctorate and be knowledgeable in the field of the candidate's research. In addition, to ensure fairness and impartiality, the external examiner must be at arm's length from the candidate's thesis, candidate and supervisor(s), and must not be in a potential conflict of interest with regards to the outcome of the thesis examination. An external examiner should be selected such that there are no ~~perceptions of~~ potential bias or conflicts of interest between the external examiner, the ~~student being evaluated~~ and the supervisor(s). There is a conflict of interest when:

- A proposed external examiner is, or was in the last six years, from the same university, organization or department, or belongs or belonged, in the last six years, to the same research unit as the supervisor(s) or candidate; or
- There is an administrative or family link between the proposed external examiner and the supervisor(s) or candidate (e.g., head of the department, Dean of the Faculty, etc.); or

minimum of five voting members comprised of an external examiner, and a minimum of four voting members who have an appointment with the University of Waterloo:

- External Examiner
- Supervisor or Co-supervisors
- Internal Member (from the student's home Department/School or Program)
- Internal-external Member (external to the student's home Department/School or Program)
- Regular Member(s)

The Internal Member, Internal-external Member and Regular Member(s) must meet the committee membership requirements in section 7.1 Graduate students' supervisors and committees. The Internal Member and Internal-external Member have additional role-specific requirements specified below.

The PhD Thesis Examination is chaired by an impartial faculty member with Sole-Supervisory Privilege Status (SSPS2) from outside the candidate's department. The Chair is appointed by Graduate Studies and Postdoctoral Affairs (GSPA). The Chair is responsible for proper conduct of the examination and does not vote.

External Examiner

The external examiner must hold a doctorate and be knowledgeable in the field of the candidate's research. In addition, to ensure fairness and impartiality, the external examiner must be at arm's length from the candidate's thesis, the candidate and supervisor(s), and must not be in a potential conflict of interest with regards to the outcome of the thesis examination. An external examiner should be selected such that there are no potential bias or conflicts of interest between the external examiner, the candidate and the supervisor(s). There is a conflict of interest when:

- A proposed external examiner is, or was in the last six years, from the same university, organization or department, or belongs or belonged, in the last six years, to the same research unit as the supervisor(s) or candidate; or

• A proposed external examiner is an industrial or government representative or professional who is or was in the last six years directly involved in collaborative activities with the supervisor(s) or candidate; or • A proposed external examiner is a former research supervisor or graduate student of the supervisor(s) or candidate; or • A proposed external examiner has collaborated or published with the supervisor(s) or candidate within the past six years; or • A proposed external examiner is a planned future research supervisor or employer of the candidate or plans to collaborate or publish with the candidate in the foreseeable future; or • The proposed external examiner is uncomfortable with reviewing the proposal due to previous conflicts or any other reason (e.g., past student or supervisor, even if more than six years ago, or personal conflict); or • The Faculty Associate Dean, Graduate Studies, has reason to believe that a specific proposed external examiner should not be involved in the review. In cases where the candidate's thesis research has involved collaborations with other members of the examining committee beyond the supervisor(s) within the past six years, the external examiner must be free of potential conflict of interest under the guidelines above with those members as well. Recommendation of an individual to serve as external examiner is made by the supervisor(s) or Graduate Officer/Associate Chair, Graduate Studies, as appropriate, to the Faculty, Associate Dean, Graduate Studies for approval. The Graduate Officer/Associate Chair is responsible for determining that the requirements for arm's length have been met, and the recommendation must be accompanied by a curriculum vitae covering the past six years and a conflict of interest statement, as well as full disclosure of any past affiliations involving	• There is an administrative or family link between the proposed external examiner and the supervisor(s) or candidate (e.g., head of the department, Dean of the Faculty, etc.); or • A proposed external examiner is an industrial or government representative or professional who is or was in the last six years directly involved in collaborative activities with the supervisor(s) or candidate; or • A proposed external examiner is a former research supervisor or graduate student of the supervisor(s) or candidate; or • A proposed external examiner has collaborated or published with the supervisor(s) or candidate within the past six years; or • A proposed external examiner is a planned future research supervisor or employer of the candidate or plans to collaborate or publish with the candidate in the foreseeable future; or • The proposed external examiner is uncomfortable with reviewing the proposal due to previous conflicts or <u>for</u> any other reason (e.g., past student or supervisor, even if more than six years ago, or personal conflict); or • The Faculty Associate Dean, Graduate Studies, has reason to believe that a specific proposed external examiner should not be involved in the review. In cases where the candidate's thesis research has involved collaborations with other members of the examining committee beyond the supervisor(s) within the past six years, the external examiner must be free of potential conflict of interest under the guidelines above with those members as well. Recommendation of an individual to serve as external examiner is made by the supervisor(s) or Graduate Officer, Graduate Studies, as appropriate, to the Faculty Associate Dean, Graduate Studies for approval. The Graduate Officer is responsible
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the candidate and supervisor(s) to assist in confirming an arm's-length relationship.

The Associate Dean is the contact for the external examiner regarding the thesis and its defence. At no point should the candidate be in communication with the external examiner prior to the defence. The department may communicate with the external only for the purposes of other arrangements not related to the defence (e.g. arrangements for a research talk).

The external examiner must provide the Faculty Associate Dean, Graduate Studies with a written assessment of the thesis at least one week before the scheduled defence. Whether the assessment is positive or negative, the Associate Dean will ~~copy~~ the report of the external examiner ~~only to the supervisor~~, who will inform the candidate of any major criticisms of the thesis, so that the ~~student can respond to these~~, but the ~~evaluation must not be shown to the candidate~~. The candidate ~~may be shown the evaluation~~ after the defence, with the permission of the external examiner. Should the assessment be negative, the Associate Dean may wish to advise that the candidate withdraw the dissertation and defend with the same external examiner at a later date. A candidate may withdraw the thesis only once. Despite a negative assessment, a candidate has the right to proceed to a defence.

Supervisor or Co-supervisors

The student's supervisor serves on the Examining Committee.

In the case that there is more than one supervisor, all co-supervisors are expected to attend the defence and the supervisor vote is divided fractionally among the co-supervisors such that each may vote independently but the total supervisor vote (one) remains unchanged.

Only with the approval of the Faculty Associate Dean, Graduate Studies may a co-supervisor be absent from the exam. In that case, the other co-supervisor, who must have

for determining that the requirements for arm's length have been met, and the recommendation must be accompanied by a curriculum vitae covering the past six years and a conflict of interest statement, as well as full disclosure of any past affiliations involving the candidate and supervisor(s) to assist in confirming an arm's-length relationship.

The Associate Dean is the contact for the external examiner regarding the thesis and its defence. At no point should the candidate be in communication with the external examiner prior to the defence. The department/school/program may communicate with the external examiner only for the purposes of other arrangements not related to the defence (e.g. arrangements for a research talk).

The external examiner must provide the Faculty Associate Dean, Graduate Studies with a written assessment of the thesis at least one week before the scheduled defence. Whether the assessment is positive or negative, the Associate Dean will share the report of the external examiner with the supervisor(s), who will inform the candidate of any major criticisms of the thesis, so that the candidate can prepare a response. The assessment must not be shared directly with the candidate. The assessment may be shared with the candidate after the defence, with the permission of the external examiner. Should the assessment be negative, the Associate Dean may wish to advise that the candidate withdraw the dissertation and defend with the same external examiner at a later date. A candidate may withdraw the thesis only once. Despite a negative assessment, a candidate has the right to proceed to a defence.

Supervisor or Co-supervisors

The student's supervisor serves on the Examining Committee.

In the case that there is more than one supervisor, all co-supervisors are expected to attend the defence and the supervisor vote is divided fractionally among the co-supervisors such that each may vote independently but

Sole-Supervisory Privilege Status (SSPS2), will represent them. Internal Member The internal member must hold a regular faculty appointment within the student's home Department/School or Academic Program. Normally the Internal Member is drawn from the student's Advisory Committee. Internal-External Member The internal-external should have suitable knowledge of the subject matter of the dissertation and is external to the student's home department/school or academic program but holds a faculty appointment with the University of Waterloo. The internal-external member ensures that the thesis meets University standards of quality and helps to assess the performance of the candidate at the defence. Holding an adjunct or cross appointment in the student's home department/school or academic program does not preclude serving as an internal-external. In rare cases, identifying an internal-external who is able to make a meaningful contribution to the examination is problematic. In such circumstances, the requirement that the Internal-External be external to the department may be waived by the Faculty Associate Dean, Graduate Studies based on a rationale provided by the Graduate Officer. Other Member Normally, this committee member is drawn from the student's Advisory Committee. Refer to section 7.1 Graduate students' supervisors and committees for guidance on faculty roles at the University and eligibility for membership on examining committees. Adjunct faculty on Examining Committees In certain cases, it may be beneficial for a student's work to be evaluated by an adjunct faculty member, distinct from the External Examiner, who possesses specific expertise relevant to the research. With approval from	the total supervisor vote (one) remains unchanged. Only with the approval of the Faculty Associate Dean, Graduate Studies may a co-supervisor be absent from the exam. In that case, the other co-supervisor, who must have Sole-Supervisory Privilege Status (SSPS2), will represent them. Internal Member The internal member must hold a regular faculty appointment within the student's home Department/School or Program. Normally the Internal Member is drawn from the student's Advisory Committee. Internal-External Member The internal-external <u>must</u> have suitable knowledge of the subject matter of the dissertation and <u>be</u> external to the student's home department/school or program but holds a faculty appointment with the University of Waterloo. The internal-external member ensures that the thesis meets University standards of quality and helps to assess the performance of the candidate at the defence. Holding an adjunct or cross appointment in the student's home department/school or program does not preclude <u>an individual from</u> serving as an internal-external <u>member, provided that their other appointment is outside the student's home department/school or program.</u> In rare cases, <u>securing</u> an internal-external who <u>can</u> make a meaningful contribution to the examination is <u>challenging</u>. In such circumstances, the requirement that the Internal-External be external to the department/<u>school or program</u> may be waived by the Faculty Associate Dean, Graduate Studies based on a rationale provided by the Graduate Officer. Regular Member Normally, this committee member is drawn from the student's Advisory Committee. Refer to section 7.1 Graduate students' supervisors and committees for guidance on faculty roles
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the Faculty Associate Dean, Graduate Studies, an adjunct faculty member holding a PhD may serve on the Examining Committee as the Internal-External or Other Member. Only one adjunct faculty member may serve on the Examining Committee. This includes retired faculty (with adjunct status). This limit excludes co-supervisors (with adjunct status). An exception is made for cotutelle student defences, which may involve more than one adjunct faculty member.	at the University and eligibility for membership on examining committees. Adjunct faculty on Examining Committees In certain cases, it may be beneficial for a student's work to be evaluated by an adjunct faculty member, distinct from the External Examiner, who possesses specific expertise relevant to the research. With approval from the Faculty Associate Dean, Graduate Studies, an adjunct faculty member holding a PhD may serve on the Examining Committee as the Internal-External or <u>Regular</u> Member. <u>At most</u> one adjunct faculty member may serve on the Examining Committee. This <u>limit</u> includes retired faculty (with adjunct status) <u>but</u> excludes co-supervisors (with adjunct status). An exception is made for cotutelle student defences, which may involve more than one adjunct faculty member.
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4) Section 11.1 Graduate Certificates

Description and rationale for proposed changes:

Minor revisions are being made to this section to improve the clarity and readability of the Graduate Certificate description. Language has also been added to clarify that Graduate Certificates are official University documents that bear the University seal.

Proposed effective date: Term: Winter Year: 2027

Current **Graduate Studies Academic Calendar (GSAC)** page:

<https://uwaterloo.ca/academic-calendar/graduate-studies/catalog#/policy/B1PWdsJAT>

Current Calendar copy	Proposed Calendar copy
11.1 Graduate Certificates Graduate Certificates at the University of Waterloo are intended to recognize graduate students' accomplishments, typically co-curricular, that are in addition to their primary degree programs. Graduate Certificates require an articulation of the students' learning outcomes and the pathways to achieve and demonstrate the attainment of those learning outcomes. New Graduate Certificates shall be approved by Senate Graduate Council (SGC). Elements completed in pursuit of a Graduate Certificate will not generate academic credit for the student and may not be used in satisfying the requirements of a degree or diploma program. Graduate Certificates will be recognized and included on a student's academic transcript.	11.1 Graduate Certificates Graduate Certificates at the University of Waterloo are intended to recognize graduate students' accomplishments, typically co-curricular, that are in addition to their primary degree programs. <u>Each Graduate Certificate clearly defines the intended student learning outcomes and outlines the pathways through which students will achieve and demonstrate those outcomes.</u> New Graduate Certificates shall be approved by Senate Graduate Council (SGC). Elements completed in pursuit of a Graduate Certificate will not generate academic credit for the student and may not be used in satisfying the requirements of a degree or diploma program. Graduate Certificates will be recognized and included on a student's academic transcript. <u>As an official University document, a Graduate Certificate shall bear the University seal.</u>

5) Section 11.2 Graduate Certificate of Participation

Description and rationale for proposed changes:

This section is being updated to clarify that Graduate Certificates of Participation are official University documents that bear the University seal. In alignment with approvals for use of the seal by University Relations, Graduate Certificates of Participation are recognized as official university documents and thereby the use of the University seal is appropriate for these certificates.

Proposed effective date: Term: Winter Year: 2027

Current **Graduate Studies Academic Calendar (GSAC)** page:

<https://uwaterloo.ca/academic-calendar/graduate-studies/catalog#/policy/Sk1pbyzrJe>

Current Calendar copy	Proposed Calendar copy
11.2 Graduate Certificate of Participation In contrast to the Graduate Certificates as identified in section 11.1, a Graduate Certificate of Participation is prepared and awarded by the Department/Faculty to acknowledge participation or completion of one or more courses, seminars or workshops. Awarding of a Graduate Certificate of Participation is not recorded on the official University record and academic transcript. Proposals for Graduate Certificates of Participation require Department and Faculty approval and are normally completed in conjunction with a master's or doctoral program, or non-degree graduate enrolment. All Graduate Certificates of Participation approved by a Department and Faculty must be reported to Senate Graduate Council (SGC) for information.	11.2 Graduate Certificate of Participation In contrast to the Graduate Certificates as identified in section 11.1, a Graduate Certificate of Participation <u>may be</u> prepared and awarded by <u>a</u> Department/<u>School</u>/Faculty to acknowledge participation or completion of one or more courses, seminars or workshops. Awarding of a Graduate Certificate of Participation is not recorded on the official University record and academic transcript. Proposals for Graduate Certificates of Participation require Department/<u>School</u> and Faculty approval and are normally completed in conjunction with a master's or doctoral program, or non-degree graduate enrolment. All Graduate Certificates of Participation approved by a Department/<u>School</u> and Faculty must be reported to Senate Graduate Council (SGC) for information. <u>As an official University document, a Certificate of Participation shall bear the University seal.</u>

6) Section 11.3 Certificate in University Teaching

Description and rationale for proposed changes:

This section is being updated to clarify eligibility, application, and program requirements for the Certificate in University Teaching. The revisions also specify that the certificate must be completed concurrently with a student's doctoral program.

Proposed effective date: Term: Winter Year: 2027

Current **Graduate Studies Academic Calendar (GSAC)** page:

<https://uwaterloo.ca/academic-calendar/graduate-studies/catalog#/policy/r1H9uiyRa>

Current Calendar copy	Proposed Calendar copy
11.3 Certificate in University Teaching The Certificate in University Teaching provides an opportunity for graduate students to develop their teaching skills and is open to doctoral students who are interested in pursuing an academic career. Completion of the required courses will enhance the competitiveness of graduate students in obtaining academic positions. The Certificate is offered jointly by the Centre for Teaching Excellence (CTE) and by the Associate Vice President, Graduate Studies and Postdoctoral Affairs, and is open to interested doctoral students in all Faculties. Students must obtain permission to enter the Certificate and must have completed the Centre for Teaching Excellence's Fundamentals of University Teaching program. Students who participate in the program should have held (or concurrently hold) graduate teaching assistantships, and ideally will have the opportunity, during their time as students, for some classroom teaching. In order to obtain the certificate, students must successfully complete three Graduate Studies (GS) courses (GS 901, GS 902 and GS 903). Students register for the program through Quest, and have one year to complete each course. GS 901 is a pre-requisite for GS 902. Note: These courses	11.3 Certificate in University Teaching The Certificate in University Teaching <u>is open to currently enrolled doctoral students who are interested in pursuing an academic career and provides an opportunity to develop their teaching skills.</u> Completing the required courses will enhance <u>graduate students'</u> competitiveness in obtaining academic positions. <u>The Certificate in University Teaching may only be completed while students are active in their doctoral program.</u> The Certificate is offered jointly by the Centre for Teaching Excellence (CTE) <u>(within the Integrated Teaching Support Unit (ITSU))</u> and by Graduate Studies and Postdoctoral Affairs, and is open to interested doctoral students in all Faculties. Students must obtain permission <u>from CTE, via application to the program,</u> to enter the Certificate and must have completed the Centre for Teaching Excellence's Fundamentals of University Teaching program. Students who participate in the program should have held (or concurrently hold) graduate teaching assistantships, and ideally will have the opportunity, during their time as students, for some classroom teaching. <u>To</u> obtain the certificate, students must successfully complete three Graduate

may only be applied for credit towards the Certificate in University Teaching and may not be counted towards any degree. All work must be deemed acceptable by CTE evaluators in order for students to pass each component. More specific guidelines and requirements for each component of the Certificate are available at the Centre for Teaching Excellence website.	Studies (GS) courses (GS 901, GS 902 and GS 903). Students register for the program through Quest, and have one year to complete each course. GS 901 is a pre-requisite for GS 902. Note: These courses may only be applied for credit towards the Certificate in University Teaching and may not be counted towards any degree <u>program requirements</u>. All work must be deemed acceptable by CTE evaluators in order for students to pass each component. More specific guidelines and requirements for each component of the Certificate are available at the Centre for Teaching Excellence website.
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7) Section 13.2.3 Academic progression: Conditional standing

Description and rationale for proposed changes:

This section is being updated to clarify roles, responsibilities, and decision-making processes related to Conditional Standing. The revisions also provide greater clarity regarding the continuation of financial support (both academic and employment) while a student is on Conditional Standing.

Proposed effective date: Term: Winter Year: 2027

Current **Graduate Studies Academic Calendar (GSAC)** page:

<https://uwaterloo.ca/academic-calendar/graduate-studies/catalog#/policy/SJMPNoPAT>

Current Calendar copy	Proposed Calendar copy
13.2.3 Academic progression: Conditional standing A student with Conditional Standing is at risk of being required to withdraw if substantive improvements in performance are not observed. The student will normally be given one to two terms (at the discretion of the Program Director/Graduate Officer) to complete an articulated set of academic requirements – e.g., completing courses with grades that exceed a minimum threshold; completing satisfactorily outstanding academic milestones; or making substantive progress in the student's research. Students with Conditional Standing will receive written notice of the conditions under which they may continue their studies, as determined by the Graduate Program Committee and the Associate Dean, Graduate Studies. A copy of this decision will be added to the student's internal University record. Students with Conditional Standing will receive financial support consistent with their offer of admission for at least one term. Students who do not return to Good Academic Standing within one term, may continue to receive support at the discretion of the student's Program or Faculty.	13.2.3 Academic progression: Conditional standing A student with Conditional Standing is at risk of being required to withdraw if substantive improvements in performance are not <u>achieved</u>. <u>A student with Conditional Standing</u> will normally be given one to two terms (at the discretion of the Graduate Officer) to complete an articulated set of academic requirements – e.g., completing courses with grades that exceed a minimum threshold; completing satisfactorily outstanding academic milestones; or making substantive progress in the student's research. Students with Conditional Standing will receive written notice <u>from their department/school or program</u> of the conditions under which they may continue their studies, as determined by the Graduate Officer, <u>with input from the supervisor and Advisory Committee (as appropriate)</u> and <u>reviewed by</u> the Associate Dean, Graduate Studies. A copy of this decision will be <u>sent to Graduate Studies and Postdoctoral Affairs to be added</u> to the student's internal University record. Students with Conditional Standing will receive financial support <u>(including both academic financial support and opportunities for employment income)</u> consistent with their

A student who fails to meet the articulated requirements will normally receive a Required to Withdraw decision. Successful completion of the articulated requirements will allow the student to return to Good Academic Standing. A student whose Academic Standing has changed from Good Academic Standing to Conditional Standing or Required to Withdraw may petition or grieve the decision under Policy 70 – Student Petitions and Grievances.	<u>offer of admission in line with the terms of their Conditional Standing</u>. Students who do not return to Good Academic Standing within one term, may continue to receive support at the discretion of the student's Program or Faculty. A student who fails to meet the articulated requirements will normally receive a Required to Withdraw decision. Successful completion of the articulated requirements will allow the student to return to Good Academic Standing. A student whose Academic Standing has changed from Good Academic Standing to Conditional Standing or Required to Withdraw may petition or grieve the decision under Policy 70 – Student Petitions and Grievances.
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8) Section 13.3 Residence requirements

Description and rationale for proposed changes:

This section is being updated to reflect approved exceptions to the standard Master's degree requirement of 3.0 terms. The Master of Digital Experience Innovation (MDEI) requires 2.0 terms, and the Master of Mathematics for Teachers (MMT) requires 2.5 terms, in accordance with their program requirements.

Proposed effective date: Term: Winter Year: 2027

Current **Graduate Studies Academic Calendar (GSAC)** page:

https://uwaterloo.ca/academic-calendar/graduate-studies/catalog#/policy/B1eZ_iDCp

Current Calendar copy		Proposed Calendar copy	
13.3 Residence requirements To receive a University of Waterloo degree, the student must satisfy a residence requirement – a cumulative student term count of enrolment at the University of Waterloo that meets or exceeds minimum values. Mode of study, either on-campus or online, is determined at the time of program approval or through subsequent major modification. A student's time in residence at the University is calculated using the values associated with the student's enrolment status and progression in their program at either the part-time rate (0.5) or full-time rate (1.0). The minimum residence requirements are provided in the table below.		13.3 Residence requirements To receive a University of Waterloo degree, the student must satisfy a residence requirement – a cumulative student term count of enrolment at the University of Waterloo that meets or exceeds minimum values. Mode of study, either on-campus or online, is determined at the time of program approval or through subsequent major modification. A student's time in residence at the University is calculated using the values associated with the student's enrolment status and progression in their program at either the part-time rate (0.5) or full-time rate (1.0). The minimum residence requirements are provided in the table below.	
Master's	PhD	Master's	PhD
- Two terms (2.0) in the Master of Accounting program - Two terms (2.0) in an Accelerated Master's program - Three terms (3.0) from an Honours	- Six terms (6.0) from a Master's degree - Nine terms (9.0) from an Honours Bachelor's degree	Two terms (2.0) in an Accelerated Master's program, the Master of Accounting (MAcc) program, or the Master of Digital Experience Innovation (MDEI) program	- Six terms (6.0) from a Master's degree - Nine terms (9.0) from an Honours Bachelor's degree

Bachelor's degree		• <u>Two and a half terms (2.50) in the Master of Mathematics for Teachers (MMT) program</u> • Three terms (3.0) from an Honours Bachelor's degree	
Residence requirements may be adjusted in exceptional circumstances or when specified by a program or admission pathway. Such adjustments require written approval from the Associate Dean, Graduate Studies in the student's home Faculty, or, for program or pathway design, explicit institutional approval.		Residence requirements may be adjusted in exceptional circumstances or when specified by a program or admission pathway. Such adjustments require written approval from the Associate Dean, Graduate Studies in the student's home Faculty, or, for program or pathway design, explicit institutional approval. <u>Related section: 13.2.5 Academic progression: Program completion time limits</u>	

9) Section 16.1 Courses and assessments: Grades and grading

Description and rationale for proposed changes:

This section is being updated to reflect current practice; providing guidance for AUD courses and clarify processes associated with XTRA course designations.

Proposed effective date: Term: Winter Year: 2027

Current **Graduate Studies Academic Calendar (GSAC)** page:

<https://uwaterloo.ca/academic-calendar/graduate-studies/catalog#/policy/r1abiqwCp>

Current Calendar copy	Proposed Calendar copy																								
16.1 Courses and assessments: Grades and grading Grading scheme Numeric grades on a scale from 0 - 100 are used by all Faculties for courses; averages (overall, program, etc.) are reported on the same 0-100 scale. Students must obtain an average of at least 70% in the set of courses which they present in fulfilment of course requirements for any graduate degree. Some programs may require higher program averages or course grades for graduate degrees. Any course with a numeric grade below 60% will not be counted for credit and is considered a failure. In some programs a higher than 60% grade is required for the course to count towards degree completion. In some instances (e.g., grades granted by the University of Waterloo prior to 2001 or a student seeking transfer credit achieved elsewhere), a student may require a conversion from a letter grade to a numeric percentage. The following conversion scale applies to these cases. <table><tr><th>Letter grade</th><th>Percentage ranges</th><th>Weighting factors for letter grades</th></tr><tr><td>A+</td><td>90-100</td><td>95</td></tr><tr><td>A</td><td>85-89</td><td>89</td></tr><tr><td>A-</td><td>80-84</td><td>83</td></tr></table>	Letter grade	Percentage ranges	Weighting factors for letter grades	A+	90-100	95	A	85-89	89	A-	80-84	83	16.1 Courses and assessments: Grades and grading Grading scheme Numeric grades on a scale from 0 - 100 are used by all Faculties for courses; averages (overall, program, etc.) are reported on the same 0-100 scale. Students must obtain an average of at least 70% in the set of courses which they present in fulfilment of course requirements for any graduate degree. Some programs may require higher program averages or course grades for graduate degrees. Any course with a numeric grade below 60% will not be counted for credit and is considered a failure. In some programs a higher than 60% grade is required for the course to count towards degree completion. In some instances (e.g., grades granted by the University of Waterloo prior to 2001 or a student seeking transfer credit achieved elsewhere), a student may require a conversion from a letter grade to a numeric percentage. The following conversion scale applies to these cases. <table><tr><th>Letter grade</th><th>Percentage ranges</th><th>Weighting factors for letter grades</th></tr><tr><td>A+</td><td>90-100</td><td>95</td></tr><tr><td>A</td><td>85-89</td><td>89</td></tr><tr><td>A-</td><td>80-84</td><td>83</td></tr></table>	Letter grade	Percentage ranges	Weighting factors for letter grades	A+	90-100	95	A	85-89	89	A-	80-84	83
Letter grade	Percentage ranges	Weighting factors for letter grades																							
A+	90-100	95																							
A	85-89	89																							
A-	80-84	83																							
Letter grade	Percentage ranges	Weighting factors for letter grades																							
A+	90-100	95																							
A	85-89	89																							
A-	80-84	83																							

B+	77-79	78
B	73-76	75
B-	70-72	72
C+	67-69	68
C	63-66	65
C-	60-62	62
F	0-59	0

Note, for admissions purposes, an applicant's previous average will be calculated using the values articulated by the home university on the student's transcript.

Non-numeric grades/grade status

Designation	Description
ACC	Accepted (thesis)
AEG [1]	Aegrotat, credit granted due to illness or extenuating circumstances
AUD	Audit only, no credit granted
CR [2]	Credit granted
DNW	Did not write examination, no credit granted (value 0)
FTC	Failure to complete course requirements in a course with a grade of INC, no credit granted (value 0)
INC [3]	Course requirements not complete, no credit granted, not in average
NAC	Not Accepted (thesis)
NCR [2]	No credit granted
NMR	No mark reported, no credit granted (value 0)
UR	Under review, no credit granted
WD	Withdrawn, no credit granted
XTRA [4]	Extra course, not counted towards program average or degree requirements

1AEG: The aegrotat designation signifies the granting of credit for a course when some coursework has been completed but no further assessment is possible because of illness or other extenuating circumstances. The aegrotat designation is used only in exceptional circumstances and must be

B+	77-79	78
B	73-76	75
B-	70-72	72
C+	67-69	68
C	63-66	65
C-	60-62	62
F	0-59	0

Note, for admissions purposes, an applicant's previous average will be calculated using the values articulated by the home university on the student's transcript.

Non-numeric grades/grade status

Designation	Description
ACC	Accepted (thesis)
AEG [1]	Aegrotat, credit granted due to illness or extenuating circumstances
AUD [2]	Audit only, no credit granted
CR [3]	Credit granted
DNW	Did not write examination, no credit granted (value 0)
FTC	Failure to complete course requirements in a course with a grade of INC, no credit granted (value 0)
INC [4]	Course requirements not complete, no credit granted, not in average
NAC	Not Accepted (thesis)
NCR [3]	No credit granted
NMR	No mark reported, no credit granted (value 0)
UR	Under review, no credit granted
WD	Withdrawn, no credit granted
XTRA [5]	Extra course, not counted towards program average or degree requirements

1AEG: The aegrotat designation signifies the granting of credit for a course when some coursework has been completed but no further assessment is possible because of illness or other extenuating circumstances. The aegrotat designation is used only in exceptional circumstances and must be

approved by the Faculty Associate Dean, Graduate Studies. 2CR/NCR: Departments may offer, for graduate credit, courses that carry no grades, and satisfactory work in such courses will be indicated on the transcript by CR. CR/NCR courses are so designated in the calendar. CR/NCR grades are not calculated in a student average. No degree candidate can fulfil more than half of the minimum department course requirements by courses of this type. 3INC (Incomplete): In exceptional circumstances, an instructor may grant a student an INC interim grade – reflecting an extension for the student to complete specific outstanding course element(s). If the circumstance is related to a documented accommodation, students are encouraged to connect with AccessAbility Services. The instructor will determine completion dates for outstanding course element(s). 4XTRA: Students who wish to enrol in courses that are not required and are not to be used in satisfying degree requirements, may have that course designated as XTRA such that marks earned in that course will not be calculated in the student's overall or program averages. A student must seek approval for a course to be designated as XTRA. In some cases, students may be enrolled in administrative courses (e.g., "GS – Continuing Graduate Studies" and "GS 999 Continuing Degree Requirement") to demonstrate the student's enrolment, which are not graded and do not carry any credit weight. Graduate students enrolled in undergraduate courses If a graduate student takes an undergraduate course for graduate credit the above grading scheme will apply. Undergraduate courses taken for graduate credit or to satisfy admissions requirements for a graduate program are subject to the same regulations as graduate courses.	approved by the Faculty Associate Dean, Graduate Studies. <u>2AUD: Courses taken for audit cannot be later taken for credit. Audited courses do not count towards a student's degree program requirements. Audited courses are included on transcripts with a grade of AUD (audit) in place of a numerical grade.</u> 3CR/NCR: Departments may offer, for graduate credit, courses that carry no grades. <u>Satisfactory</u> work in such courses will be indicated on the transcript by CR. CR/NCR courses are so designated in the calendar. CR/NCR grades are not calculated in a student average. No degree candidate can fulfil more than half of the minimum <u>department/school/program</u> course requirements by courses of this type. 4INC (Incomplete): In exceptional circumstances, an instructor may grant a student an INC interim grade – reflecting an extension for the student to complete specific outstanding course element(s). If the circumstance is related to a documented accommodation, students are encouraged to connect with AccessAbility Services. The instructor will determine completion dates for outstanding course element(s). 5XTRA: Students who wish to enrol in courses that are not required and are not to be used in satisfying degree requirements, may have <u>such</u> courses designated as XTRA such that marks earned in that course will not be calculated in the student's overall or program averages. A student must seek approval <u>via submission and approval of a Graduate Studies course drop/add form</u>, for a course to be designated as XTRA. In some cases, students may be enrolled in administrative courses (e.g., "GS – Continuing Graduate Studies" and "GS 999 Continuing Degree Requirement") to demonstrate the student's enrolment. <u>These</u> are not graded and do not carry any credit weight. Graduate students enrolled in undergraduate courses
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Grade submission

Instructors must submit final grades to Graduate Studies and Postdoctoral Affairs (GSPA) by the grade submission deadline of the term in which the course was given. Interim grades other than INC may not be assigned.

Conversion of incompletes

An incomplete grade status (INC) submitted by an instructor may remain on a student's academic record for at most two terms of enrolment following the term in which the course was taken. If a grade has not been submitted by the end of the second term and an extension has not been granted, the INC will automatically convert to a failure to complete (FTC).

For average calculation, FTC value equals 0. An FTC status may be reverted to an INC on the academic record only if a petition from the student is approved by the Department and Faculty.

If a graduate student takes an undergraduate course for graduate credit the above grading scheme will apply. Undergraduate courses taken for graduate credit or to satisfy admissions requirements for a graduate program are subject to the same regulations as graduate courses.

Grade submission

Instructors must submit final grades to Graduate Studies and Postdoctoral Affairs (GSPA) by the grade submission deadline of the term in which the course was given. Interim grades other than INC may not be assigned.

Conversion of incompletes

An incomplete grade status (INC) submitted by an instructor may remain on a student's academic record for at most two terms of enrolment following the term in which the course was taken. If a grade has not been submitted by the end of the second term and an extension has not been granted, the INC will automatically convert to a failure to complete (FTC).

For average calculation, FTC value equals 0. An FTC status may be reverted to an INC on the academic record only if a petition from the student is approved by the Department and Faculty.

September 1, 2026

TO: Ashley Day, Associate University Secretary
Tony Kongly, Governance Officer

FROM: Heidi Mussar, Associate Director, Graduate Financial Aid & Awards

RE: Agenda items for Senate Graduate Council – September 2026

Awards for Consent

a) Anita B. Taylor Bursary – endowment

A bursary, valued at approximately \$1,500, will be awarded annually to a full-time undergraduate or graduate student enrolled in any program in the Faculty of Environment. Preference will be given to undergraduate students enrolled in the Geography and Aviation program and to graduate students enrolled in any program in the Department of Geography and Environmental Management. Candidates must have a minimum cumulative average of 70% and be Canadian citizens or permanent residents. Selection will be based on demonstrated financial need as determined by Waterloo. To be considered, students must complete the University of Waterloo Bursary application during the Fall term. This fund is made possible by a donation from Anita Barbara Taylor.

b) ECE MEng Program Entrance Award – operating

The Electrical and Computer Engineering Department will provide this award to exceptional MEng students entering their first term of the ECE MEng program in Fall 2026.

Entrance scholarships valued at \$2,500 each will be provided as a one-time lump sum payment during the student's first registered academic term. The department will identify candidates during the admission process for consideration of these awards.

This is expected to be a one-time award and, as such, will not be added to a public awards directly.

c) Norman Esch Entrepreneurial PhD Awards – endowment (and bridge funding in 2026)

Scholarships with a value of at least \$10,000 will be awarded annually to graduate students registered in a doctoral program in the Faculty of Engineering or Science. Students must be participating in the [Academy of Research and Commercialization \(ARC\) program](#) and pursuing the commercialization of their deep tech research ventures. Eligible candidates will be those who complete the ARC programming and move on to participate in the pitch competition. Preference will be given to students interested in building and commercializing their ideas in Canada. Selection will be made in the Spring term by a judging panel based on the quality of the pitch and the students engagement in the ARC programming. This fund is made possible by a donation from The Esch Foundation.

d) Dalia and Sally Ghazi Ibaid Graduate Scholarship – operating

Scholarships, valued at up to \$20,000 per year for up to four years, will be awarded annually to graduate students admitted to and registered full time in a doctoral program in the Cheriton School of Computer Science at the University of Waterloo. Eligible students will be those whose lives or studies have been disrupted by conflict or war in a war/conflict-affected country in

which they resided. Selection will be based on academic achievement and research accomplishments and potential as demonstrated in their application for admission. A committee in the School of Computer Science will select recipients annually based on the application for admission to the program.

e) Sponsored Master's Award Program [S-MAP Course-Based + S-MAP Research] – operating

Funded through scholarship operating budget in Graduate Studies and Postdoctoral Affairs (GSPA), this initiative is being established as a 3-year pilot with support from Graduate Operations. The impetus for creating this award is that based on research conducted in 2026, it was found that peer institutions offer incentives for sponsored master's students including: tuition discounts, domestic tuition rates, or entrance awards of up to \$20,000. In order to remain competitive amongst our peer institutes and attractive to sponsorship agencies (e.g., Colfuturo, FUNED, SENCIHTI, ANID, SENACYT), it would be beneficial to have an institutional incentive for sponsored master's students joining Waterloo.

International students who are admitted to and registered full time in any course-based or research-based master's program, as of fall 2026 or thereafter, will be automatically considered for this award. Students must be admitted full time to a master's program under a signed international sponsorship agreement for the duration of their academic program. Students in a course-based program will receive an award of up to \$10,000; research-based master's students will receive an annual award of up to \$12,500 as part of an annual minimum funding package of \$19,500. Selection will be based on academic achievement and research potential, as determined through assessment for admission.

Annual budget = \$500,000 (50:50 course-based and research-based)

Awards for Information

f) J. Alan George Student Leadership Award – endowment

This award, established in 1997, was tied to the former Provost Women's Incentive Fund Scholarship (later renamed to the Provost Doctoral Entrance Award for Women or "PDEAW"). As of May 1, 2026 the PDEAW was replaced with the Provost's Distinguished Inclusivity Doctoral Entrance Award (PD-IDEA), a program that aims to remove barriers and support the participation of students from equity-deserving groups that have been historically underrepresented.

Going forward, the J. Alan George Student Leadership Award will be awarded based on the following criteria:

- Graduate students registered full time within their first year of doctoral studies at the University of Waterloo
- Students must be within three terms of first receiving the Provost's Distinguished Inclusivity Doctoral Entrance Award
- Students must demonstrate outstanding leadership

The updated award description will be as follows:

The J. Alan George Student Leadership Award is awarded to a graduate student who demonstrates outstanding leadership. Eligible students must be registered full time in the first year of their doctoral program at the University of Waterloo and must have received the Provost's Distinguished Inclusivity Doctoral Entrance Award (PD-IDEA). Graduate Studies and Postdoctoral Affairs will select a recipient annually.

g) Norman Esch Graduate Scholarship – endowment

Originally established in 2013, this award has been renewed several times, the last of which was in 2024. The award is once again being renewed through an endowment. The expendable should allow for two awards annually, each valued at \$20,000 instead of three awards at \$10,000 each. No changes to the criteria have been made.

h) Sharon Lamont Student Award – trust

Originally established in 2021 to offer two awards at \$1,000 each up to 2026. The award is being renewed but changing to one award at \$2,000 annually up to 2031. The rest of the criteria remain the same.

i) Barry Goodison Graduate Scholarship for Cryospheric Research – endowment/trust

Originally established in 2021 to provide at least one award of \$5,000 annually to graduate students registered full time in any year in the Faculty of Environment who were conducting cryospheric research or research in which cryosphere is a significant factor. This is an endowed award with awards being funded on an interim basis out of a trust while the endowment grows. The agreement is being amended to update the total gift amount and related schedule, to continue supporting both the endowment and trust; additionally, the award eligibility and selection criteria have been updated to expand the eligible pool of candidates for long-term success and flexibility. Eligible students are now able to be from any Faculty (not just the Faculty of Environment) and be conducting research in cryospheric science, or scientific studies in water or climate in which cryosphere is a significant factor; preference will be given to graduate students who are supervised by a faculty member in the cryospheric science group in the Faculty of Environment specializing in cryospheric science, water or climate.

For Approval**Open Session**

To: Senate Graduate Council

From: Justin Wan
Associate Vice-President, Graduate Studies
and Postdoctoral Affairs

Date of Meeting: September 15, 2026

Agenda Item: **7. AQuE Membership**

Summary

The Academic Quality Enhancement Committee require three faculty members, drawn from either the ex-officio or elected/appointed members of the Graduate and Research Council of Senate, who shall serve for a term of two years, appointed on the recommendation of the Graduate and Research Council.

Documentation Provided

[AQuE Terms of Reference](#)

Academic Quality Enhancement Committee

The Academic Quality Enhancement Committee is responsible for overseeing the University's Institutional Quality Assurance Process (IQAP), including reviewing and approving quality assurance reports and enhancements on behalf of Senate, and reporting its decisions and deliberations to Senate for information or further consideration where necessary.

The Secretary for the Academic Quality Enhancement Committee is Tony Kongly.

Membership 2026-2027

Ex-Officio

Name	Membership/Title
Martin Cooke [Co-chair]	Associate Vice-President, Academic
Justin Wan [Co-chair]	Associate Vice-President, Graduate Studies and Postdoctoral Affairs

Elected - Faculty

Name	Membership/Title
Vacant	Faculty, Graduate Council
Vacant	Faculty, Graduate Council
Vacant	Faculty, Undergraduate Council
Vacant	Faculty, Graduate Council
Vacant	Faculty, Undergraduate Council
Vacant	Faculty, Undergraduate Council

Elected - Students

Name	Membership/Title
Meray Sadek	Graduate Student
Vacant	Undergraduate Student

Terms of Reference

The Academic Quality Enhancement Committee shall have the following powers and duties:

1. To consider, study, and review all matters pertaining to the University's Institutional Quality Assurance Process (IQAP), and make recommendations to Senate, thereon. In the case of editorial changes to the IQAP, consider and approve such changes on behalf of Senate, and report to Senate for information.
2. On behalf of Senate, consider and approve all Final Assessment Reports and Progress Reports within the University's IQAP, and provide Senate with a summary of the committee's deliberations in this regard. Any matter of controversy that might arise may be referred to Senate.
3. On behalf of Senate, consider and approve any aspects of the quality enhancement processes that fall outside the remit of the IQAP, and provide Senate with a summary of the committee's deliberations in this regard. Any matter of controversy that might arise may be referred to Senate.

The membership of this committee shall consist of the following:

- The associate vice-president, academic, who shall co-chair this committee.
- The associate vice-president, graduate studies and postdoctoral affairs, who shall co-chair this committee.
- Three faculty members, drawn from either the ex-officio or elected/appointed members of the Undergraduate Council of Senate, who shall serve for a term of two years, appointed on the recommendation of the Undergraduate Council.
- Three faculty members, drawn from either the ex-officio or elected/appointed members of the Graduate & Research Council of Senate, who shall serve for a term of two years, appointed on the recommendation of the Graduate & Research Council.
- Two members of Senate from the elected student members, one of whom shall be an undergraduate student and one of whom shall be a graduate student.

Approved by Senate on May 6, 2024

For Information**Open Session**

To: Senate Graduate Council
From: Mark Weber
Founding Executive Director, Waterloo Business
Date of Meeting: September 15, 2026
Agenda Item: **8. Waterloo Business**

Summary

Mark Weber, Founding Executive Director, Waterloo Business, will provide an update on business programs and courses.

Documentation Provided

N/A

For Approval**Open Session**

To: Senate Graduate Council

From: Bradley Pomeroy
Associate Dean, Graduate Studies

Date of Meeting: September 15, 2026

Agenda Item: **9.1. Graduate Diploma in Accounting**

Recommendation/Motion

To recommend that Senate approve the Graduate Diploma in Accounting program for the Faculty of Arts, effective May 1, 2027, as presented.

Summary

The proposed program is a Type 3/direct-entry Graduate Diploma (GDip) in Accounting. It is a professional, course-based graduate credential designed to provide a direct pathway to the Chartered Professional Accountant (CPA) designation while developing strong technical and applied accounting competencies. The academic discipline is Accounting, with emphasis on financial reporting, assurance, taxation, performance management, and professional judgment.

The GDip in Accounting is structured as a full-time, one-term program consisting of five graduate-level courses. It is designed primarily as a professional program with strong elements of applied research and critical analysis embedded throughout the curriculum. Students complete coursework-only, with no thesis requirement. Experiential learning is integrated through case-based instruction, applied projects, simulations, and professional skill development, preparing students for Chartered Professional Accountant (CPA) examinations and workplace practice.

The program is offered in a regular, non-co-op format. Delivery is in-person, with planned use of blended and technology-enabled learning approaches to support flexibility, engagement, and innovative pedagogy.

The program's objectives are to develop deep conceptual understanding of core accounting and tax principles, strengthen analytical and research-informed problem solving, and cultivate professional judgment and ethical reasoning. Through an integrated curriculum that connects theory with application, students learn to interpret complex standards, evaluate alternative approaches, and communicate well-supported conclusions and recommendations.

Proposal/Rationale

The GDip in Accounting responds to strong and sustained demand for accelerated CPA pathway programs that combine rigorous technical training with applied professional learning. The curriculum is intentionally designed to emphasize experiential learning, ethical reasoning, professional judgment, and technology-enabled practice, aligning with evolving expectations of the accounting profession.

The program supports institutional priorities related to student access and pathway flexibility, offering an efficient graduate-level credential for students seeking professional accounting careers. It also contributes to equity and inclusion goals by broadening entry routes into the profession and providing structured academic and student-support frameworks to promote persistence and success.

Recent changes in the CPA profession and evolving expectations for entry into the designation have created strong demand for flexible, accelerated academic pathways that meet CPA preparatory requirements while accommodating diverse student goals and circumstances. A short, diploma-type graduate option responds directly to this shift by providing an efficient, professionally focused route for students who choose not to pursue a full master's degree immediately after undergraduate studies, as well as for those seeking a shorter, cost-effective academic credential to meet entry as a CPA. By expanding Waterloo's academic options to include a GDip in Accounting addition to our Master of Accounting program, it increases student choice in academic planning, reduces barriers to participation, and introduces a flexible alternative that is well-positioned to attract and retain a broader pool of high-potential accounting students. This added flexibility strengthens our academic offerings in the discipline of Accounting, supports sustained enrolment growth and increases our leadership position in the professional accounting education market in Ontario.

Jurisdictional Information

As outlined in the council's [Terms and Reference](#), Senate Graduate Council is empowered to make approvals on behalf of Senate for a variety of matters:

- Consider, study and review all proposals for new graduate programs, the deletion of graduate programs, and/or major modifications to existing graduate programs, and make recommendations to Senate thereon.

Governance Path

Faculty of Arts: May 21, 2026

Senate Graduate Council: September 15, 2026

Senate: October 5, 2026

Documentation Provided

New Program Proposal of Graduate Diploma (GDip) in Accounting (Type 3) - Volume I - Proposed Brief

UNIVERSITY OF WATERLOO



NEW PROGRAM PROPOSAL OF GRADUATE DIPLOMA (GDIP) IN ACCOUNTING (TYPE 3)

Submitted to the
Ontario Universities Council on Quality Assurance

VOLUME I - PROPOSED BRIEF

September 2026

Completed by AQuE Office

Proposed Start Date:

May 2027

*(subject to change by the AQuE Office
depending on meeting approval
milestones below)*

- QC submission by ..xx..
- QC approval by ..xx..
- MCU approval by ..xx..

Approved Start Date:

xxx

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Quick Reference Information	
(PLEASE COMPLETE)	
Where will this program be housed?	<i>School of Accounting and Finance</i>
What is the proposed start date?	<i>May 1, 2027</i>
Will you be requiring a new subject code?	☐ Yes ☒ No
Will you need to develop new online courses?	☐ Yes ☒ No

1. INTRODUCTION

The proposed program is a Graduate Diploma (GDip) in Accounting. It is a professional, course-based graduate credential designed to provide a direct pathway to the Chartered Professional Accountant (CPA) designation while developing strong technical and applied accounting competencies. The academic discipline is Accounting, with emphasis on financial reporting, assurance, taxation, performance management, and professional judgment.

The GDip is structured as a full-time, one-term program consisting of five graduate-level courses. It is designed primarily as a professional program with strong elements of applied research and critical analysis embedded throughout the curriculum. Students complete coursework-only, with no thesis requirement. Experiential learning is integrated through case-based instruction, applied projects, simulations, and professional skill development, preparing students for Chartered Professional Accountant (CPA) examinations and workplace practice.

The program is offered in a regular, non-co-op format. Delivery is in-person, with planned use of blended and technology-enabled learning approaches to support flexibility, engagement, and innovative pedagogy. The program will initially be launched as a one-term full-time only study pathway. However, students may request program director approval to transition to part-time status on an as-needed basis. As demand grows and sufficient interest in a part-time pathway emerges, this option, alongside the full-time format, will be advertised and made available to all students.

The expected program length is one academic term (approximately four months). The anticipated tuition aligns with comparable graduate professional programs in accounting, with separate domestic and international fee structures, and will be finalized through institutional approval processes.

The proposed program is expected to launch with its first student intake in Spring 2027. Similar to the Master of Accounting program, the GDip will be taught in both Waterloo and Toronto campus locations.

Additional Context and Distinctive Features

The GDip responds to strong and sustained demand for accelerated CPA pathway programs that combine rigorous technical training with applied professional learning. The curriculum is intentionally designed to emphasize experiential learning, ethical reasoning, professional judgment, and technology-enabled practice, aligning with evolving expectations of the accounting profession.

The program supports institutional priorities related to student access and pathway flexibility, offering an efficient graduate-level credential for students seeking professional accounting careers. It also contributes to equity and inclusion goals by broadening entry routes into the profession and providing structured academic and student-support frameworks to promote persistence and success.

Recent changes in the CPA profession and evolving expectations for entry into the designation have created strong demand for flexible, accelerated academic pathways that meet CPA preparatory requirements while accommodating diverse student goals and circumstances. A short, diploma-type graduate option responds directly to this shift by providing an efficient, professionally focused route for students who choose not to pursue a full master's degree immediately after undergraduate studies, as well as for those seeking a shorter, cost-effective academic credential to meet entry as a CPA. By expanding Waterloo's academic options to include a GDip in addition to our Master of Accounting, it increases student choice in academic planning, reduces barriers to participation, and introduces a flexible alternative that is well-positioned to attract and retain a broader pool of high-potential accounting students. This added flexibility strengthens our academic offerings in the discipline of Accounting, supports sustained enrolment growth and increases our leadership position in the professional accounting education market in Ontario.

2. EVALUATION CRITERIA

2.1 Objectives of the program (QAF 2.1.2.1)

The Graduate Diploma in Accounting is designed to provide a rigorous academic and professionally oriented pathway for students pursuing advanced study in accounting, taxation, and business decision-making. The program's objectives are to develop deep conceptual understanding of core accounting and tax principles, strengthen analytical and research-informed problem solving, and cultivate professional judgment and ethical reasoning. Through an integrated curriculum that connects theory with application, students learn to interpret complex standards, evaluate alternative approaches, and communicate well-supported conclusions and recommendations. By offering a shorter, intensive graduate-level option, the program expands access to advanced academic study in accounting while preparing students for further professional and academic pathways, including progression toward a CPA designation and future graduate education.

The Graduate Diploma in Accounting aligns closely with the University of Waterloo's mission to advance learning and knowledge through high-quality teaching, research, and scholarship in a diverse and inquiry-driven environment. By offering a rigorous graduate-level curriculum that combines deep conceptual understanding with applied and experiential learning including the use of artificial intelligence and data analytics, the GDip supports Waterloo's strategic priority to educate students for a complex, rapidly changing world and to create flexible, learner-centred pathways that develop critical thinking, strong communication skills and professional competence. This program also strengthens graduate education by expanding options for flexible, interdisciplinary study and lifelong learning, consistent with Waterloo's goals to empower students with diverse learning experiences and to foster enriched academic and career pathways for global impact.

2.2 Program Requirements (QAF 2.1.2.2)

Designed as a five-course program, delivered over a single term, the Graduate Diploma in Accounting provides an intensive post-undergraduate academic and professional learning experience for students seeking advanced study in accounting and taxation within a condensed timeframe. The program offers a flexible pathway for individuals who wish to pursue graduate-level education without committing to a longer master's program, while still engaging in rigorous, conceptually grounded, and application-focused coursework. The program will be offered primarily on a full-time basis, allowing students to complete the five-course curriculum within a single term. However, a part-time option can also be available upon request for students who need to distribute their coursework over multiple terms. This flexibility allows students to tailor the pace of their progression through the program while maintaining the academic integrity and coherence of the curriculum.

Building on prior undergraduate preparation, the program is designed to deepen technical expertise and expand technological skills, strengthen integrative and case-based analysis, and cultivate the professional judgment, ethical reasoning, and professional communication skills expected of aspiring business leaders and those pursuing a CPA designation.

The GDip curriculum comprises an integrated sequence of graduate-level courses that build from foundational conceptual frameworks in accounting, assurance, taxation, and business decision-making to advanced applications requiring analysis, interpretation, integration and professional judgment. Course sequencing and assessment strategies emphasize the connection between theory and practice, enabling students to synthesize knowledge across disciplines, evaluate complex and ambiguous problems, and communicate well-reasoned conclusions. This in-person structure ensures that students not only acquire technical competence, but also develop the critical thinking, ethical reasoning, and research-informed inquiry skills that define advanced academic study in the discipline.

The program's structure, learning outcomes, and assessment approaches are aligned with the University's Graduate Degree Level Expectations by fostering depth and breadth of knowledge, analytical and problem-solving capacity, autonomy in learning, and effective professional communication. The proposed in-person, intensive mode of delivery supports active learning through case-based instruction, collaborative problem-solving, and applied projects that reinforce student engagement and timely feedback. The curriculum is designed to reflect the current state of the accounting, assurance, and taxation disciplines, incorporating evolving professional standards, emerging technologies, regulatory developments, and contemporary issues shaping business practice. As a result, graduates are equipped with academically grounded, future-oriented expertise that prepares them to advance along the CPA professional pathway toward designation while also positioning them for further graduate study and for leadership roles in professional and organizational contexts.

2.3 Program Requirements for graduate programs only (QAF 2.1.2.3)

The five-course, single-term structure of the Graduate Diploma in Accounting is intentionally designed to ensure students can achieve all program-level learning outcomes within the proposed timeframe. The curriculum focuses on carefully selected core areas of accounting, assurance, taxation, and business decision-making that provide depth in essential disciplinary knowledge and application of that knowledge while avoiding unnecessary duplication with prior undergraduate preparation. Students will be required to complete the following courses:

- ACC 631 Assurance and Trust
- ACC 632 Corporate Reporting
- ACC 633 Taxation
- ACC 636 Management Decision-Making
- ACC 637 Professional Leadership

Courses are sequenced and delivered in an intensive format that promotes sustained engagement, frequent assessment, and timely feedback, enabling students to progressively build and demonstrate advanced analytical, technical, and professional competencies. This concentrated design allows students to complete rigorous graduate-level study efficiently while maintaining academic quality, coherence across courses, and full alignment with program objectives and graduate degree-level expectations.

The GDip is intentionally designed to align closely with the existing Master of Accounting (MAcc) program to ensure academic rigor, curricular coherence, and efficient use of institutional resources. Three of the five GDip courses are shared with the MAcc curriculum, ensuring that students engage with the same graduate-level content, learning activities, and assessment standards as master's students. This commonality reinforces the depth and quality of the academic experience, supports consistency in program-level learning outcomes across related credentials, and provides a seamless pathway for students who may later choose to pursue further graduate study. At the same time, the GDip's focused structure allows students to complete a concentrated program of study while benefiting from an established, high-quality graduate teaching and learning environment.

The course sequence consists entirely of new master's-level courses designed to align directly with the diploma's required learning outcomes. Three of these courses are shared with the MAcc program, while two are unique to the GDip. The shared courses are currently undergoing approval through the MAcc major program modification process; however, they are also included in this document to present a complete and integrated view of the overall curriculum structure. Detailed course descriptions and structural information are provided in Appendix B of the brief.

As there are three shared courses with the MAcc program, the GDip will follow a common instructional and assessment approach, ensuring consistency in academic standards, learning activities and evaluation methods across both credentials.

Across courses, students complete case-based analyses, applied problem sets, research-informed written assignments, presentations, and integrative final assessments that require synthesis of knowledge, critical evaluation of alternatives, and clear professional communication of their analyses, conclusions and recommendations. These assessment methods are appropriate at the graduate level as they emphasize analytical depth, independent judgment, and evidence-based reasoning, while providing multiple opportunities for feedback and demonstration of progressive mastery of program outcomes.

The GDip will employ multiple, complementary methods to assess student achievement of program-level learning outcomes and to evaluate overall program effectiveness. These measures combine direct assessment of student work with systematic collection of feedback from students, faculty, alumni, and employers as well as results from CPA professional exams written by program graduates. Data will be gathered on a regular cycle using established institutional survey tools and program-specific instruments, enabling continuous monitoring of learning quality, student experience, and student outcomes. Findings will inform ongoing curriculum refinement, teaching innovation, and strategic program improvements.

Examples of tools the program will utilize include:

1. Assessment of student deliverables: Direct evaluation of course-based assignments, case analyses, examinations, presentations, and integrative assessments using standardized grading rubrics aligned with program-level learning outcomes (each term).
2. Current student surveys: End-of-course and end-of-program surveys administered through institutional survey platforms to gather feedback on course quality, workload, learning experience, and achievement of learning outcomes (each term).
3. Faculty surveys: Structured surveys and reflective teaching reports collecting faculty feedback on course delivery, student performance, and curriculum alignment (annually).
4. Exit surveys: Program completion surveys gathering student reflections on learning outcomes achievement, program coherence, and overall experience (each term/program completion).
5. Alumni surveys: Follow-up surveys assessing graduate satisfaction, perceived relevance of learning, and further academic or professional progression (every 1–3 years).
6. Employer surveys: Periodic surveys and targeted consultations with employers to assess GDip graduate preparedness, professional competence, and perceived program quality (every 2 years).
7. Tracking of graduate outcomes: Collection of data on employment, CPA exam pass rates and profession progression, career advancement, and professional achievements through alumni relations and institutional data systems (ongoing, reviewed annually).
8. Formal program review: Cyclical program evaluation conducted under the University's IQAP processes, incorporating internal and external review and action planning for continuous improvement (as scheduled by institutional policy).

2.4 Admission Requirements (QAF 2.1.2.5)

Admission to the GDip program will parallel the MAcc program admission requirements as follows:

- Successful completion of a four-year Honour's Bachelor's degree, or equivalent, with at least a 75% average across all courses taken.
- Completion of the following set of courses, or their equivalent which includes completion of CPA Ontario's Knowledge Assessment, with a grade of at least 60% in each course and with at least a 70% average across these courses, calculated using the maximum grade in a course in the case of repeated courses:
 1. Intermediate Financial Reporting 1
 2. Intermediate Financial Reporting 2
 3. Advanced Financial Reporting
 4. Principles of Finance
 5. Intermediate Management Accounting
 6. Taxation
 7. Audit and Assurance
- English language proficiency (ELP), if applicable.

Admit terms: Fall, Winter, and Spring

Application materials:

- Statement of interest
- Transcripts

References:

- Number of references: 2
- Type of references: academic

Other notes:

Students enrolled in the GDip may apply to transfer into the MAcc program, and MAcc students may similarly apply to transfer into the GDip, subject to applicable program regulations.

2.5 Resources (QAF 2.1.2.6)

Faculty teaching in the GDip program will be of comparable caliber and hold similar professional credentials to those currently teaching in the MAcc program. Instructional resources will be drawn from our existing complement of full-time faculty and adjunct instructors, with the proportion of full-time faculty relative to adjunct instructors expected to range from approximately 60 to 70 percent.

The School of Accounting and Finance currently has 59 full-time faculty, comprised of 25 research faculty and 29 teaching stream.

Currently, approximately 20 to 25 percent of our 59 full-time faculty currently teach in the MAcc program, providing a rich blend of academic expertise and professional experience. Of those teaching in the program, roughly 75 percent are full-time faculty members. Within this group, approximately 15 to 20 percent are tenured faculty, 40 to 50 percent are permanent

teaching-stream faculty, and about 30 percent are teaching-stream faculty on the permanence track. This composition reflects a strong and stable instructional base that combines experienced tenured faculty, established teaching-stream faculty, and emerging educators progressing toward permanent appointments.

The academic credentials of faculty teaching in the MAcc program further demonstrate the strength of the instructional team. Approximately 15 to 20 percent hold PhD degrees, while the remaining faculty hold master's degrees, often a Master of Accounting or a closely related professional graduate degree.

Our current complement of adjunct instructors brings, at a minimum, a master's-level degree combined with relevant professional experience, enriching the classroom learning environment. This group represents a stable and long-standing component of our instructional team, with many adjunct instructors teaching very regularly in the program and often assuming responsibility for multiple sections or courses. Their sustained engagement provides continuity in instruction while maintaining strong connections between professional practice and the classroom. In many cases, adjunct instructors also contribute expertise drawn from specialized or emerging areas of professional practice, further broadening the range of perspectives and applied knowledge available to students.

Our extensive alumni population will be a valuable complement to our full-time faculty teaching in both the Waterloo and Toronto locations. As one of the province's most highly concentrated employment centres, Toronto provides access to a deep pool of highly qualified professionals. Many of our alumni already maintain strong connections to our programs through grading, outreach, and serving as course assistants, both currently and in the past. Leveraging this large and engaged alumni community will allow us to draw from a rich provincial talent market, further strengthening instructional capacity, enhancing student support, and enriching overall program delivery.

The GDip will fall within the oversight purview of the Co-Directors of the Master's programs, who are responsible for direct oversight and continuous assessment of program learning outcomes. The School of Accounting and Finance (SAF) Administrative Officer oversees the allocation and management of physical and administrative resources to support program delivery.

The program will leverage existing institutional infrastructure. The Waterloo location provides full access to University of Waterloo services and supports, while the Toronto location, currently home to the Master of Taxation program, will also support delivery and accessibility of the GDip for students in the GTA. Ample classroom and office space is available at both sites, supported by strong and reliable IT services to ensure effective program delivery.

To support program expansion and increased operational demands, one new administrative position will be introduced. This role will strengthen scheduling coordination, streamline program administration, and enhance the student interface, ensuring efficient program delivery and a high-quality student experience as enrolment grows.

2.6 Resources for graduate programs only (QAF 2.1.2.7)

The proposed GDip is a course-based program and does not rely directly on research supervision to meet its learning objectives. However, the intellectual quality of the program is strengthened by the broader academic environment of the School of Accounting and Finance. SAF benefits from a complementary combination of research-active faculty who contribute to advancing knowledge in accounting and finance, and teaching-focused faculty who bring significant professional expertise and leadership in curriculum development and student learning. Together, this blend of scholarly strength and teaching excellence creates a rich academic environment that supports high-quality instruction and an intellectually rigorous student experience.

2.7 Quality and other indicators (QAF 2.1.2.8)

The Graduate Diploma (GDip) will be supported by the same highly qualified faculty who contribute to the School of Accounting and Finance's established graduate accounting programs. The instructional team includes faculty with expertise across assurance, financial reporting, managerial accounting, taxation, governance, and accounting analytics. Faculty members hold advanced graduate degrees and professional accounting designations, including Chartered Professional Accountant (CPA) credentials, and many bring significant professional experience from leading global accounting and advisory firms. Several faculty members have held roles in public accounting, audit, assurance, and financial advisory prior to entering academia, ensuring that students benefit from instruction that integrates rigorous academic foundations with current professional practice.

Faculty contributing to the program are actively engaged in scholarly activity and pedagogical innovation that strengthens the intellectual environment of SAF's graduate programs. Their research and scholarly work address areas such as auditing judgment and decision-making, financial reporting, governance, accounting ethics, and the use of data analytics and emerging technologies in assurance and financial reporting. Faculty members regularly publish in peer-reviewed journals, contribute to professional research initiatives, and participate in national and international academic communities. In addition to their research contributions, faculty play a central role in curriculum design and the development of innovative courses that reflect evolving professional standards and the changing demands of the accounting profession.

The instructional team also demonstrates a strong commitment to teaching excellence and student mentoring. Faculty members are closely involved in curriculum development, competency mapping aligned with CPA professional standards, and program activities that support student success, including advising, professional preparation, and capstone learning experiences. This high level of engagement ensures that students benefit from faculty who are deeply invested in the design and delivery of learning experiences that support both intellectual development and professional readiness.

The strength of SAF's instructional environment is reflected in its outstanding outcomes in the CPA Common Final Examination (CFE). SAF graduates consistently achieve some of the highest

pass rates in the province on the CFE, demonstrating the effectiveness of the school's curriculum, faculty instruction, and student support systems in preparing students for professional success. In addition to these strong pass rates, SAF graduates are regularly represented on the national CFE Honour Roll, which recognizes the top-performing candidates across Canada on the CPA's final qualifying examination. These results reflect SAF's sustained commitment to academic rigor, professional relevance, and high-quality student mentoring.

The proposed GDip will draw directly on this established foundation. Using the parent program as a guide, the GDip will be delivered with the same academic standards, faculty engagement, and curriculum oversight that have contributed to SAF's strong reputation in accounting education. Students enrolled in the GDip will benefit from the same faculty expertise, scholarly environment, and commitment to teaching excellence that characterize SAF's existing programs.

Beyond the core faculty complement, SAF also benefits from a large and highly engaged alumni community, particularly in the Toronto region, one of the province's most concentrated centres for finance and accounting employment. Many alumni remain actively connected to SAF through grading, outreach activities, mentoring, and service as course assistants. This engagement allows the program to draw upon a rich pool of highly qualified professionals who contribute to student learning, professional mentorship, and industry perspective.

Taken together, the strength of SAF's faculty expertise, scholarly activity, professional engagement, and proven instructional model provides strong assurance that the GDip will deliver the same high level of intellectual quality and student experience that characterizes SAF's existing graduate programs.

3. PROJECTED ENROLMENT

See **Table 1.**

Tables and Appendices

Table 1 shows the projected student intake and total enrolment in the proposed program over the next seven academic years.

To be completed in consultation with IAP

Table 1

Projected Student Intake and Enrolment								
Academic Year	FULL-TIME							
	Year One Intake		Total FT Enrolment					
	Domestic	International *	Domestic	International				
2023/24								
2024/25								
2025/26								
2026/27								
2027/28	77	8	77	8				
2028/29	117	13	117	13				
2029/30	157	18	157	18				

Location Split

- 2027/28: Total 85 comprised of Waterloo 35, Toronto 50
- 2028/29: Total 130 comprised of Waterloo 60, Toronto 70
- 2029/30: Total 175 comprised of Waterloo 75, Toronto 100

* International fee-paying students

*Assessment methods included in the table are suggestions. Please feel free to edit and propose actual assessment methods you intend to use in your program.

Appendix A - Summary of Program Level Learning Outcomes and [GDLES](#) Mapped to Courses and Assessment Methods

Specific GDLEs and Associated Learning Outcomes	Course					Assessment method				
	ACC631 Assurance and Trust	ACC632 Corporate Reporting	ACC633 Taxation	ACC636 Management Decision Making	ACC637 CPA Leadership	Assignment/Project	Case analysis	Test/Quiz/Exam	Oral presentation	Participation/Engagement
1. Depth and Breadth of Knowledge										
A systematic understanding of knowledge and a critical awareness of current problems and/or new insights, much of which is at, or informed by, the forefront of their academic discipline, field of study, or area of professional practice;	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2. Research & Scholarship										
a. A conceptual understanding and methodological competence that:										
i) Enables a working comprehension of how established techniques of research and inquiry are used to create and interpret knowledge in the discipline;	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
ii) Enables a critical evaluation of current research and advanced research and scholarship in the discipline or area of professional competence;	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
iii) Enables a treatment of complex issues and judgments based on established principles and techniques; and,	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
b. On the basis of that competence, has shown at least one of the following:										
i) The development and support of a sustained argument in written form; or	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
ii) Originality in the application of knowledge.	✓	✓	✓	✓	✓	✓	✓			
3. Level of Application of Knowledge										

Competence in the research process by applying an existing body of knowledge into the critical analysis of a new question or of a specific problem or issue in a new setting.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
4. Professional Capacity/Autonomy										
a. The qualities and transferable skills necessary for employment requiring:										
i) The exercise of initiative and of personal responsibility and accountability;	✓	✓	✓	✓	✓	✓	✓			
ii) Decision-making in complex situations;	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
b. The intellectual independence required for continuing professional development;	✓	✓	✓	✓	✓	✓	✓			
c. The ethical behavior consistent with academic integrity and the use of appropriate guidelines and procedures for responsible conduct of research; and	✓	✓	✓		✓	✓	✓			
d. The ability to appreciate the broader implications of applying knowledge to particular contexts.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
5. Level of Communication Skills										
The ability to communicate ideas, issues and conclusions clearly.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
6. Awareness of Limits of Knowledge										
Cognizance of the complexity of knowledge and of the potential contributions of other interpretations, methods, and disciplines.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Appendix B – Graduate Diploma in Accounting Courses

ACC631 - Assurance and Trust, 0.50 Units (New in s27 / Shared with MAcc)

This course considers the role of risk in the context of assurance and the client's risk management process and addresses the impact of risk on an assurance provider's professional practice using case studies. By the end of this course students will be able to assess the assurance needs of relevant stakeholders; identify risks in a variety of assurance contexts; describe appropriate procedures and other responses to the assessed risk; and integrate their knowledge of assurance, financial reporting, and governance standards to analyze and conclude on issues impacting assurance engagements over various subject matters.

ACC632 - Corporate Reporting, 0.50 Units (New in s27 / Shared with MAcc)

This course emphasizes financial and non-financial reporting standards and their application through the use of scenarios and case studies. By the end of this course, students will be able to assess the appropriateness of the reporting framework used to prepare financial and non-financial information; apply financial reporting standards such as ASPE and IFRS to analyze and measure routine and non-routine transactions at varying levels of complexity; and analyze the impact of non-financial metrics on organizational performance and relevant stakeholders.

ACC633 – Taxation, 0.50 Units (New in s27 / Shared with MAcc)

This course will develop the students' skills in identifying and addressing advanced personal and corporate tax issues, using integrated case studies. By the end of the course, students will be able to explain and calculate the various components of personal and corporate income tax payable; measure the impact of personal and corporate tax planning opportunities; and explain appropriate tax treatment for GST.

ACC636 - Management Decision Making, 0.50 Units (New)

This course reviews and integrates theory and analytical approaches to provide insight into the problems facing management and executives using cases designed to expose students to real world situations requiring qualitative and quantitative analysis. By the end of this course students will be able to identify and analyze strategic, operational, and/or financing issues faced by decision-makers and alternative solutions to address those issues by applying appropriate quantitative and qualitative analysis to support conclusion and recommended actions.

ACC637 – CPA Leadership, 0.50 Units (New)

This course will enhance students' technical and communication skills through the application and integration of their knowledge in a variety of cases. By the end of this course students will be able to assess the impact of ethical decisions and governance practices on organizational performance, the risks associated with non-compliance with standards, laws, and regulations, a company's financial risks and financial health, the feasibility of capital projects and appropriate financing alternatives, and value creation through an analysis of cost management, governance and controls, systems and strategy.



Graduate Studies New Program Template

Prior to form submission, review the [new graduate program instructions](#). For questions about the form submission, contact [Trevor Clews](#), Graduate Studies and Postdoctoral Affairs.

Faculty: Arts

Program: Graduate Diploma (GDip) in Accounting (Type 3)

Program contact name(s): Deb Kraft, Blake Phillips, Bradley Pomeroy

Form completed by:

Note: new courses and milestones also require the completion/submission of the SGRC Graduate Studies Course/Milestone form ([PC docx version](#)).

Proposed effective date: Term: Spring Year: 2027

[Graduate Studies Academic Calendar \(GSAC\)](#) section (include the link to the section (web page) where the new program will be located):

<https://uwaterloo.ca/academic-calendar/graduate-studies/catalog#/programs?group=Accounting%20and%20Finance>

Proposed Graduate Studies Academic Calendar content:

GRADUATE DIPLOMA (GDIP) IN ACCOUNTING (TYPE 3)

Faculty

- Faculty of Arts

Academic unit

- School of Accounting and Finance

Admit term(s)

- Fall
- Winter
- Spring

Delivery mode

- On-campus

Delivery mode information

- The program is offered on-campus in Waterloo and off-campus in Toronto.

Registration option(s)

- Full-time
- Part-time

Registration option(s) information

- Note: direct entry into the program is only available through the full-time option. Students must obtain approval from the Program Director to transfer to the part-time option, which will be assessed on a case-by-case basis.

Program type(s)

Proposed Graduate Studies Academic Calendar content:

- Diploma

Study option(s)

- Coursework

Length of program

- 1 term (4 months)

Admission requirements: Minimum requirements

- To be considered for admission to the program, students must meet the following minimum requirements:
 - Successful completion of a four-year Honours Bachelor's degree, or equivalent, with at least a 75% average across all courses taken.
 - Completion of the following set of courses, or their equivalent which includes completion of CPA Ontario's Knowledge Assessment, with a grade of at least 60% in each course and with at least a 70% average across these courses, calculated using the maximum grade in a course in the case of repeated courses:
 - Advanced Financial Reporting
 - Audit and Assurance
 - Intermediate Financial Reporting 1
 - Intermediate Financial Reporting 2
 - Intermediate Management Accounting
 - Principles of Finance
 - Taxation
- [English language proficiency \(ELP\)](#) (if applicable)

Admission requirements: Application materials

- Statement of interest
- Transcript(s)

Admission requirements: References

- Number of references: 2
- Type of references: academic

Degree requirements

- Students must complete the course requirements listed below in addition to the [Graduate Academic Integrity Module \(Graduate AIM\)](#).

Course requirements

- Students must complete the following 5 courses (0.50 unit weight):
 - ACC 631 Assurance and Trust
 - ACC 632 Corporate Reporting
 - ACC 633 Taxation
 - ACC 636 Management Decision Making
 - ACC 637 CPA Leadership
- Students must achieve an average of at least 60% in each course and an average of at least 75% across all courses presented in fulfillment of the degree requirements.

Reviewed by GSPA/QA (for GSPA/QA use only) ☒ date (mm/dd/yy): 05/07/26

Departmental approval date (mm/dd/yy): 02/27/26

Graduate Faculty Sub-Committee approval date (mm/dd/yy): 05/21/26

Faculty approval date (mm/dd/yy):

Senate Graduate Council (SRC) approval date (mm/dd/yy):

Date 2026/08/10

Show Empty Fields

Meeting Information

Agenda Page Title

SGC - Faculty of Health - Regular Agenda - September 15, 2026

Career Level

Graduate,

Faculty/Unit

Health

Date

2026-09-15

Summary

Program Proposals:

1) Kinesiology and Health Sciences

1.1) PhD in Kinesiology and Health Sciences

- a. Adding a new Graduate Research Field in Health and Behaviour.
- b. Changing the admit terms of the PhD in Kinesiology and Health Sciences programs from Fall, Winter and Spring to only Fall.

1.2) MSc in Kinesiology and Health Sciences

- a. Adding a new Graduate Research Field in Health and Behaviour.
- b. Updating the required and elective courses for the existing three Graduate Research Fields for clarity.
- c. Changing the admit terms of the MSc in Kinesiology and Health Sciences programs from Fall, Winter and Spring to only Fall.

Other Business

Attachment(s)

Course Proposals

Courses: Retire

No proposals have been added.

Courses: New

No proposals have been added.

Courses: Changes

No proposals have been added.

Programs & Plans Proposals

Programs & Plans: Retire
No proposals have been added.

Programs & Plans: Major Modifications

Code	Title	Type	Workflow Step
PhD in Kinesiology & Health Sciences	Doctor of Philosophy (PhD) in Kinesiology and Health Sciences	Programs	SGC, Senate Graduate Council (SGC)
MSc in Kinesiology & Health Sciences	Master of Science (MSc) in Kinesiology and Health Sciences	Programs	SGC, Senate Graduate Council (SGC)

Programs & Plans: Minor Modifications
No proposals have been added.

Regulations Proposals

Regulations: Retire
No proposals have been added.

Regulations: New
No proposals have been added.

Regulations: Changes
No proposals have been added.

PhD in Kinesiology & Health Sciences - Doctor of Philosophy (PhD) in Kinesiology and Health Sciences

Top

Effective Date and Career

Career
Graduate

Effective Term and Year

Proposed

Effective Term and Year
Winter 2027

Existing

Effective Term and Year
Fall 2025

Proposal Details

Proposal Type
Change

Academic Unit Approval
2026-03-25

Quality Assurance Designation

Major Modification Qad

Major Modification Categories

Add/re-name a graduate research field, graduate specialization, honours, option, specialization, undergraduate diploma, minor

Is there an impact to existing students?

Yes

Impact on Existing Students

Current students can opt into the reserach field if they would like.

Is the credential name changing?

No

Graduate Co-operative Requirements

Not Applicable

Change to Learning Outcomes

No

Rationale and Background for Change(s)

1) Adding a new Graduate Research Field in Health and Behaviour.

The Department of Kinesiology and Health Sciences is proposing a major modification to its graduate program to better align with its current research strengths and to improve the student administrative experience. Following past cyclical reviews and a series of strategic planning retreats that occurred over the past two years, the Department identified that our three existing research fields (Biomechanics, Neuroscience, and Physiology and Nutrition) do not fully encompass the research and teaching expertise of many faculty members. To address this, we are formalizing "Health and Behaviour" as a fourth graduate research field. This change provides a clear academic home for a recent hire (health behaviour change, exercise and health psychology), alongside established researchers (aging, mood and emotion, clinical research, dementia prevention and care, knowledge translation, implementation research and other research methods), while allowing the new cohort to establish a distinct identity that reflects their primary contributions. In a 2026 survey, a cohort of 8 students indicated that they would classify their work under the "Health and Behaviour" field, if available. Additional students are being recruited for MSc and Ph D work that falls under the Health and Behaviour umbrella. Similar fields can be found across other Kinesiology programs in Canada. For example, the University of British Colombia has fields in "Socio-Cultural Studies" and "Psychological Studies", the University of Western Ontario has a field in "Social Impact", and the University of Calgary has a field in "Psychosocial Aspects of Health and Sport".

The "Health and Behaviour" stream is already well-substantiated, having operated effectively as a de facto research field for the last two academic years with a dedicated seminar series and a robust catalog of existing course offerings. The Health and Behaviour seminars draw 15-30 participants each session, a similar number of participants as our existing fields.

2) Changing the admit terms of the Ph D in Kinesiology and Health Sciences programs from Fall, Winter and Spring to only Fall. A note will be added to the website to indicate that if applicants would like to apply for Winter or Spring admission they will need to contact the Graduate Program Coordinator. The rationale is that this aligns with other programs in our Faculty and reduces administrative burden. Additionally, supervisors do not tend to take on students in the Winter or Spring terms very often.

General Program/Plan Information

Faculty

Faculty of Health

Academic Unit

Department of Kinesiology and Health Sciences

Graduate Field of Study

Kinesiology and Health Sciences

Faculty

Faculty of Health

Program/Plan Name

Doctor of Philosophy (Ph D) in Kinesiology and Health Sciences

Graduate Credential Type

PhD

Accelerated Program

Not applicable

Admit Term(s)

Proposed

Admit Term(s)

Fall

Existing

Admit Term(s)

Fall, Winter, Spring

Delivery Mode

On-campus

Length of Program

- Must be completed within 12 terms (full time) from completion of the Master’s degree.
- Students must have permission of the Department Graduate Committee to continue enrolment beyond term limits.
- Students are expected to devote as much time as is necessary to complete their thesis within this timeline.
- Students must be continuously enrolled at the University to the end of the term in which they complete the degree requirements.

Registration Option(s)

Full-time, Part-time

Graduate Research Fields

Proposed

Graduate Research Fields

- Biomechanics
- Health and Behaviour
- Neuroscience
- Physiology and Nutrition

Existing

Graduate Research Fields

- Biomechanics
- Neuroscience
- Physiology and Nutrition

Admissions

Admission Requirements: Minimum Requirements

- A Master's degree with a minimum 75% average in a relevant field (normally Kinesiology or a discipline related to their area of concentration).
- Letter stating research interests and why the student wishes to pursue graduate studies.
- [English language proficiency \(ELP\)](#) (if applicable)

Admission Requirements: Application materials

- Curriculum vitae
- Program-specific questions (PSQ)
- Transcript(s)
- Writing sample
 - Submit one copy of a term paper, research project, or thesis written during the students last year of Master's studies.

Admission Requirements: References

- Number of references: 3
- Type of references: from faculty members who taught the student while in a Master's program. Normally, 1 must be from the Master's supervisor.

Requirements Information

Graduate Degree Requirements

- Students must complete the course and milestone requirements listed below in addition to the [Graduate Academic Integrity Module \(Graduate AIM\)](#).

Graduate Course Requirements

No Rules

Graduate Course Requirements

- Since students' backgrounds are expected to differ considerably, course requirements will vary. However, a minimum of 3.00 units of graduate courses (e.g., 6 courses each at a 0.50 unit weight) beyond an Honours Bachelor degree is required. Of these, at least 0.50 units must be related to quantitative or qualitative analysis, such as research methods, modelling, mathematics, or statistics.
- The course requirements will be determined in consultation with the candidate's supervisor and Advisory Committee. Students pursuing one of the program's Graduate Research Fields, should inform their supervisor(s) of their chosen field to ensure appropriate course selection.
- All graduate courses must be assigned a numerical grade. Students must obtain an average of at least 75% in the set of courses which they present in fulfilment of course requirements. A grade below 70% on any individual course or an average below 75% on the set of courses for the degree will result in a review of the student's status by the Department Graduate Committee. If a student receives a grade in any individual course below 60%, the Department Graduate Committee review may result in the requirement to withdraw from the program. If the student is permitted to proceed, any course with a grade below 60% will not be eligible towards the degree requirements, thus requiring the course to be repeated or additional course work to be completed.

Milestone Requirements

Proposed
Milestone Requirements
Ph D Seminar
• Students are required to complete a series of academic and discipline-specific seminars throughout their program of study.
Ph D Professional Development Seminar
• Students are required to complete a series of professional development seminars and workshops throughout their program of study.
Ph D Comprehensive Examination
• Students are required to meet the University-level Ph D Comprehensive Examination minimum requirements, with certain noted differences that are specific to the Faculty of Health Comprehensive Examination minimum requirements: ◦ Comprehensive examination purpose: Consistent with University-level minimum requirements. Note: In the Faculty of Health, the novel research topic is tested through a separate thesis proposal process. ◦ Timing: Consistent with University-level minimum requirements. ◦ Committee: Consistent with University-level minimum requirements with the exception that in the Faculty of

Health, the composition of the comprehensive examining committee will be approved by the Associate Chair or Director, Graduate Studies for the student's Department/School, as delegated by the Associate Dean, Graduate Studies.

- Who Chairs an examination: Consistent with University-level minimum requirements.
- Format / Content: Consistent with University-level minimum requirements.
- Academic integrity: Consistent with University-level minimum requirements.

Ph D Thesis

- Thesis Proposal: Following successful completion of the comprehensive exam, each student will be required to complete a Ph D thesis proposal. The proposal involves a written document related to the student's thesis area. The thesis project and proposal are developed in consultation with the supervisor. Each student must orally defend the thesis proposal to the Advisory Committee consisting of the supervisor (or co-supervisors), and two other members (one of which must be from the home Department). A chair to oversee the oral thesis proposal defense will be appointed by the Department.
- Thesis Defence: Each student is required to submit a thesis embodying the results of original research carried out under the direction of an Advisory Committee headed by the supervisor. The candidate defends the thesis before an Examining Committee approved by the Department Graduate Committee. The Examining Board should consist of the Advisory Committee (see thesis proposal above), an additional member that is external to the Department (referred to as the internal-external), and finally an additional member that is external to the University (referred to as the external examiner).
- Students may also wish to pursue one of the following Graduate Research Fields:
 - Biomechanics
 - Health and Behaviour
 - Neuroscience
 - Physiology and Nutrition
- A Graduate Research Field is a University credential that is recognized on the student's transcript and is intended to reflect that a student has successfully completed research concentrated in the area of the Graduate Research Field. For the Graduate Research Field in Biomechanics, KIN 713 is a required course. The Department of Kinesiology and Health Sciences (e.g., student's supervisor(s) and Examining Committee, the Associate Chair of Graduate Studies) must assess whether a student's completed research warrants the field designation at the time of degree completion. To obtain the Graduate Research Field, students must also complete the requirements associated with the Ph D degree. Students will be limited to one Graduate Research Field designation for their Ph D in Kinesiology and Health Sciences degree.

Other requirements

- Student evaluation: A review of each student's progress by both the supervisor and Department Graduate Committee takes place each year. Students are evaluated on several criteria, including performance in courses, progress towards course and milestone completion, thesis progress, scholarly activity, and research and teaching assistantship activity.

Existing

Milestone Requirements

Ph D Seminar

- Students are required to complete a series of academic and discipline-specific seminars throughout their program of study.

Ph D Professional Development Seminar

- Students are required to complete a series of professional development seminars and workshops throughout their program of study.

Ph D Comprehensive Examination

- Students are required to meet the University-level Ph D [Comprehensive Examination](#) minimum requirements, with certain noted differences that are specific to the Faculty of Health Comprehensive Examination minimum requirements:
 - Comprehensive examination purpose: Consistent with University-level minimum requirements. Note: In the Faculty of Health, the novel research topic is tested through a separate thesis proposal process.
 - Timing: Consistent with University-level minimum requirements.
 - Committee: Consistent with University-level minimum requirements with the exception that in the Faculty of Health, the composition of the comprehensive examining committee will be approved by the Associate Chair or Director, Graduate Studies for the student's Department/School, as delegated by the Associate Dean, Graduate Studies.
 - Who Chairs an examination: Consistent with University-level minimum requirements.
 - Format / Content: Consistent with University-level minimum requirements.
 - Academic integrity: Consistent with University-level minimum requirements.

Ph D Thesis

- Thesis Proposal: Following successful completion of the comprehensive exam, each student will be required to complete a Ph D thesis proposal. The proposal involves a written document related to the student's thesis area. The thesis project and proposal are developed in consultation with the supervisor. Each student must orally defend the thesis proposal to the Advisory Committee consisting of the supervisor (or co-supervisors), and two other members (one of which must be from the home Department). A chair to oversee the oral thesis proposal defense will be appointed by the Department.
- Thesis Defence: Each student is required to submit a thesis embodying the results of original research carried out under the direction of an Advisory Committee headed by the supervisor. The candidate defends the thesis before an

Examining Committee approved by the Department Graduate Committee. The Examining Board should consist of the Advisory Committee (see thesis proposal above), an additional member that is external to the Department (referred to as the internal-external), and finally an additional member that is external to the University (referred to as the external examiner).

- Students may also wish to pursue one of the following Graduate Research Fields:
 - Biomechanics
 - Neuroscience
 - Physiology and Nutrition
- A Graduate Research Field is a University credential that is recognized on the student’s transcript and is intended to reflect that a student has successfully completed research concentrated in the area of the Graduate Research Field. For the Graduate Research Field in Biomechanics, KIN 713 is a required course. The Department of Kinesiology and Health Sciences (e.g., student’s supervisor(s) and Examining Committee, the Associate Chair of Graduate Studies) must assess whether a student’s completed research warrants the field designation at the time of degree completion. To obtain the Graduate Research Field, students must also complete the requirements associated with the Ph D degree. Students will be limited to one Graduate Research Field designation for their Ph D in Kinesiology and Health Sciences degree.

Other requirements

- Student evaluation: A review of each student's progress by both the supervisor and Department Graduate Committee takes place each year. Students are evaluated on several criteria, including performance in courses, progress towards course and milestone completion, thesis progress, scholarly activity, and research and teaching assistantship activity.

Notes

- [Department of Kinesiology and Health Sciences website](#)
- [Doctor of Philosophy \(Ph D\) in Kinesiology and Health Sciences future graduate students program page](#)

Specializations

Undergraduate Plan Guidelines

Workflow Information

Workflow Path
Committee approvals

Faculty/AFIW Path(s) for Workflow
Faculty of Health

Dependencies

Prerequisites

- KIN 605 - Nutrition and Exercise in Health and Performance
- KIN 750 - Fundamentals of Aging, Health and Well-being
- REC 750 - Fundamentals of Aging, Health and Well-being
- HLTH 750 - Fundamentals of Aging, Health and Well-being

[View Program](#)
[View Program](#)
[View Program](#)
[View Program](#)

MSc in Kinesiology & Health Sciences - Master of Science (MSc) in Kinesiology and Health Sciences

[Top](#)

Effective Date and Career

Career
Graduate

Effective Term and Year

Proposed

Effective Term and Year
Winter 2027

Existing

Effective Term and Year
Fall 2025

Proposal Details

Proposal Type
Change

Academic Unit Approval
2026-03-25

Quality Assurance Designation
Major Modification Qad

Major Modification Categories

Add/re-name a graduate research field, graduate specialization, honours, option, specialization, undergraduate diploma, minor

Is there an impact to existing students?
Yes

Impact on Existing Students

Students in the program can opt into the graduate research field.

Is the credential name changing?
No

Graduate Co-operative Requirements
Not Applicable

Change to Learning Outcomes
No

Rationale and Background for Change(s)

1) Adding a new Graduate Research Field in Health and Behaviour.
The Department of Kinesiology and Health Sciences is proposing a major modification to its graduate program to better align with its current research strengths and to improve the student administrative experience. Following past cyclical reviews and a series of strategic planning retreats that occurred over the past two years, the Department identified that our three existing research fields (Biomechanics, Neuroscience, and Physiology and Nutrition) do not fully encompass the research and teaching expertise of many faculty members. To address this, we are formalizing "Health and Behaviour" as a fourth graduate research field. This change provides a clear academic home for a recent hire (health behaviour change, exercise and health psychology), alongside established researchers (aging, mood and emotion, clinical research, dementia prevention and care, knowledge translation, implementation research and other research methods), while allowing the new cohort to establish a distinct identity that reflects their primary contributions. In a 2026 survey, a cohort of 8 students indicated that they would classify their work under the "Health and Behaviour" field, if available. Additional students are being recruited for MSc and Ph D work that falls under the Health and Behaviour umbrella. Similar fields can be found across other Kinesiology programs in Canada. For example, the University of British Colombia has fields in "Socio-Cultural Studies" and "Psychological Studies", the University of Western Ontario has a field in "Social Impact", and the University of Calgary has a field in "Psychosocial Aspects of Health and Sport".

The "Health and Behaviour" stream is already well-substantiated, having operated effectively as a de facto research field for the last two academic years with a dedicated seminar series and a robust catalog of existing course offerings. The Health and Behaviour seminars draw 15-30 participants each session, a similar number of participants as our existing fields.

2) Updating the required and elective courses for the existing three Graduate Research Fields for clarity.
This modification includes a comprehensive update to the required and elective course descriptions for the other three existing research fields. By refining the wording and standardizing the structure across all four fields, the Department will ensure greater transparency for students and more efficient degree audits. This dual approach of expanding research scope while clarifying academic milestones ensures the program remains competitive and accessible for all graduate students.

3) Changing the admit terms of the MSc in Kinesiology and Health Sciences programs from Fall, Winter and Spring to only Fall. A note will be added to the website to indicate that if applicants would like to apply for Winter or Spring admission they will need to contact the Graduate Program Coordinator. The rationale is that this aligns with other programs in our Faculty and reduces administrative burden. Additionally, supervisors do not tend to take on students in the Winter or Spring terms very often.

General Program/Plan Information

Faculty
Faculty of Health

Academic Unit
Department of Kinesiology and Health Sciences

Graduate Field of Study

Kinesiology and Health Sciences

Faculty

Faculty of Health

Program/Plan Name

Master of Science (MSc) in Kinesiology and Health Sciences

Graduate Credential Type

Master's

Accelerated Program

Not applicable

Study Options (New)

Thesis

Admit Term(s)

Proposed

Admit Term(s)

Fall

Existing

Admit Term(s)

Fall, Winter, Spring

Delivery Mode

On-campus

Length of Program

- Must be completed within 6 terms full time or 12 terms part time.
- Students must have permission of the Department Graduate Committee to continue enrolment beyond term limits.
- Students are expected to devote as much time as is necessary to complete their thesis within this timeline.
- Students must be continuously enrolled at the University to the end of the term in which they complete the degree requirements.

Registration Option(s)

Full-time, Part-time

Graduate Research Fields

Proposed

Graduate Research Fields

- Biomechanics
- Health and Behaviour
- Neuroscience
- Physiology and Nutrition

Existing

Graduate Research Fields

- Biomechanics
- Neuroscience
- Physiology and Nutrition

Admissions

Admission Requirements: Minimum Requirements

- An Honours Bachelor's degree (or equivalent) with at least a 75% average.
- Letter indicating why the student wishes to pursue graduate studies.
- [English language proficiency \(ELP\)](#) (if applicable)

Admission Requirements: Application materials

- Curriculum vitae
- Program-specific questions (PSQ)
- Statement of interest
- Transcript(s)
- Writing sample
 - Submit one copy of a term paper, research project or senior essay written during the last two years of undergraduate studies.

Admission Requirements: References

- Number of references: 2
- Type of references: from faculty members who taught the student as an undergraduate.

Requirements Information

Graduate Degree Requirements

- Students must complete the course and milestone requirements listed below in addition to the [Graduate Academic](#)

Thesis Option: Course Requirements

Thesis Option: Course Requirements

Proposed

Thesis Option: Course Requirements

- All students must successfully complete a minimum of 2.00 units of graduate courses (e.g., 4 courses each at 0.50 unit weight), including KIN 630 Research Design and Statistical Analysis (0.50 unit weight) or an equivalent course (related to quantitative or qualitative analysis, such as research methods, modelling, mathematics, or statistics), with the approval of the Department Graduate Officer. A minimum of 1.00 units must be from the Department of Kinesiology and Health Sciences. All graduate courses must be assigned a numerical grade. Students must obtain an average of at least 75% in the set of courses which they present in fulfilment of course requirements. A grade below 70% on any individual course or an average below 75% on the set of courses for the degree will result in a review of the student's status by the Department Graduate Committee. If a student receives a grade in any individual course below 60%, the Department Graduate Committee review may result in the requirement to withdraw from the program. If the student is permitted to proceed, any course with a grade below 60% will not be eligible towards the degree requirements, thus requiring the course to be repeated or additional course work to be completed.
- Students must also complete (and receive credit for) the following credit/no credit granted (CR/NCR) graduate seminar courses:
 - KIN 670A Seminar in Kinesiology and Health Sciences 1
 - KIN 670B Seminar in Kinesiology and Health Sciences 2
- Students in the MSc in Kinesiology program may also wish to pursue one of the following Graduate Research Fields:
 1. Biomechanics
 2. Health and Behaviour
 3. Neuroscience
 4. Physiology and Nutrition
- A Graduate Research Field is a University credential that is recognized on the student's transcript and is intended to reflect that a student has successfully completed research and a set of courses that together provide an in-depth study in the area of the Graduate Research Field. A student will only obtain the Graduate Research Field on their transcript if they have completed the requirements associated with the MSc degree and the requirements associated with the Graduate Research Field. Students will be limited to one Graduate Research Field designation for their MSc in Kinesiology degree.
- All MSc Graduate Research Fields in Kinesiology consist of a Master's Seminar, a Master's Thesis that is confirmed by the Department of Kinesiology and Health Sciences to be in the chosen Graduate Research Field, and a minimum of 2.0 units of graduate courses. This set of courses is comprised of a mix of required or elective courses. Required courses are those that are prescribed as part of the Graduate Research Field. Elective courses are those that are on a list of courses designated as electives for a given Graduate Research Field.
- For any of the Graduate Research Fields below, an equivalent course focused on the Graduate Research Field may replace a required or elective course, with the approval of the Department Graduate Officer.
- The course requirements for each of the Graduate Research Fields are described below.

1. Graduate Research Field in Biomechanics

- Students must successfully complete the required and elective courses listed below. An assessment of whether or not the student's thesis warrants the Biomechanics Graduate Research Field designation will be completed by the Department of Kinesiology and Health Sciences.
 - Required courses (1.0 unit weights):
 - KIN 612 Instrumentation and Signal Processing in Biophysical Research
 - KIN 613 Modern Methods in Biomechanical Modeling, Kinematics and Kinetics
 - Elective courses: select elective courses amounting to 0.50 unit weights from the following list:
 - KIN 611 Biomechanics of Human Motion
 - Open elective(s) (amounting to 0.50 unit weights)

2. Graduate Research Field in Health and Behaviour

- Students must successfully complete the elective courses listed below. An assessment of whether or not the student's thesis warrants the Health and Behaviour Graduate Research Field designation will be completed by the Department of Kinesiology and Health Sciences.
 - Elective courses (1.50 unit weights):
 - Select elective courses amounting to a minimum of 0.50 unit weights from the following list:
 - KIN 632 Clinical Epidemiology and Health Measurement

- KIN 658 Physical Activity and Cognition
- KIN 660 Health Research and Implementation Science Methodologies
- KIN 661 Theories and Models in Health Behaviour Change
- Select elective courses amounting to 1.00 unit weights from the following list. Courses listed above that have not already been completed may also be used to satisfy this requirement.
 - HLTH 601 Lifespan Determinants
 - HLTH 614 Foundations of Program Evaluation
 - HLTH 627 Dementia Care
 - HLTH 651 Theory and Applications in Program Evaluation
 - HLTH 655 Health Measurement and Survey Methods
 - HLTH 657M Application of Artificial Intelligence in Health
 - HLTH 658M Machine Learning Techniques in Health
 - KIN 605 Nutrition and Exercise in Health and Performance
 - KIN 646 Physiological and Biochemical Aspects of Nutrition and Health
 - KIN 652 Movement Control and Learning
 - KIN 655 Theory and Practice of Movement Assessment
 - KIN 684 Selected Topics in Health and Behaviour
 - Open elective(s) (amounting to 0.50 unit weights)
- Note: Final assignment for KIN 684 Selected Topics in Health and Behaviour and HLTH 655 Health Measurement and Survey Methods must focus on human health and behaviour as discussed with the supervisor and instructor.

3. Graduate Research Field in Neuroscience

- Students must successfully complete the required and elective courses listed below. An assessment of whether or not the student's thesis warrants the Neuroscience Graduate Research Field designation will be completed by the Department of Kinesiology and Health Sciences.
 - Required course (0.50 unit weights):
 - KIN 653 Human Neuroscience Theory
 - Elective courses: select elective courses amounting to 1.00 unit weights from the following list:
 - KIN 616 Neural Control of Human Movement
 - KIN 652 Movement Control and Learning
 - KIN 654 Instrumentation in Neuroscience Research
 - KIN 657 Human Neuroanatomy
 - KIN 686 Selected Topics in Neuroscience I (MSc)
 - Open elective(s) (amounting to 0.50 unit weights)

4. Graduate Research Field in Physiology and Nutrition

- Students must successfully complete the elective courses listed below. An assessment of whether or not the student's thesis warrants the Physiology and Nutrition Graduate Research Field designation will be completed by the Department of Kinesiology and Health Sciences.
 - Elective courses: select elective courses amounting to 1.50 unit weights from the following list:
 - KIN 601 Skeletal Muscle Physiology: Structure & Function
 - KIN 602 Respiratory and Cardiovascular Physiology
 - KIN 603 Cardiac and Vascular Smooth Muscle Physiology
 - KIN 605 Nutrition and Exercise in Health and Performance
 - KIN 606 Molecular Basis of Disease
 - KIN 607 Integrative Energy Metabolism in Health and Disease
 - KIN 608 Introduction to Genetics for the Biosciences
 - KIN 609 Introduction to Genetics for Biosciences Lab
 - KIN 632 Clinical Epidemiology and Health Measurement
 - KIN 646 Physiological and Biochemical Aspects of Nutrition and Health
 - KIN 680 Selected Topics in Physiology and Nutrition (MSc)
 - Open elective(s) (amounting to 0.50 unit weights)

Existing

Thesis Option: Course Requirements

- Students must successfully complete a minimum of 2.00 units of graduate courses (e.g., 4 courses each at 0.50 unit weight), including KIN 630 Research Design and Statistical Analysis (0.50 unit weight) or an equivalent course (related to quantitative or qualitative analysis, such as research methods, modelling, mathematics, or statistics), with the approval of the Department Graduate Officer. All graduate courses must be assigned a numerical grade. Students must obtain an average of at least 75% in the set of courses which they present in fulfilment of course requirements. A grade below 70% on any individual course or an average below 75% on the set of courses for the degree will result in a review of the student's status by the Department Graduate Committee. If a student receives a grade in any individual course below 60%, the Department Graduate Committee review may result in the requirement to withdraw from the program. If the student is permitted to proceed, any course with a grade below 60% will not be eligible towards the degree requirements, thus requiring the course to be repeated or additional course work to be completed.
- Students must also complete (and receive credit for) the following credit/no credit granted (CR/NCR) graduate seminar courses:
 - KIN 670A Seminar in Kinesiology and Health Sciences 1
 - KIN 670B Seminar in Kinesiology and Health Sciences 2
- Students in the MSc in Kinesiology program may also wish to pursue one of the following Graduate Research Fields:
 1. Biomechanics
 2. Neuroscience
 3. Physiology and Nutrition
- A Graduate Research Field is a University credential that is recognized on the student's transcript and is intended to reflect that a student has successfully completed research and a set of courses that together provide an in-depth

study in the area of the Graduate Research Field. A student will only obtain the Graduate Research Field on their transcript if they have completed the requirements associated with the MSc degree and the requirements associated with the Graduate Research Field. Students will be limited to one Graduate Research Field designation for their MSc in Kinesiology degree.

- All MSc Graduate Research Fields in Kinesiology consist of a Master's Seminar, a Master's Thesis that is confirmed by the Department of Kinesiology and Health Sciences to be in the chosen Graduate Research Field, and a minimum of 2.0 units of graduate courses. This set of courses is comprised of a mix of required or elective courses. Required courses are those that are prescribed as part of the Graduate Research Field. Elective courses are those that are on a list of courses designated as electives for a given Graduate Research Field.
- For any of the Graduate Research Fields below, an equivalent course focused on the Graduate Research Field may replace a required or elective course, with the approval of the Department Graduate Officer.
- The course requirements for each of the Graduate Research Fields are described below.

1. Graduate Research Field in Biomechanics

- Students must successfully complete the required and elective courses listed below. An assessment of whether or not the student's thesis warrants the Biomechanics Graduate Research Field designation will be completed by the Department of Kinesiology and Health Sciences.
 - Required courses:
 - KIN 612 Instrumentation and Signal Processing in Biophysical Research
 - KIN 613 Modern Methods in Biomechanical Modeling, Kinematics and Kinetics
 - KIN 630 Research Design and Statistical Analysis
 - Elective courses:
 - Open elective(s) (amounting to 0.50 unit weights)

2. Graduate Research Field in Neuroscience

- Students must successfully complete the required and elective courses listed below. An assessment of whether or not the student's thesis warrants the Neuroscience Graduate Research Field designation will be completed by the Department of Kinesiology and Health Sciences.
 - Required course:
 - KIN 630 Research Design and Statistical Analysis
 - Elective courses: select elective courses amounting to 1.50 unit weights from the following list:
 - KIN 616 Neural Control of Human Movement
 - KIN 652 Movement Control and Learning
 - KIN 653 Human Neuroscience Theory
 - KIN 654 Instrumentation in Neuroscience Research
 - KIN 657 Human Neuroanatomy
 - KIN 686 Selected Topics in Neuroscience I (MSc)
 - Open elective(s) (amounting to 0.50 unit weights)

3. Graduate Research Field in Physiology and Nutrition

- Students must successfully complete the required and elective courses listed below. An assessment of whether or not the student's thesis warrants the Physiology and Nutrition Graduate Research Field designation will be completed by the Department of Kinesiology and Health Sciences.
 - Required course:
 - KIN 630 Research Design and Statistical Analysis
 - Elective courses: select elective courses amounting to 1.50 unit weights from the following list:
 - KIN 601 Skeletal Muscle Physiology: Structure & Function
 - KIN 602 Respiratory and Cardiovascular Physiology
 - KIN 603 Cardiac and Vascular Smooth Muscle Physiology
 - KIN 606 Molecular Basis of Disease
 - KIN 607 Integrative Energy Metabolism in Health and Disease
 - KIN 608 Introduction to Genetics for the Biosciences
 - KIN 609 Introduction to Genetics for Biosciences Lab
 - KIN 632 Clinical Epidemiology and Health Measurement
 - KIN 646 Physiological and Biochemical Aspects of Nutrition and Health
 - KIN 680 Selected Topics in Physiology and Nutrition (MSc)
 - KIN 691 Theory and Practice of Cardiorespiratory Assessment
 - KIN 702 Cardiorespiratory Integration
 - KIN 704 Bioactive Lipids
 - Open elective(s) (amounting to 0.50 unit weights)

Thesis Option: Milestone Requirements

Master's Seminar

- Students are required to complete a series of academic and discipline-specific seminars throughout their program of study.

Master's Thesis

- Thesis Proposal: Following successful completion of coursework, each student will be required to compete a Master's thesis proposal. The proposal involves a written document related to the student's thesis area. The thesis project and proposal is developed in consultation with the supervisor. Each student must orally defend the thesis proposal to the Advisory Committee, consisting of the supervisor (or co-supervisors), and two other members (one of which must be from the home Department).

- Thesis Defence: Each student is required to submit a written thesis embodying the results of original research carried out under the direction of an Advisory Committee headed by the supervisor. The candidate defends the thesis before an Examining Committee approved by the Department Graduate Committee. The Examining Board should consist of the Advisory Committee, which is normally the same Advisory Committee as the thesis proposal.

Other requirements

- Student evaluation: A review of each student's progress by both the supervisor and the Department Graduate Committee takes place each year. Students are evaluated on several criteria, including performance in courses, progress towards course and milestone completion, thesis progress, scholarly activity, and research and teaching assistantship activity.

Notes

- [Department of Kinesiology and Health Sciences website](#)
- [Master of Science \(MSc\) in Kinesiology and Health Sciences future graduate students program page](#)

Specializations

Undergraduate Plan Guidelines

Workflow Information

Workflow Path Committee approvals	Faculty/AFIW Path(s) for Workflow Faculty of Health
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Dependencies

Prerequisites • KIN 605 - Nutrition and Exercise in Health and Performance	View Program
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For Approval**Open Session**

To: Senate Graduate Council

From: Barbara Csima
Associate Dean, Graduate Studies

Date of Meeting: September 15, 2026

Agenda Item: **9.3. Master of Cybersecurity and Privacy**

Recommendation/Motion

To recommend that Senate approve the Master of Cybersecurity and Privacy (MCP) program for the Faculty of Mathematics, effective September 1, 2027, as presented.

Summary

The proposed Master of Cybersecurity and Privacy is a coursework program with co-op and regular options. The degree requirements include nine graduate courses relevant to cybersecurity and privacy and an ethics workshop. All courses will be delivered on campus.

The two objectives of the proposed Master of Cybersecurity and Privacy program are:

- To give students the theoretical and practical knowledge required for obtaining a cybersecurity position in industry or the public sector.
- To provide students with opportunities to engage with cybersecurity professionals in industry or the public sector through work-integrated learning.

The proposed program is carefully designed to let students learn about cryptography, security, and privacy individually as well as how the three areas complement and sometimes interfere with each other. Students will learn about these areas both from a technical and a non-technical point of view. Co-op will give the students the opportunity to apply their knowledge learned in the classroom in the real world.

The proposed program consists of three mandatory core courses, where students learn about both the fundamentals of cryptography, security, and privacy, and more recent developments in these three areas, and six elective courses. In their elective courses, students can choose to get more insights into specific topics discussed in the core courses (depth) or learn about additional topics in these areas not covered in the core courses (breadth). Many of the offered elective courses are at the CS 800-level or CO 700-level, which are seminar courses, allowing students to familiarize themselves with the state-of-the-art research in the area. In addition, students must complete an Ethics Workshop milestone by participating in a three-day workshop that will usually be offered in the Fall term. The Ethics Workshop milestone will ensure students learn to think critically about the legal, ethical, and policy implications of cryptography, security, and privacy technologies.

Proposal/Rationale

The Faculty of Mathematics is proposing a new professional, course-based Master's program in Cybersecurity and Privacy to address a significant need for cybersecurity professionals locally, nationally, and globally.

Attacks on computer and cyberphysical systems have become commonplace. In the last few years, the Region of Waterloo and surrounding areas witnessed cyber attacks on various public institutions, such as the Waterloo Region District School Board, the Universities of Waterloo and Guelph, hospitals in Listowel and Wingham, SickKids, and the Cities of Stratford, Woodstock, Hamilton, and St. Marys, along with attacks on companies such as Waterloo Brewing, The Beer Store, SunWing Airlines, Maple Leaf Foods, Sobeys, Indigo, and iMedic. Researchers from the University of Quebec identified at least 75 foreign digital operations of a malicious political or industrial nature directed at Canada since 2010.

One of the reasons for the significant rise in attacks is a lack of cybersecurity professionals who have the expertise to deploy and maintain secure computer and cyberphysical systems, give security training to the users of such systems, design and build cybersecurity technologies, perform forensic analysis after an attack to avoid future attacks, and work for governments to coordinate the response against cybersecurity incidents.

As well as responding to the need for cybersecurity professionals, this program aligns with the Waterloo at 100 strategic plan, particularly the focus on technological futures, which explicitly mentions cybersecurity and privacy as areas where the University can play a role in shaping technology to better serve society.

Jurisdictional Information

As outlined in the council's [Terms and Reference](#), Senate Graduate Council is empowered to make approvals on behalf of Senate for a variety of matters:

- Consider, study and review all proposals for new graduate programs, the deletion of graduate programs, and/or major modifications to existing graduate programs, and make recommendations to Senate thereon.

Governance Path

Faculty of Mathematics: April 28, 2026

Senate Graduate Council: September 15, 2026

Senate: October 5, 2026

Documentation Provided

- 1) New Program Proposal of Master of Cybersecurity and Privacy - Volume I - Proposed Brief
- 2) New Program Proposal of Master of Cybersecurity and Privacy - Volume II - Faculty Curricula Vitae
- 3) External Reviewers' Report
- 4) Program and Deans Response to External Reviewers' Report

UNIVERSITY OF WATERLOO



NEW PROGRAM PROPOSAL **OF** MASTER OF CYBERSECURITY AND PRIVACY (MCP)

**Submitted to the
Ontario Universities Council on Quality Assurance**

VOLUME I - PROPOSED BRIEF

AUGUST 2026

***NOTE:** This template must be used for submission of a new program proposal. Please consult the University of Waterloo [Institutional Quality Assurance Process](#) and the [Quality Assurance Framework](#) (QAF) for details or the [Academic Quality Enhancement Office](#).

****Volumes I, II, III must be reviewed and approved by the Academic Quality Enhancement Office, GSPA and IAP prior to submission to your Faculty Council****

Recent Changes:

July 2026: Updated tuition amounts. Updated course descriptions. Changed format of ethics workshop following suggestions from external reviewers.

March 2026: Replaced co-op work reports with reflective reports. Updated switching procedure to regular program, as suggested by GSPA.

January 2026: Replaced Advanced Cryptography with CS 758.

November 2025: Updated projected enrolment numbers and program start date.

May 2025: Updated Section 2.8: Quality and other Indicators.

March 2025: Removed UXRD 730 and associated faculty due to development of related Stratford grad programs being cancelled/on hold. Introduced default of two co-op work terms, as suggested by CEE. Updated fit with “Waterloo at 100”. Added TMU’s new cybersecurity Master program.

January 2025: Replaced SOC 719 with SOC 721. Updated resource requirements.

December 2024: Removed Jon Yard from list of C&O faculty.

October-December 2024: Proposal approved by C&O and CS.

October 2024: Updated steering committee membership and program update processes to conform with Faculty’s governance model for cross-faculty credentials.

September 2024: Converted to new proposal template. Updated fit with Math Strategic Framework. Converted program outcomes to program-level learning outcomes and introduced new program outcomes. Added discussion of teaching by non-core faculty members, degree nomenclature, and monitoring of program quality and program objectives. Updated tuition fees.

June 2023: Mentioned approval from Arts to include UXRD 730. Updated tuition fees, including domestic Ontario. Added Sam Jaques and his CRYPTO/Eurocrypt papers to list of C&O faculty.

May 2023: Removed industry partner from Secure Programming. Mentioned need for Associate Director in Section 4.6. Introduced Section 3.6 about special events. Made lab description in Sections 3.3 and 3.4 more detailed. Stated that Arts supports including SOC 719. Reformatted requirements for elective courses for better readability. Changed “Other course-based Masters programs” to “Other non-thesis-based Masters programs” in Section 1.5.

April 2023: Make it (more) clear that the listed areas are not all required for admissions.

March 2023: Updated admission requirements to include Cryptographic Implementation and Deployment. Make it clear that listed requirements are not all required. Added justification for requiring nine courses.

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1. INTRODUCTION

Program Overview

The proposed Master of Cybersecurity and Privacy is a coursework program with co-op and regular options. The degree requirements include nine graduate courses relevant to cybersecurity and privacy and an ethics workshop. All courses will be delivered on campus.

While the program includes a regular option, all students will be admitted to the co-op option. Students are allowed to transfer to the regular option only if they already have cybersecurity-related job experience. Part-time study is allowed only in the regular option.

We expect most students to complete the co-op option in five terms (20 months), which includes three study terms and two work terms. Students can choose to reduce the number of work terms to a single one, which would shorten their program to four terms (16 months). Full time students in the regular option are expected to complete the degree in three terms (one year).

The first intake of students is planned to happen in Fall 2027.

Tuition Fees

The total tuition for the program is proposed to be \$27,540 for domestic Ontario students, \$32,805 for domestic out-of-province students, and \$56,448 for international students (\$9,180 per study term for domestic students, \$10,935 per study term for domestic out-of-province students, and \$18,816 per study term for international students), under the assumption students take three courses per term. Since this is a course-based program, the tuition will be assessed on a per-course basis. This means that domestic Ontario students will be assessed tuition at \$3,060 for each course, domestic out-of-province students will be assessed \$3,645 per course, and international students will be assessed \$6,272 per course. Students in the co-op program will also be assessed the co-op fee.

Some of the reasons for this proposed tuition structure compared to existing Master programs in the Faculty of Mathematics include the following:

1. The proposed tuition is identical to the tuition for the Master of Data Science and Artificial Intelligence (MDSAI) program in the Faculty of Mathematics. Similar to the proposed program, the MDSAI program is course-based, has co-op, requires nine courses, and assesses tuition on a per-course basis.

2. As mentioned below, there is a high demand for graduates in cybersecurity and privacy and thus graduates of this program are expected to easily find positions with starting salaries in the range \$100K-200K. As such, the program is a very good investment for these students¹.
3. Students in the Master of Cybersecurity and Privacy program will by default be enrolled in co-op. During the co-op terms, students are expected to make a salary over the eight-months period in the range of \$30K-40K. In addition to the experiential learning that occurs during this period, the co-op terms are an important source of remuneration and financial support to students during their program.
4. More generally, the co-op component of the Master of Cybersecurity and Privacy program is a distinctive asset of the program that provides work experience to students and enhances their placement options upon graduation.
5. In addition to its co-op option, with its nine-course requirement, the Master of Cybersecurity and Privacy program provides students with both the breadth and depth necessary to prepare them for a career in industry or the public sector.
6. As seen in
- 7.
8. *Table 1*, the proposed tuition is in line with what is being charged by other programs in cybersecurity. With its co-op component and the internationally recognized expertise in the Faculty of Mathematics (see Section 2.8), the program is expected to be competitive.

All tuition numbers in this subsection are as of Spring or Fall 2026. Any future tuition increases to the MDSA program will also apply to the proposed tuition for the Master of Cybersecurity and Privacy program.

Table 1: Canadian Master's programs comparable to the proposed Master of Cybersecurity and Privacy program and tuition charged over duration of the program. The given information applies to full-time students only. Fees are not included.

Program Name	University	Duration and Curriculum	Tuition (entire cost of program)
Master of Information Systems Security (MEng)	Concordia	2-year program 3 core courses, 8 elective courses with two replaceable by an optional internship	Domestic Québec: \$4,540 ² Domestic out-of-province: \$18,911 Int'l: \$35,775

¹ <https://fortune.com/education/articles/cybersecurity-masters-grads-are-landing-200k-plus-pay-packages/>

² <https://www.concordia.ca/students/financial/tuition-fees/rates.html>

Proposed Program – Master of Cybersecurity and Privacy

Master of Cybersecurity and Threat Intelligence (MCTI)	Guelph	1-year program 6 core courses, project or 2 elective courses	Domestic: \$25,317 ³ Int'l: \$52,092
Master of Applied Cybersecurity	New Brunswick	1-year program 1 pre-req course (if needed), 7 core courses, 1 elective course, capstone project	Domestic: \$21,450 ⁴ Int'l: \$28,335
Master of Information Security and Privacy (MISP)	Calgary	1-year program 10 courses, capstone project or internship	Domestic: \$35,234 ⁵ Int'l: \$50,465
Master of Cybersecurity	Simon Fraser	16-months program 5 courses, 2 labs, co-op (one or two terms) or capstone project	Domestic: \$37,454 ⁶ Int'l: \$55,425
Master of Cybersecurity	Toronto Metropolitan University	1-year program 5 core courses, 3 elective courses	Domestic: \$21,500 ⁷ International: \$41,500

Demand for Program

Attacks on computer and cyberphysical systems have become commonplace. In the last few years, the Region of Waterloo and surrounding areas witnessed cyber attacks on various public institutions, such as the Waterloo Region District School Board⁸, the

³ https://www.uoguelph.ca/registrar/studentfinance/fees/guelph_gr

⁴ <https://www.unb.ca/finance/financial-services/graduate/fredericton.html>

⁵ <https://calendar.ucalgary.ca/pages/416de8d4b1f340f6bbf17cb8cf6817d5>

⁶ <https://www.sfu.ca/fas/study/future-graduates/programs/master-cybersecurity.html>

⁷ <https://www.torontomu.ca/graduate/programs/cybersecurity/>

⁸ <https://www.therecord.com/news/waterloo-region/2022/09/29/data-for-70000-students-accessed-in-summer-cyber-attack-waterloo-region-district-school-board-reports.html>

Universities of Waterloo⁹ and Guelph¹⁰, hospitals in Listowel and Wingham¹¹, SickKids¹², and the Cities of Stratford, Woodstock¹³, Hamilton¹⁴, and St. Marys¹⁵. Companies such as Waterloo Brewing¹⁶, The Beer Store¹⁷, SunWing Airlines¹⁸, Maple Leaf Foods¹⁹, Sobeys²⁰, Indigo²¹, and iMedic, providing software to Kitchener’s paramedic services²², suffered severe cybersecurity incidents. Researchers from the University of Quebec identified at least 75 foreign digital operations of a malicious political or industrial nature directed at Canada since 2010²³. Canadian MPs were warned to change their email passwords after a cyberattack on the Canadian government²⁴. Amnesty International Canada was hit by a sophisticated cyberattack

⁹ <https://www.cbc.ca/news/canada/kitchener-waterloo/university-waterloo-ransomware-attack-1.6862175>

¹⁰ <https://kitchener.ctvnews.ca/u-of-g-student-upset-over-lack-of-transparency-after-cyber-breach-1.6096285>

¹¹ <https://www.cbc.ca/news/canada/kitchener-waterloo/listowel-wingham-hospital-cyberattack-systems-back-online-1.5337910>

¹² <https://www.sickkids.ca/en/news/archive/2022/update-on-sickkids-response-to-cybersecurity-incident/>

¹³ <https://www.cbc.ca/news/canada/london/city-of-woodstock-cyber-attack-email-data-blocked-1.5295452>

¹⁴ https://www.thestar.com/news/council/hackers-demanded-whole-hell-of-a-lot-of-money-hamilton-mayor/article_d4df9ce9-c6d8-5e85-97e8-97360198177d.html

¹⁵ <https://kitchener.ctvnews.ca/town-of-st-marys-cyberattack-cost-1-3m-including-290k-in-bitcoin-ransom-1.6354515>

¹⁶ <https://www.cbc.ca/news/canada/kitchener-waterloo/waterloo-brewing-cyberattack-1.5367658>

¹⁷ <https://www.cbc.ca/news/business/beer-store-cyberattack-1.5511164>

¹⁸ <https://www.ctvnews.ca/canada/sunwing-deals-with-delays-for-third-day-blames-cyber-breach-1.5868952>

¹⁹ <https://www.itworldcanada.com/article/maple-leaf-foods-suffers-it-outage-after-cybersecurity-incident/511986>

²⁰ <https://www.cbc.ca/news/canada/nova-scotia/sobeys-cyber-attack-25-million-1.6686838>

²¹ <https://www.cbc.ca/news/business/indigo-cyberattack-update-1.6747714>

²² <https://globalnews.ca/news/9288442/patient-software-ontario-paramedics-cyberattack/>

²³ <https://globalnews.ca/news/9130927/canada-cyber-spying-threats-study/>

²⁴ <https://www.thestar.com/politics/federal/2022/10/18/mps-warned-to-change-email-passwords-after-cyber-attack-on-canadian-government.html>

looking for Amnesty’s contacts²⁵. London Drugs²⁶ and the City of Hamilton²⁷ also recently experienced ransomware incidents. Each attack caused significant damage, including the unavailability of important systems, such as payroll or healthcare infrastructure, or the loss of potentially highly sensitive personal information.

One of the reasons for the significant rise in attacks is a lack of cybersecurity professionals who have the expertise to deploy and maintain secure computer and cyberphysical systems, give security training to the users of such systems, design and build cybersecurity technologies, perform forensic analysis after an attack to avoid future attacks, and work for governments to coordinate the response against cybersecurity incidents. The lack of cybersecurity professionals is reflected in the job postings of local cybersecurity companies. Magnet Forensics is (as of May 2025) hiring for eleven engineering-related positions, Arctic Wolf (whose R&D is placed in Waterloo) for 24 R&D-related and 35 Security Services-related positions, and eSentire for five security-related positions. On a global scale, cybersecurity giant Thales is looking for 3,160 positions, 61 of them in Canada. The RCMP’s cybercrime unit has almost one third of its positions unfilled²⁸. According to Cyberseek²⁹, the number of cybersecurity job openings in the U.S. is about 450K (May 2025). Job site Indeed lists more than 1,000 cybersecurity job openings for Canada³⁰. The (ISC)² Cybersecurity Workforce Study 2024³¹ estimates a global cybersecurity workforce gap of 4.8 million people.

In summary, there is a significant need for cybersecurity professionals locally, nationally, and globally, which is our reason for proposing a new professional, course-based Master of Cybersecurity and Privacy program at the University of Waterloo.

Consultation Process

The units involved in developing and operating this program are the Cheriton School of Computer Science (CS) and the Department of Combinatorics & Optimization (C&O) in the Faculty of Mathematics. The development of the proposed program was launched

²⁵ <https://www.cbc.ca/news/politics/amnesty-international-canada-cyber-attack-china-1.6674788>

²⁶ <https://www.cbc.ca/news/canada/british-columbia/london-drugs-ransomware-attack-1.7210754>

²⁷ <https://www.hamilton.ca/cyberincident>

²⁸ <https://www.cbc.ca/news/politics/cyber-crime-rcmp-ag-1.7223887>

²⁹ <https://www.cyberseek.org/heatmap.html>

³⁰ <https://ca.indeed.com/Cyber-Security-jobs>

³¹ <https://www.isc2.org/Insights/2024/10/ISC2-2024-Cybersecurity-Workforce-Study>

by the Dean of the Faculty of Mathematics, the Director of the Cheriton School of Computer Science, and the Chair of the Department of Combinatorics & Optimization in Fall 2021. Urs Hengartner (CS) and David Jao (C&O) are in charge of developing the program. A draft of the planned program's structure and admission requirements was circulated to the CS and C&O cryptography, security, and privacy faculty members and the graduate officers of CS, C&O, and the Faculty of Mathematics in September 2022. Afterwards, writing of this document started. The document is based on the proposal for the Master of Data Science and Artificial Intelligence (MDSAI) program launched in Fall 2019. The program-level learning outcomes in Section 2.1 and the mappings of program-level learning outcomes to GDLEs and courses in Section 2.2 were reviewed by the Centre for Teaching Excellence (CTE) in January 2023. Between March and May 2023, this document was presented at meetings of the C&O Graduate Committee, the C&O Department, the Math Faculty Graduate Studies Committee (MFGSC), the CS Graduate Committee, and the CS School Council. Feedback was also sought from the developers and current director of the MDSAI program, the Associate Dean Operations and Academic, the Associate Dean Computing, and the CS Director of Infrastructure. Between June 2023 and August 2024, the Dean of the Faculty Mathematics and the Director of the Cheriton School of Computer Science discussed operational details about the proposed program. The program was sent for approval by the C&O Graduate Committee and the CS Graduate Committee in October 2024. The C&O department approved the program proposal at a departmental meeting held on Oct 23, 2024. The School of Computer Science approved the program proposal at a School Council meeting held on Dec 11, 2024. The proposal was sent to the AQuE Office for further feedback in January 2025. The Financial Viability Evaluation started in March 2025 and ended with the Provost's approval of the proposal in March 2026. The Faculty of Math approved the program proposal at a Faculty Council meeting held on April 28, 2026. A virtual visit by two external reviewers was conducted May 25-29, 2026.

Co-operative and Experiential Education (CEE) was consulted during the development of this proposal, beginning in April 2022. An updated CEE feasibility study was completed in November 2024, and a program response from CEE was received in February 2025.

2. EVALUATION CRITERIA

2.1 Objectives of the program (QAF 2.1.2.1)

Program Objectives

The two objectives of the proposed Master of Cybersecurity and Privacy program are:

- To give students the theoretical and practical knowledge required for obtaining a cybersecurity position in industry or the public sector.

- To provide students with opportunities to engage with cybersecurity professionals in industry or the public sector through work-integrated learning.

The program-level learning outcomes were established by consulting various curriculum guidance documents on cybersecurity programs, with a focus on:

- The “Cybersecurity Curricula 2017 - Curriculum Guidelines for Post-Secondary Degree Programs in Cybersecurity”³² - a Report in the Computing Curricula Series from the Joint Task Force on Cybersecurity Education, consisting of the Association for Computing Machinery (ACM), IEEE Computer Society (IEEE-CS), Association for Information Systems Special Interest Group on Information Security and Privacy (AIS SIGSEC), and International Federation for Information Processing Technical Committee on Information Security Education (IFIP WG 11.8).
- The “Cybersecurity Curricular Guidance for Associate-Degree Programs”³³ report from ACM’s Committee for Education in Community Colleges, which is based on the Cybersecurity Curricula 2017.

The two reports provide cybersecurity curriculum guidance for two-year and four-year cybersecurity programs, respectively. Though there are other cybersecurity curriculum guidance documents, Cybersecurity Curricula 2017 is the dominant one (see Paul van Oorschot, “Coevolution of Security’s Body of Knowledge and Curricula”, IEEE Security, 19(5), 2021).

The first report introduces eight knowledge areas (data security, software security, component security, connection security, system security, human security, organizational security, and societal security) and associated learning outcomes. The second report builds on these knowledge areas and learning outcomes and introduces five essential competencies that represent cross-cutting concepts. A cross-cutting concept spans multiple knowledge areas. We use these five essential competencies as the basis for the first five program-level learning outcomes of our proposed Master of Cybersecurity and Privacy program, and extend the competencies as follows:

1. We make privacy a first-class citizen, in addition to cryptography and security.
2. We add a sixth program outcome that focuses on understanding of the fundamental cryptography, security, and privacy technologies.
3. We add a seventh program outcome that requires the development of strong communication skills.

Table 3 lists the program-level learning outcomes of the proposed Master of Cybersecurity and Privacy program.

³² <https://www.acm.org/binaries/content/assets/education/curricula-recommendations/csec2017.pdf>

³³ <https://ccecc.acm.org/files/publications/Cyber2yr2020.pdf>

Table 2: List of the program-level learning outcomes of the proposed Master of Cybersecurity and Privacy program and associated codes used later in this document.

Program-level Learning Outcomes	Program-level Learning Outcome Code
Outline via appropriate methods, and using industry-standard terminology, cybersecurity-related issues within an organization as they pertain to Confidentiality, Integrity, Availability, and Privacy.	I
Assess and respond appropriately to various risks that can affect the expected operation of information systems.	II
Investigate current and emerging cyberthreats and incorporate best practices to mitigate them.	III
Apply appropriate countermeasures to help protect organizational resources based on an understanding of how bad actors think and operate and based on ethical or legal privacy requirements.	IV
Discuss how changes in one part of a system may impact other parts of a cybersecurity ecosystem.	V
Demonstrate a thorough understanding of the fundamental cryptography, security, and privacy technologies and tools.	VI
Develop strong communication skills for a range of audiences.	VII

Degree Nomenclature

At the University of Waterloo, a Master's program may be a coursework program in which a student satisfies the degree requirements through the successful completion of courses, and in some programs, milestones. The program needs to include 4.0 units of courses, normally achieved as eight one-term (0.5 unit weight) courses accepted for graduate credit by the department for coursework only degrees.

The proposed Master of Cybersecurity and Privacy program requires taking nine (0.5 unit weight) courses, which is one course more than the stated minimum. The course-based MDSAI program recently established in the Faculty of Mathematics also requires nine courses. Other non-thesis-based Masters programs within the Faculty of Mathematics typically require seven courses plus a research paper, which represents a similar workload given the time and effort required for the research paper.

In the courses expected to be taken as part of the proposed program, students will acquire fundamental knowledge in cybersecurity, as required by the first program objective. Moreover, students in the co-op option will work in a cybersecurity position in industry or the public sector, addressing the second program objective.

Consistency with Waterloo's Mission and Strategic and Academic Plans

The University of Waterloo's mission is to advance learning and knowledge through teaching, research, and scholarship, nationally and internationally, in an environment of free expression and inquiry. The proposed program will contribute to the teaching part of the University's mission.

The University of Waterloo's "Waterloo at 100" strategic plan³⁴ describes a vision for the University in the year 2057 when it will turn 100. The plan lists several differentiators that the University should be known for in 2057 (if not yet already). One of them is "[t]he Future of Co-op and Work Integrated Learning". As part of this differentiator, the University promises to expand co-op and work integrated learning opportunities for undergraduate and graduate students and to evolve its programming to keep pace with social, technological and economic change. One of the stated goals of this differentiator is for the University to become "a global leader in graduate student work-integrated learning that is connected to [the University's] research". The proposed Master of Cybersecurity and Privacy program will expand co-op and work integrated learning opportunities for graduate students and will contribute to the University becoming a global leader in work-integrated learning. The strategic plan also lists five interconnected futures for humanity that are aligned with the University's academic and research strengths. Technological futures are one of the listed futures, and cybersecurity and privacy are explicitly listed as areas where Waterloo can contribute to shaping technology. This focus will ensure that globally leading faculty members in these areas will be available to teach the courses offered as part of the proposed program.

The number and proportion of graduates in programs who participated in at least one course with required experiential learning component(s) is listed as a performance metrics in the University's Strategic Mandate Agreement³⁵ with the Ministry of Colleges and Universities (MCU). The proposed program will contribute to increasing this performance metric.

The Faculty of Mathematics Strategic Framework³⁶ lists enriching the graduate program as one of its goals. One of the stated objectives that contributes to achieving this goal is attracting high-quality graduate students, with one of the mentioned options calling for an expansion of professional master's programs in impactful key areas that are of interest to diverse prospective student audiences. Another stated objective is supporting graduate work-integrated learning and connections to industry, with the two mentioned options calling for 1) an expansion of work-integrated learning opportunities that are responsive to the unique needs of graduate students, including

³⁴ <https://uwaterloo.ca/waterloo-100/>

³⁵ <https://uwaterloo.ca/institutional-analysis-planning/reports/strategic-mandate-agreement>

³⁶ <https://uwaterloo.ca/math/about/math-strategic-framework>

curricular integration in professional master's programs and 2) increasing opportunities for graduate student links with industry and supports for graduate students interested in industry paths. The proposed program is a course-based, professional Master's program in Cybersecurity and Privacy with a co-op option, which aligns the program with the mentioned objective and options.

2.2 Program Requirements (QAF 2.1.2.2)

Program Structure and Requirements

Applicants are expected to enroll as full-time students into the co-op option of the proposed Master of Cybersecurity and Privacy program. They can transfer into the regular option with approval of the Program Director. The regular option is expected to be chosen only by students who have completed an undergraduate degree that included either a co-op or internship experience related to cybersecurity and privacy, or who have Canadian industry experience related to cybersecurity and privacy.

Admissions will be made only for the Fall term. Students need to complete nine courses (0.5 units each) to graduate. As is the case for all students at the University of Waterloo, students must complete the Academic Integrity Module by the end of their first term. In addition, students in this program must complete an Ethics Workshop Milestone by completing a six-day workshop that will be offered in the Fall term.

The proposed program is carefully designed to let students learn about cryptography, security, and privacy individually as well as how the three areas complement and sometimes interfere with each other. Students will learn about these areas both from a technical and a non-technical point of view. Co-op will give the students the opportunity to apply their knowledge learned in the classroom in the real world. Moreover, some courses will provide for experiential learning as part of their assignments. For example, assignments will be designed to use the same tools that are also used in industry, decreasing the learning time needed by students when starting a co-op position or permanent employment and increasing attractiveness of graduates of the program to potential employers.

The proposed program consists of three mandatory core courses where students learn about both the fundamentals of cryptography, security, and privacy, and more recent developments in these three areas. Students who are already familiar with the material offered in (some of) the core courses can, with permission of the Program Director, replace a core course with an additional elective course.

Students also need to take (at least) six elective courses. In their elective courses, students can choose to get more insights about specific topics discussed in the core courses (depth) or learn about additional topics in these areas not covered in the core courses (breadth). Many of the offered elective courses are at the CS 800-level or CO

700-level, which are seminar courses, allowing students to familiarize themselves with the state-of-the-art research in the area. Once in the program and with the approval of the Program Director, one elective course may be replaced by a project course (CYBR 701) under the supervision of one or more faculty members in cryptography, security, or privacy (see Section 2.6). The project gives the student the opportunity to plan and carry out a research project. It gives a chance to students in the co-op option to study an idea/problem they may have encountered during their work term.

The courses in the program have been either specially designed for the proposed program or selected because of their obvious fit with the program's objectives and learning outcomes. As presented in Table 5-Table 8, all courses build depth and breadth of knowledge in cryptography, security, and privacy.

Students enrolled in the co-op program must complete at least one co-op work term, which is supported by Co-operative and Experiential Education (CEE), with the support of the Centre for Career Action (CCA), which provides training and individual student advising services. By default, students complete two work terms, both with the same employer, as suggested by Co-operative and Experiential Education (CEE) due to employers preferring longer durations for graduate-level co-op. However, with Program Director approval, students can choose to complete only a single work term. CEE will help prepare students for their first work term by holding preparatory workshops: WIL 601 Career Foundations for Work-Integrated Learning. Students will also have access to the WaterlooWorks job database to search and apply for jobs. Furthermore, CEE's International team will ensure students receive the required paperwork and guidance to apply for co-op related work permits prior to their arrival on campus. Before a student is allowed to start their work term, they are required to complete five courses successfully including the core course(s). Students may be required to take additional professional courses offered by CEE in the Fall and Winter term. During the Winter term, they will apply for their Spring work term.

Students must also complete an Ethics Workshop Milestone by participating in a six-day workshop that will usually be offered in the Fall term and scheduled to avoid conflicts with other courses. The Ethics Workshop Milestone will ensure students learn to think critically about the legal, ethical, and policy implications of cryptography, security, and privacy technologies.

To remain in good academic standing, students must maintain an average of 75%. Progress reports are not required; however, the Program Director will review students' overall average every term. Students whose average falls below the program's minimum requirements may be required to withdraw from the program. The procedure described in the University Calendar to handle such cases will be followed, with details provided in the student handbook for the proposed program. The minimum average required by the program is higher than the University's minimum requirement (70%).

Students must obtain a 70% in any given course for it to count towards their degree. This pass mark matches the 70% requirement in effect for all graduate students in the Cheriton School of Computer Science under current School policies.

All courses in the proposed program are classroom based. Classroom-based teaching provides more and better discussion opportunities for the topics presented in class and facilitates interaction both between instructors and students and among students. The Ethics Workshop Milestone will likely be offered online to make mandatory attendance easier for students.

The degree requirements for the proposed program are as follows:

1) Core Courses

All students are expected to take three core courses:

1. Applied Cryptography (CO 687)
2. Privacy, Cryptography, Network and Data Security (CS 659)
3. Software and Systems Security (CS 653)

CO 687 has been around for many years. CS 653 and CS 659 are new courses; both were officially approved in March 2025 and are being taught regularly now.

Students who have already taken a course whose contents significantly overlap with a core course may at the discretion of the Program Director be exempted from the core course and replace it with another elective course. Students can be exempted from multiple core courses.

2) Elective Courses

Students must take enough additional elective courses to fulfill the nine-course requirement. These courses must normally be taken from the list of selected graduate courses given below. Courses not on the list are subject to the approval of the Program Director. Courses that already exist are listed first, followed by courses that are currently being developed and still need to go through the required approval stages. In the meantime, these courses will be taught as pilot special topics courses, and students can take them with approval by the Program Director. Finally, there are two special courses.

A) Existing courses:

- Cryptography / Network Security (CS 758)
- Advanced Topics in Algorithms and Complexity (CS 860)
- Advanced Topics in Cryptography, Security, and Privacy (CS 858)

- Advanced Topics in Databases (CS 848)
- Mathematics of Public-Key Cryptography (CO 685)
- Quantum Information Processing (CS 768 / CO 681)
- Law, Tech, & Society (GGOV 664 / SOC 721)
The Faculty of Arts is supporting the inclusion of SOC 721 in the new program.
- Software Testing, Quality Assurance, and Maintenance (CS 647)
- Topics in Cryptography (CO 789)
- Topics in Quantum Information (CO 781)

B) New courses:

- Digital Forensics and Incident Response (CS 7xx)
- Foundations of Modern Cryptography (CS 6xx)
- Organizational Security (CYBR 601)
- Privacy in Computation and Communication (CS 7xx)
- Secure Programming (CS 6xx)

C) Special courses:

- Cybersecurity and Privacy Project (CYBR 701)
- Capstone project course (CS 6xx)

CO 781, CO 789, CS 848, CS 858, and CS 860 are special topics courses and can each be taken multiple times as long as it is a different topic each time.

Students must choose their elective courses such that the following conditions are met:

- a) At least one of the elective courses must be:
- Advanced Topics in Cryptography, Security, and Privacy (CS 858) (in the “Hardware and Software Systems” area),
 - Advanced Topics in Databases (CS 848),
 - Software Testing, Quality Assurance, and Maintenance (CS 647),
 - Digital Forensics and Incident Response (CS 7xx),
 - Privacy in Computation and Communication (CS 7xx), or
 - Secure Programming (CS 6xx).

This requirement avoids that students take a selection of

- Advanced Topics in Cryptography, Security, and Privacy (CS 858) (in the “Algorithms and Complexity” area),
- Mathematics of Public-Key Cryptography (CO 685),
- Quantum Information Processing (CS 768 / CO 681),
- Topics in Cryptography (CO 789),
- Topics in Quantum Information (CO 781),

- Cryptography / Network Security (CS 758), and
- Foundations of Modern Cryptography (CS 6xx)

as their only elective courses. The purpose of this requirement is to ensure that graduates of the proposed program can apply cryptography in an actual hardware or software product.

- b) At least one of the elective courses must be at the CO 700 or CS 800 level. These courses usually have students review and present research papers or work on a project that requires a formal write-up and presentation. These opportunities provide important communication skills training for the students in the proposed program.

3) Milestones

- **Ethics Workshop:** Students must complete a workshop on ethics in cybersecurity that will be offered usually in the Fall term. The structure of the workshop will be similar to HLTH 648M: Ethics and Privacy in HI, which is a required course for some graduate programs in Health. The plan is to have one online two-hour session per week during the first six weeks of the term (i.e., half the term). In total, the workshop will last twelve hours. Students will have to complete reading assignments before attending a lecture. During the lecture, the readings will be discussed. Students must also hand in commentaries or position papers. The students' work, including participation during a lecture, will be graded. A session recording can be made available to students who are unable to attend due to an emergency. The workshop is pass or fail based on a student's grades during the workshop; a failing student must re-take the workshop the following year.
- **Graduate WIL Reflective Report (Co-op option only):** The Graduate WIL Reflective Report requires students to critically reflect on their co-op work term experience, connecting academic knowledge to practical tasks and professional development. Students must complete one reflective report per required work term. The report is administered, evaluated, and graded by the Centre for Work-Integrated Learning.

Overview of Courses

Five of the listed elective courses are seminar topics courses where the topic taught in a term is chosen by the instructor teaching the course. Not all topics may qualify as an elective course for the proposed program.

- **Advanced Topics in Algorithms and Complexity (CS 860):** Some topics qualify; approval from the Program Director is required. Some qualifying topics that have been taught in the recent past and that likely will be taught again are:
 - Algorithms for Private Data Analysis

Additional topics may be developed according to an instructor's expertise.

- **Advanced Topics in Cryptography, Security, and Privacy (CS 858):** All topics qualify. Topics that have been taught in the recent past and that likely will be taught again are:
 - Cryptography and Blockchain Technologies
 - Internet Censorship and Surveillance
 - Mobile Platform Security
 - Offensive and Defensive Approaches to Software Security
 - Privacy Enhancing Technologies
 - Security and Privacy in Data Science
 - Security and Privacy of Machine Learning
 - Selected Topics in Systems Security
 - Surveillance and Privacy (cross-listed with the Department of Sociology and Legal Studies and co-taught by faculty members from this department and the Cheriton School of Computer Science)
 - User Authentication

Additional topics may be developed according to an instructor's expertise. Each CS 858 topic is assigned to either the "Hardware and Software Systems" area or the "Algorithms and Complexity" area.

- **Advanced Topics in Databases (CS 848):** Some topics qualify; approval from the Program Director is required. Some qualifying topics that have been taught in the recent past and that likely will be taught again are:
 - Building Privacy-aware Database Systems

Additional topics may be developed according to an instructor's expertise.

- **Topics in Cryptography (CO 789):** All topics qualify. Topics that have been taught in the recent past and that likely will be taught again are:
 - Cryptographic Protocols
 - Lattice-based Cryptography
 - Post-Quantum Cryptography

Additional topics may be developed according to an instructor's expertise.

- **Topics in Quantum Information (CO 781 / QIC 890):** Some topics qualify; approval from the Program Director is required. Some qualifying topics that have been taught in the recent past and that likely will be taught again are:
 - Applied Quantum Cryptography
 - Topics in Quantum-Safe Cryptography
 - Quantum Algorithms
 - Theory of Quantum Communication

Additional topics may be developed according to an instructor's expertise.

Several core and elective courses have been developed recently, are currently being developed, or will be developed to support the proposed program:

- **Privacy, Cryptography, Network and Data Security (CS 659):** This core course covers the basics of network, data, and AI security. It starts with concepts in cryptography (symmetric key encryption, public key encryption, signatures, hash functions, MAC) including basic mathematical concepts. It then covers securing and providing privacy in distributed systems, at the network layer, for data sharing, and in generative AI and agentic AI systems. This makes use of and extends the cryptographic concepts to applications. There are a midterm and a final exam. In addition, there are assignments/projects to complete. Examples of the homework assignments could include performing an inference (or other privacy) attack, implementing a cryptographic protocol (over the Ethereum blockchain), or attacking a generative AI protection mechanism such as alignment. This course was piloted in Winter 2023, formally approved in March 2025, and is being taught regularly now.
- **Software and Systems Security (CS 653):** This core course provides the basic foundations for understanding software and systems security. It covers the following topics (some of which include selected case studies): basics of security, program security, OS security, web programming and browser security, hardware-assisted security, generative AI and security, as well as non-technical aspects of systems security. Course assessments consist of short quizzes, several assignments including programming components, a final exam or assignment, and possibly a blog task where students write short articles on recent developments in software and systems security (like prominent recent incidents). This course was piloted in Spring 2023, formally approved in March 2025, and is being taught regularly now.
- **Digital Forensics and Incident Response (CS 7xx):** The goal of this course is to expose students to the forensic techniques required for acquiring, preserving, and analyzing digital evidence in the context of investigations related to computer crimes, such as ransomware infections, including both technical issues and policy/legal issues involved with the preservation of evidence. Students will gain expertise in a range of computer forensics tools (e.g., The Sleuth Kit, Volatility, Wireshark) required for collecting and analyzing digital evidence gathered from multiple sources, including file systems, volatile memory, and network traffic. In addition, students will be exposed to tools used for malware analysis and incident response, such as Cuckoo Sandbox and Google Rapid Response, as well as machine learning (ML) techniques increasingly used to triage, classify, and prioritize forensic artifacts at scale. The course covers the core forensics methodologies which, in light of the current legal framework, are necessary for the production of admissible evidence in court, including the challenges posed by generative AI, such as pinpointing AI-generated evidence (e.g., deepfakes, AI-authored phishing content) and assessing its impact on evidentiary admissibility. The course aims

to strike a balance between a) having students attending lectures to grasp key concepts, while; b) completing a mock multi-stage digital investigation scenario to progressively earn practical experience. The course has been designed with a work-integrated learning component in mind: in cooperation with an industry partner, eSentire, the course aims to connect classroom training on computer forensics with hands-on use of state-of-the-art forensic tools such as eSentire's Atlas XDR Investigator (AXI) platform. This course was piloted in Winter 2024. Once the course has been piloted twice, it will go through the required approval stages.

- **Foundations of Modern Cryptography (CS 6xx):** This course provides an introduction to principles and tools of modern cryptography. The course's main focus is on theoretical foundations of cryptography. Students completing this course will learn about the basic cryptographic primitives, how to reason about their security, and how to use them as part of larger protocols in a provably sound way. The course's modules cover private-key cryptography, public-key cryptography, an introduction to advanced public key-encryption primitives, commitment schemes, and zero-knowledge protocols. In addition, we examine how ML aids cryptanalysis and implementation attacks and how cryptographic tools (homomorphic encryption, MPC, differential privacy) enable privacy-preserving ML. Assessment is based on assignments and a final exam. The course was piloted in Fall 2023 and 2025 and is going through the required approval stages.
- **Organizational Security (CYBR 601):** This course is about non-technical security. It explores emerging issues related to cybersecurity management, governance, and control, which pose significant challenges to organizations in a networked environment. The course focuses on cybersecurity risks and investigates how companies can more effectively protect their digital assets from both internal and external threats. The School of Accounting and Finance (SAF) has an undergraduate course on cybersecurity (AFM 347) and has agreed to revise this course to fit the needs of the proposed program. The revised course will be taught both to SAF undergraduates and to students in the proposed program, where the latter need to achieve additional learning outcomes.
- **Privacy in Computation and Communication (CS 7xx):** This course introduces students to the importance of preserving privacy when designing and implementing systems that communicate and process information, as well as a variety of specific techniques to accomplish this. After taking this course, students should be able to: Describe what privacy is and why it is important, evaluate privacy implications of communication and computation systems, describe (and for some, implement) technologies that can be used to, and enhance the privacy of the users and the subjects of such systems, and use tools such as git and docker to create reproducible code artifacts. The course will begin with a module introducing privacy: different notions of privacy, why privacy is important, the effect of having or not having privacy on individuals and societies, privacy laws and regulations around the world. The remainder of the course will be a

sequence of 3 to 5 modules covering technologies and techniques that can be used to enhance and protect privacy in a range of settings. Such modules may include: Privacy-preserving communication, censorship resistance, zero-knowledge proofs, computing on encrypted data, multiparty computation, computing using Trusted Execution Environments, Web privacy, differential privacy, ML/AI privacy, and mobile privacy. The ML/AI privacy module could include sections such as the following. (1) Introduction to ML privacy, different settings, and threat models: This section explains different types of ML training settings (federated learning, standalone training, MLaaS) and an overview of different possible threats in each case. It introduces the blackbox vs. whitebox threat models. (2) Confidentiality during ML training and inference: Data accessible to a service provider and proprietary models can be directly leaked and so learned by users; this section demonstrates how to use the private computation techniques discussed earlier in the course to provide private inference and training. This section also discusses model extraction attacks and potential defences, such as watermarking and ownership verification. (3) Inference risks in ML/AI: Data exposed to a model when trained can also be indirectly leaked via inference attacks that exploit model observables to infer unobservable sensitive information specific to a particular individual. This section describes different types of inference attacks (membership, attribute, property, and data reconstruction) and attack methodologies. (4) Interaction of privacy with other protection mechanisms: This section discusses the interaction between privacy and other ML/AI features such as fairness, explainability, and adversarial robustness. Assessment will be primarily based on assignments, which may have written and/or implementation components. The course was piloted in Spring 2024 and Fall 2025 and is going through the required approval stages.

- **Secure Programming (CS 6xx):** This course covers how software engineers can build secure applications from the ground up, including common vulnerabilities and how to avoid or safeguard against them. Topics include software supply chain risks arising from reused and third-party code; static and dynamic analysis, fuzz testing, and related tools for detecting security issues during development; and vulnerability classes introduced by AI-assisted coding tools, including how these tools can introduce insecure patterns, hallucinated dependencies, or subtly broken logic, how developers can review and validate AI-generated code before it ships, and how generative AI itself is used to detect vulnerabilities. Finally, the course addresses vulnerabilities that creep in during release and how to plan for them. The course was piloted in Winter 2025 and Winter 2026 and is going through the required approval stages.

There are two special courses:

- **Cybersecurity and Privacy Project (CYBR 701):** A student will work individually with one of the program's faculty members (see Section 2.6) on a project. This project requires approval by the Program Director. Upon completion, the supervising faculty

member will assess the project and assign a grade. This course is currently going through the required approval stages.

- **Capstone project course (CS 6xx):** After an initial project identification and refinement effort, students are instructed on and gain experience in teamwork, planning, communication, critical thinking, requirements definition, and agile development. Teams must use modern software tools and methods, as appropriate to their project. User-centred design and test-driven development will be emphasized. Ethical and legal implications must be considered, as appropriate to the project. Guidance will be provided from the start (forming teams, picking projects), through development work, to a culminating symposium. Teams will be composed of three to five students and projects may range from new software systems, to contribution to existing open-source projects, to research projects. There will be in-class instruction on several topics, but the emphasis will be on the project work with guidance from the instructor, and there will not be lectures every week. Project work will lead up to a demo day near the end of the term. This demo day will include technical presentations from each group, providing an opportunity to learn and practice technical presentation skills. The Cheriton School of Computer Science has offered this course as a pilot course to undergraduate students. If the course is turned into a regular course, the plan is to make it also available to graduate students in the proposed Master's program. The Faculty of Math is developing a capstone project course independently of the proposed program. The plan is to integrate this course into the program.

Fulfillment of Program Outcomes

Table 3 lists the mapping of the program-level learning outcomes of the proposed program to the Graduate Degree Level Expectations (GDLEs) of the University of Waterloo.

In a separate effort (not included in this proposal), we established a map between the learning outcomes of the individual courses offered for this program and the learning outcomes developed in the two reports mentioned in Section 2.1. The conclusion is that our courses provide good coverage of the learning outcomes associated with the eight knowledge areas and the individual knowledge units that are part of a knowledge area.

Table 3: Mapping of the program-level learning outcome codes (see Table 2) to the University of Waterloo's Graduate Degree Level Expectations (GDLEs, see

Table 4).

Program-level Learning Outcome Code	GDLEs
I	1, 2Ai, 2Aii, 2Aiii, 2Bi, 3, 4Ai, 4B
II	1, 2Aii, 2Aiii, 2Bi, 3, 4Aii, 4B, 4D, 6
III	2Aii, 2Aiii, 2Bi, 4Ai, 4Aii, 4B, 4D, 6
IV	2Aii, 2Aiii, 2Bi, 4Aii, 4C
V	2Aii, 2Aiii, 2Bi, 3, 4D, 6
VI	1, 2Ai
VII	5

Table 4: The University of Waterloo's Graduate Degree Level Expectations (GDLEs) for a Master's program.

Graduate Degree Level Expectations - Master		Shortcut used in Table 3
1. Depth and Breadth of Knowledge	A systematic understanding of knowledge and a critical awareness of current problems and/or new insights, much of which is at, or informed by, the forefront of their academic discipline, field of study, or area of professional practice;	1
2. Research and Scholarship	A conceptual understanding and methodological competence that:	2
	i) Enables a working comprehension of how established techniques of research and inquiry are used to create and interpret knowledge in the discipline;	2Ai
	ii) Enables a critical evaluation of current research and advanced research and scholarship in the discipline or area of professional competence;	2Aii
	iii) Enables a treatment of complex issues and judgments based on established principles and techniques; and,	2Aiii
	On the basis of that competence, has shown at least one of the following:	
	i) The development and support of a sustained argument in written form; or	2Bi
	ii) Originality in the application of knowledge.	2Bi
3. Level of Application of Knowledge	Competence in the research process by applying an existing body of knowledge into the critical analysis of a new question or of a specific problem or issue in a new setting.	3
4. Professional Capacity/Autonomy	a. The qualities and transferable skills necessary for employment requiring:	4A
	i) The exercise of initiative and of personal responsibility and accountability;	4Ai
	ii) Decision-making in complex situations;	4Aii
	b. The intellectual independence required for continuing professional development;	4B
	c. The ethical behavior consistent with academic integrity and the use of appropriate guidelines and procedures for responsible conduct of research; and	4C
	d. The ability to appreciate the broader implications of applying knowledge to particular contexts.	4D
5. Level of Communications Skills	The ability to communicate ideas, issues and conclusions clearly.	5
6. Awareness of Limits of Knowledge	Cognizance of the complexity of knowledge and of the potential contributions of other interpretations, methods, and disciplines.	6

Table 5 shows how the three core courses of the proposed program address the program-level learning outcomes of the proposed program.

Table 5: Mapping of program-level learning outcome codes (see Table 2) to the proposed program's core courses. (A = The outcome is addressed and is formally assessed; C = The outcome is addressed but not assessed; N = The outcome is not addressed)

Program-level Learning Outcome Code	Applied Cryptography (CO 687)	Privacy, Cryptography, Network and Data Security (CS 659)	Software and Systems Security (CS 653)
I	A	A	A
II	A	A	A
III	A	A	A
IV	A	A	N
V	N	A	A
VI	A	A	A
VII	A	A	A

Table 6 shows how the existing elective courses of the proposed program address the program-level learning outcomes of the proposed program.

Table 6: Mapping of program-level learning outcome codes (see Table 2) to the proposed program's existing elective courses. (A = The outcome is addressed and is formally assessed; C = The outcome is addressed but not assessed; N = The outcome is not addressed)

Program-level Learning Outcome Code	Cryptography / Network Security (CS 758)	Advanced Topics in Algorithms and Complexity (CS 860)	Advanced Topics in Security, Cryptography, and Privacy (CS 858)	Advanced Topics in Databases (CS 848)	Mathematics of Public-Key Cryptography (CO 685)	Quantum Information Processing (CS 768 / CO 681)	Law, Tech, & Society (SOC 721)	Software Testing, Quality Assurance, and Maintenance (CS 647)	Topics in Cryptography (CO 789)	Topics in Quantum Information (CO 781)
I	A	A	A	A	A	A	N	A	A	A
II	A	A	A	A	A	A	N	A	A	A
III	A	A	A	A	A	A	N	A	A	A
IV	N	N	A	N	N	N	A	N	N	N
V	N	N	A	N	N	N	A	N	N	N
VI	N	N	N	N	N	N	N	N	N	N
VII	A	A	A	A	A	A	A	A	A	A

Table 7 shows how the planned elective and special courses of the proposed program address the program-level learning outcomes of the proposed program.

Table 7: Mapping of program-level learning outcome codes (see Table 2) to the proposed program's planned elective and special courses. (A = The outcome is addressed and is formally assessed; C = The outcome is addressed but not assessed; N = The outcome is not addressed)

Program-level Learning Outcome Code	Digital Forensics and Incident Response (CS 7xx)	Foundations of Modern Cryptography (CS 6xx)	Organizational Security (CYBR 601)	Privacy in Computation and Communication (CS 7xx)	Secure Programming (CS 6xx)	Project course with faculty member (CYBR 701)	Capstone project course (TBD)
I	A	A	A	A	A	A	A
II	A	A	A	A	A	A	A
III	A	A	A	A	A	A	A
IV	N	N	A	A	N	A	A
V	N	N	A	A	N	A	A
VI	N	N	N	N	N	N	N
VII	A	A	A	A	A	A	A

Table 8 shows how the co-op and ethics workshop components of the proposed program address the program-level learning outcomes of the proposed program.

Table 8: Mapping of program-level learning outcome codes (see Table 2) to the proposed program's co-op and ethics workshop components. (A = The outcome is addressed and is formally assessed; C = The outcome is addressed but not assessed; N = The outcome is not addressed)

Program-level Learning Outcome Code	Co-op Component	Ethics Workshop
I	C	N
II	C	N
III	C	N
IV	C	N
V	C	A
VI	C	N
VII	C	A

2.3 Program Requirements for graduate programs only (QAF 2.1.2.3)

Program Length

We expect most students to complete the co-op option in five terms (20 months), which includes three study terms and two work terms. Students can choose to reduce the number of work terms to a single one, which would shorten their program to four terms (16 months). Full time students in the regular option are expected to complete the degree in three terms (one year).

The proposed program is a nine-course program. Normally, full-time regular students will take three courses each term and thus can complete the course requirements in three terms. This course load is reasonable given that students will not have research, TA, or other commitments related to this degree.

Please see Table 9 for a summary of the program's structure.

Table 9: Table summarizing the program's structure for full-time co-op or regular students. Co-op students opting for a single work term take their final elective courses in their second Fall term.

Term	Co-op option	Co-op option with Project course (by permission)	Regular option (by permission)	Regular option with Project course (by permission)
1 Fall	Three core	Three core	Three core	Three core

2	Winter	Three electives	Three electives	Three electives	Three electives
3	Spring	Co-op work term	Co-op work term	Three electives	Project course Two electives
4	Fall	Co-op work term	Co-op work term	n/a	n/a
5	Winter	Three electives	Project course Two electives	n/a	n/a

The first academic term allows students to build strong foundations in security, privacy, and cryptography. Moreover, students get an overview of many different topics in these three areas and can use this knowledge to decide about their elective courses in the second and third academic term. The elective courses allow the students to deepen their knowledge. Alternatively, students can explore a topic through taking a project course.

The program structure gives students two terms to build their conceptual understanding before applying their knowledge to real-world problems during their co-op work terms. The mandatory co-op work term reflective report also provides students the opportunity to develop their presentation and writing skills, reflection, critical analysis, and synthesis. When students return for the final academic term, they continue to build breadth and depth of knowledge by either taking the remaining three elective courses or a project course.

Once in the program, full-time students may apply to replace one course in the final term of the program by a project-based course. This project requires approval by the Program Director, and at least one of the program's faculty members (see Section 2.2) must supervise the student.

According to the University of Waterloo's Residence Requirements, the minimum residence requirements for a Master's program is three terms, of full-time enrolment. Since we expect full-time regular and co-op students in the proposed program to complete the program within three or five terms, respectively, they will meet the minimum residence requirements to graduate with a Master from the University of Waterloo.

Two-thirds Graduate-level Courses Requirement

All courses offered in the proposed program are graduate-level courses at the 600-, 700-, or 800-level, which meets the requirement that two thirds of the taken courses are graduate-level courses.

2.4 Assessment of teaching and learning (QAF 2.1.2.4)

The overall quality of the program and whether its objectives (see Section 2.1) are being achieved will be monitored in various ways, such as:

- Performance indicators: Measurement of different performance indicators, such as graduation rates and lengths, number and strength of applications for admission to the program, and student satisfaction.
- Program reputation: Reputation of the program in industry and academia.
- Co-op and work experiences: Types of co-op and work experiences achieved by students and graduates of the program, respectively, including employment rates.
- Course offerings: Number and types of courses offered each term and year and the experiential learning opportunities offered in the courses.

The students' level of achievement in meeting the program-level learning outcomes of the program will be evaluated in courses by using a mix of assignments, projects, presentations, midterm exams, final exams, and reflective reports. Although the types of evaluations may vary from year to year, between instructors, and the delivery of the course, Table 10 summarizes the assessments that may be used to evaluate whether the student has achieved the program-level learning outcomes.

The assignments, projects, reports, and presentations can be assigned individually or in groups; the latter being important for developing relationships with students that have different academic backgrounds, developing their teamwork skills, and for integrating knowledge from two or more disciplines.

As indicated in Section 2.2, the students' performance will also be monitored on a term-by-term basis by the Program Director.

Data on co-op work experiences and employer evaluations will be collected regularly to assess students' successes in the experiential learning part of the program. Exit surveys will be conducted to further evaluate students' ability to find employment upon graduation and collect their feedback on the program. At the end of each course, students will have the opportunity to assess the course content and the instructor's delivery, thus providing feedback that can be used for future improvement of the course and, more generally, of the program. Program reputation data will be gathered by periodically sending surveys to cybersecurity leaders in industry, the public sector, and academia and by monitoring cybersecurity program rankings established by third parties, providing information for improvement of the program.

Any revisions to the program resulting from the collected data will, following the Faculty's governance mode for cross-faculty credentials, need to be approved by the steering committee (see Section 2.6), in consultation with the Cheriton School of

Computer Science and the Department of Combinatorics and Optimization, then be brought to the Mathematics Faculty Graduate Studies Committee (GSC), Mathematics Faculty Council, and Senate Graduate & Research Council (SGRC) for approval.

Program Outcomes	Assessments					
	Assignments	Project and/or Reports	Presentations	Midterm Exams	Final Exam	Reflective Report
Outline via appropriate methods, and using industry-standard terminology, cybersecurity-related issues within an organization as they pertain to confidentiality, Integrity, Availability, and Privacy.	x	x	x	x	x	x
Assess and respond appropriately to various risks that can affect the expected operation of information systems.	x	x	x	x	x	x
Investigate current and emerging cyberthreats and incorporate best practices to mitigate them.	x	x	x	x	x	
Apply appropriate countermeasures to help protect organizational resources based on an understanding of how bad actors think and operate and based on ethical or legal privacy requirements.	x	x	x	x	x	x
Discuss how changes in one part of a system may impact other parts of a cybersecurity ecosystem.	x	x	x	x	x	x
Demonstrate a thorough understanding of the fundamental cryptography, security, and privacy technologies and tools.	x	x	x	x	x	
Develop strong communication skills for a range of audiences.	x	x	x			x

Table 10: Assessments that may be used to measure the outcomes of the proposed program.

2.5 Admission Requirements (QAF 2.1.2.5)

Admission Requirements

Applicants are expected to have an Honours Bachelor's degree or equivalent in computer science, mathematics or a related field, with a minimum overall average of 78% from a recognized university. They are also expected to have relevant experience

or background knowledge in at least one of: Operating Systems, Distributed Systems, Cryptographic Implementation and Deployment, and/or Networking and Computer Programming.

The stated conditions ensure that students will have sufficient knowledge to successfully take the three mandatory core course and a number of elective courses sufficient to satisfy the nine-course course requirement and thereby achieve the program-level learning outcomes and program objectives.

Applicants are required to submit a resume/CV, academic transcripts, three references (at least two academic), and a Supplemental Information Form (SIF) containing responses to questions specific to the program. Applicants also need to meet the University of Waterloo's English Language Proficiency requirements as detailed in the Graduate Studies Academic Calendar: the scores for Computer Science will be required.

Applicants are not required to have prior work experience.

Applicants lacking in background may be admitted with probationary admission conditions and required to take and earn a grade of at least 78% in specified qualifying courses. Such courses will not count towards the nine required courses for program completion, but will count towards per-course tuition.

Full-time and Part-time

Students are normally expected to pursue full-time study in the proposed program. Part-time study requires approval from the Program Director as well as a transfer into the regular option. However, the course offerings are not designed for part-time studies. All courses will be delivered in-person and on campus. The courses are typically not available during evenings or weekends and are not delivered in concentrated modules.

We expect that the few students in the regular option, including part-time students, already have cybersecurity-related job experience, so providing experiential learning opportunities is less crucial for them. They can still benefit from experiential learning opportunities offered in different courses (see Section 2.2).

2.6 Resources (QAF 2.1.2.6)

Number and Quality of Core Faculty

Table 11 and Table 12 contain a list of 31 faculty members from the Cheriton School of Computer Science, the Department of Combinatorics and Optimization, and other units likely to teach courses offered for the proposed program. In addition, students who want to replace a course with a project would likely work with one of the listed faculty

members. The listed faculty members are also likely to be involved in the administrative oversight of the program (e.g., admission and steering committees). In addition, one of the listed faculty members will be chosen by the Dean of the Faculty of Mathematics to be Program Director of the proposed Master's program in Cybersecurity and Privacy.

The School of Computer Science recently hired Dr. Stacey Watson for a lecturer position that is targeted at developing and teaching courses that will be offered for the proposed program. The Department of Combinatorics and Optimization recently hired Dr. Sam Jaques for a faculty position in cryptography. Finally, the Faculty of Mathematics is committed to hiring one or two additional professorial positions if needed for the proposed program, for example due to the new courses having large enrolment numbers.

Table 11: List of faculty members in the Cheriton School of Computer Science or the Department of Combinatorics and Optimization who can teach courses offered for the proposed program.

Cheriton School of Computer Science	Department of Combinatorics and Optimization
Yousra Aafer	David Gosset
N. Asokan	David Jao
Diogo Barradas	Samuel Jaques
Richard Cleve	Debbie Leung
Robin Cohen	Alfred Menezes
Ian Goldberg	Michele Mosca
Sergey Gorbunov	Ashwin Nayak
Maura Grossman	Douglas Stebila
Mohammad Hajiabadi	
Xi He	
Urs Hengartner	
Gautam Kamath	
Florian Kerschbaum	
Sujaya Maiyya	
Meiyappan Nagappan	
Stacey Watson	
Meng Xu	
Hongyang Zhang	

Table 12: List of faculty members not in the Cheriton School of Computer Science and the Department of Combinatorics and Optimization who can teach courses offered for the proposed program.

Name	Unit
W. Alec Cram	School of Accounting and Finance
Norbert Lütkenhaus	Department of Physics and Astronomy

Adam Molnar	Department of Sociology and Legal Studies
Jennifer R. Whitson	Department of Sociology and Legal Studies

Together the group of faculty members listed in Table 11 and Table 12 cover all the areas of expertise that are relevant for this program. Significant efforts have already been put in place by many of the listed individuals to design and teach new courses that will be offered for this program (see Section 2.2). The listed faculty members publish papers in the top journals and conference proceedings in cryptography, security, privacy, and related fields and supervise many students working in these areas. Therefore, students will have experts teaching them the various courses listed in the program and will be exposed to the latest research advances in the field.

Table 12 lists several faculty members who are not in the Faculty of Mathematics and who can teach courses offered for the proposed program. All listed faculty members have agreed to open their courses of interest to the proposed program for students in the program, and their units have agreed to listing their courses as elective courses (see Section 2.2) for the program. (Some of the approval has been informal since some courses are still being developed.)

Teaching by Non-core Faculty Members

We expect that only a small number of courses that are part of the proposed program will be taught by non-core faculty members. All courses at the 700- and 800-level will be taught by core faculty members. Some courses at the 600-level, in particular CS 653 and CS 659, may sometimes be taught by non-core faculty members. These instructors are usually senior PhD students or postdoctoral fellows of the CrySP (Cryptography, Security and Privacy) research group in the Cheriton School of Computer Science, who have audited a previous offering of the course and whose teaching is supervised by a core faculty member.

Supervision of Experiential Learning Opportunities

Experiential learning opportunities offered as part of a course will be supervised by the core faculty member in charge of the course offering. Experiential learning opportunities as part of co-op will be supervised by the Program Director.

Planned Use of Existing Human, Physical and Financial Resources

In addition to taking courses and being on co-op, students will have several other opportunities to foster their development both as a graduate student in the proposed program and as a graduate student in general, acquiring skills that will be crucial in a student's professional career. Namely, students will be invited to events relevant to their program, such as weekly research seminars taking place in Waterloo's

Cybersecurity and Privacy Institute (CPI), the Cybersecurity and Privacy Institute Annual Conference, the yearly Cybersecurity and Privacy Institute Graduate Student Conference, thesis presentations by CPI PhD or research-based Master students, and general events taking place in the Faculty of Mathematics, such as research seminars or distinguished lectures. These events will provide academic and non-academic networking opportunities and will allow students to become familiar with current research both in the area of the proposed program and in general.

Moreover, students will be encouraged to take advantage of workshops offered to the University community (workshops offered by the Centre for Career Action, the Centre for Teaching Excellence, Graduate Studies and Postdoctoral Affairs (GSPA) e.g. on applying for fellowships, etc.) both during orientation and in email communication. In the same way, students will be made aware of other university services, such as AccessAbility Services, Counselling Services, Graduate Student Association, Health Services, Student Success Office, Velocity, Library Services, Office of Indigenous Relations, and the Writing and Communication Centre. In particular, the Centre for Career Action and Velocity will be of significance to our students as these resources have workshops regarding searching and applying for meaningful work experiences, as well as building entrepreneurial skills.

To further support their educational experience, students will have access to resources in the Faculty of Mathematics such as the Math Graduate Student Association, Math Equity Office, Women in Mathematics committee, and Women in Computer Science (WiCS) at the University of Waterloo. Services relevant to Math graduate students will be highlighted during the general Math Graduate Orientation event as well as the program-specific Graduate Orientation events taking place at the beginning of the Fall term. A program-specific student handbook will also be created.

Students must be physically present to take courses on campus, which provides them with the opportunity to engage with other students having different academic backgrounds, in such a way that students can become learning resources for one another.

Please see Section 2.7 for details on financial assistance.

Library Support, Information Technology Support, Laboratory Access and Space

Students in this program will receive library support through Rebecca Hutchison, who is the Library Liaison for Computer Science and Combinatorics & Optimization. Please see the appendix for a detailed statement regarding this support.

Information technology support for students in the program will be provided by the University of Waterloo's Information System and Technology (IST) group and staff in the Mathematics Faculty Computing Facility (MFCF) and the Computer Science

Computing Facility (CSCF). Students will have a university-level account that gives them access to Microsoft 365 for email, cloud storage, and document editing, the University Library, and other on-campus platforms related to courses and education. Students will also have accounts in the MFCF and CSCF systems, giving them access to specialized software and compute servers. Examples of installed software are Jupyter, Matlab, Python, and R. Licenses for additional software products such as IDA Pro or Magnet Forensics will be acquired if needed by a course. The compute servers include several high-performance Linux clusters and GPU computing systems. These servers allow students to run virtual machines needed for the safe study and exploitation of software vulnerabilities. Some of the work-oriented learning components offered by the courses in the proposed program may rely on AWS-based software provided by industry partners; the Faculty of Mathematics or the Cheriton School of Computer Science will cover the cost charged by Amazon for running this software if necessary.

The Faculty of Mathematics has committed to providing lounge space, meeting rooms, and lab space for students in the proposed program. The lounge space will increase social interactions between students. The meeting rooms will facilitate collaboration among students, like for course projects. Each seat in the lab space will come with appropriate computational resources. In addition, the proposed program will require an office for the Program Director and Graduate Program Administrator (see below).

Additional Institutional Resource Commitments

The Faculty of Mathematics has committed to providing monetary and logistical support for organizing events that are held exclusively for students in the proposed program. These events contribute to ensuring that the Master of Cybersecurity and Privacy program will offer a unique experience to its students. A planned, yearly event is a meeting with cybersecurity professionals from industry, resulting in networking opportunities.

Because this program is not offered in a single academic unit but is instead supported by two units, it will operate as a faculty-based program housed in the Faculty of Mathematics. According to the Faculty's governance model for cross-faculty credentials, the Dean of Mathematics appoints a Program Director for the proposed program. The Program Director is a faculty member in the Cheriton School of Computer Science or the Department of Combinatorics and Optimization who teaches courses for the proposed program. There is also a steering committee consisting of the Program Director, either the Executive Director or the Associate Director of the University of Waterloo's Cybersecurity and Privacy institute, and a faculty member from the Cheriton School of Computer Science (if the Program Director is from C&O) or the Department of Combinatorics and Optimization (if the Program Director is from CS) who teaches courses for the proposed program. If needed due to workload demands, such as student admissions, the Dean of Mathematics also appoints an Associate Program Director.

The program will require and be assigned commensurate administrative staff support for its operations, which shall normally include a full-time Graduate Program Administrator or equivalent.

2.7 Resources for graduate programs only (QAF 2.1.2.7)

Evidence of Faculty Members having Required Expertise

The background, expertise, and experiences of the faculty members listed in Table 11 and Table 12 will contribute substantively to the proposed program. Please see Volume II: Curricula Vitae of the Faculty for more information regarding the faculty's background and Section 2.8 for additional evidence of the faculty having the recent research needed to sustain the program.

Financial Assistance

Students in the proposed program will not receive financial support.

With the help of the Cybersecurity and Privacy Institute (CPI), we will approach industry partners and ask them to sponsor entrance scholarships. The CPI has successfully created similar scholarships in the past, such as the Cybersecurity and Privacy Excellence Graduate Scholarship (\$10K, one or two per year) and the Cybersecurity and Privacy Institute Undergraduate Awards (\$1K, several per year).

Since students within the proposed program are not research-based, there are no provisions for funding to travel to conferences.

Supervisor Loads

The proposed program is course-based so requires no thesis supervision. The project course (see Section 2.2) requires supervision by a faculty member. Students should contact faculty members with whom they want to execute a project. Faculty members unable to take on a project will deflect students to other faculty members doing similar research.

2.8 Quality and other indicators (QAF 2.1.2.8)

All faculty members listed in Table 11 and Table 12 have PhDs in computer science, computer engineering, information systems and computer engineering, electrical engineering and computer science, computing and information systems, machine learning, mathematics, combinatorics & optimization, physics, management, political science, sociology, or clinical/school psychology, which are consistent with the program objectives and learning outcomes for the Master of Cybersecurity and Privacy. Many of

the faculty members are cross-appointed with other academic units in the Faculty of Mathematics and have collectively taught over a hundred graduate courses relating to cryptography, security, or privacy.

In most of computer science, including security, cryptography, and privacy, conferences are the main venues for the publication of research results. Edurank³⁷ ranks computer science departments according to the number of papers their faculty members published in top venues, weighted by citation count and share of authorship, with more recent publications given higher weight. In the “Cybersecurity” category, the University of Waterloo is ranked 19th worldwide, 16th in North America, and 2nd in Canada. (All numbers from edurank.org were retrieved in April 2025.) Collectively, the faculty members listed in Table 11 and Table 12 published 58 papers in the three premier security conferences CCS, IEEE S&P, and USENIX Security. For the “Blockchain and Cryptography” category, the University of Waterloo is ranked 8th worldwide, 7th in North America, and first in Canada. Collectively, the faculty members listed in Table 11 and Table 12 published 16 papers in the two premier cryptography conferences CRYPTO and EuroCrypt. Edurank.org does not provide ranking information for the “Privacy” research area. Collectively, the faculty members listed in Table 11 and Table 12 have published 25 papers in the Privacy Enhancing Technologies Symposium, the premier privacy venue, since 2018. (Number computed in April 2025.)

The faculty members listed in Table 11 and Table 12 also publish in top conferences, as defined by CSRankings.org³⁸, that are not in security and cryptography, such as CHI, FOCS, ICML, MobiCom, MobiSys, NeurIPS, SIGMOD, SODA, and VLDB, providing for interdisciplinary opportunities to students in the proposed program.

The Cheriton School of Computer Science is home of the Canada Research Chair in Privacy Enhancing Technologies (Dr. Ian Goldberg) and the NSERC/RBC Chair in Data Security (Dr. Florian Kerschbaum).

Many of the faculty members listed in Table 11 and Table 12 have collaborated with industry partners. The launch of the Cybersecurity and Privacy Institute (CPI) in 2018 has deepened and broadened the faculty members’ connections with industry partners.

3. PROJECTED ENROLMENT

The first intake of students is planned to take place in Fall 2027.

³⁷ <https://edurank.org/>

³⁸ <https://csrankings.org/>

It is expected that the program will admit 35 students per year for the first two years, ramping up to 60 students per year in the long run (see Table 13). Admission targets will be set on a yearly basis and will depend on quality of the applications, number of students in undergraduate courses co-taught with courses in the proposed program, and instructor availability. The goal is to have an equal split of domestic and international students. We expect most students to be full-time (see Section 2.5). The presented numbers assume that all students are on co-op, that is, students will be enrolled full-time in the Fall and Winter term and the following Fall term.

Table 13: Projected Student Intake and Enrolment

Academic Year	FULL-TIME				PART-TIME			
	Year One Intake		Annualized FT Enrolment		Year One Intake		Annualized PT Enrolment	
	Domestic	International*	Domestic	International	Domestic	International	Domestic	International
2027/28	17.5	17.5	11.6	11.6	0	0	0	0
2028/29	17.5	17.5	15.6	15.6	0	0	0	0
2029/30	20	20	20.1	20.1	0	0	0	0
2030/31	22.5	22.5	22.3	22.3	0	0	0	0
2031/32	25	25	24.9	24.9	0	0	0	0
2032/33	27.5	27.5	27.6	27.6	0	0	0	0
2033/34	30	30	30.2	30.2	0	0	0	0

* International fee-paying students

Appendix A - New Program Report on Library Support for the Proposed Master of Cybersecurity and Privacy Program

January 2023

1. Level of support summary

The Library provides a high level of support for the existing graduate courses offered through the School of Computer Science and the Department of Combinatorics & Optimization in the Faculty of Mathematics, and anticipates that this high level of support will extend to the proposed Master of Cybersecurity and Privacy Program. Students and faculty members in the proposed program will be encouraged to make use of the teaching, learning and research support services and expertise the Library offers. Current collection strengths would support the new program so new collections are needed at this time. Should new subject areas emerge or if research intensity develops in subject areas currently outside of collection priorities, the Library is committed to engaging in discussions to articulate collection needs and assess funding implications.

2. Strengths of support provided collections

The University of Waterloo Library curates a collection with particular strengths in computer science, combinatorics, and optimization which includes research databases, full text journals, monographs, numeric data, and government publications. Texts on cryptography, security, and privacy have been collected as appropriate since 2007 to the Research Level³⁹. Ongoing Library subscriptions that are particularly useful to graduate students in the Program include the ACM, Knovel, O'Reilly Higher Education, Springer (including Lecture Notes in Computer Science), and Taylor & Francis ebook collections; the MathSciNet, Scopus, and Web of Science databases; and the ACM, IEEE, and Synthesis Digital Libraries. Access is also provided to many journals from publishers such as the American Mathematical Society (AMS), Nature, and the Society for Industrial Applied Mathematics (SIAM). The Library's full-text resources are also linked through Google Scholar, which directly connects students to our subscriptions via the search engine.

In addition to the local collection, the University of Waterloo Library partners with other Ontario and Canadian universities to further expand access to information on cybersecurity and privacy research through consortial purchasing at the national and provincial level and through our consortial academic search tool OMNI, which allows users to discover materials from 16 Ontario universities through one search interface. Items not in our collection can often be requested through OMNI or interlibrary loan as the need arises.

Instruction and research support

The Computer Science and Combinatorics & Optimization Liaison Librarian is available to provide research, teaching and learning support for graduate students and faculty. Instructional support includes the

³⁹ supports undergraduate study



development of online modules and research guides as well as the preparation of classroom sessions and outcomes-based workshops. These workshops can provide students with an understanding of how research is disseminated, the significance of the literature survey portion of their papers, how to create a comprehensive search, and how to determine scientific impact. The Library also has Librarians with expertise in Scholarly Communication (including copyright, licencing, and Open Access) and Research Data Management who are available to answer questions and provide guidance to students throughout their academic career.

Support for students happens primarily through virtual and in-person one-on-one research consultations with their Librarian. Research consultations include critical reviews of current search strategies, advice on database and resource selection, and training on how to identify gaps in the literature as a means to discover new research areas. Students can arrange this over e-mail or book through the [Math subject guide](#) or [Computer Science subject guide](#) at their convenience. Reference services that are largely conducted via e-mail and through the Library's chat service include troubleshooting article access issues, gaining access to specialized resources, and referring students to other experts including the Library's research data management and copyright teams. All are encouraged to make use of the learning, teaching, research support services, and expertise the Library offers.

The liaison librarians also interact with Faculty Library Representatives from the School of Computer Science and the Department of Combinatorics & Optimization to ensure their faculty and researchers are aware of new services and resources, and to provide a line of communication for any issues or recommendations. The Librarian welcomes the opportunity to participate in the research activities of faculty and researchers and to engage further with the work being done by individuals participating in the Program.

3. More information

The Library would be happy to be meet with the program reviewers to discuss this report and answer their questions.

For additional information about University of Waterloo Library and the support it provides for programs, please visit <https://uwaterloo.ca/library/about/policies-and-guidelines/support-academic-programs>.

4. Report provenance

Report written by Rebecca Hutchinson, Liaison Librarian for Computer Science and Combinatorics & Optimization, r3hutchi@uwaterloo.ca

Report reviewed by Jennifer Haas, Department Head, Information Services and Resources, Davis Centre Library, j2haas@uwaterloo.ca

Approved by Victoria Chu, Associate University Librarian, Learning, Research and User Services, victoria.chu@uwaterloo.ca



Appendix B – Co-operative & Experiential Education (CEE) Report

Proposed Program: Master of Mathematics, Cybersecurity and Privacy, Co-operative Education

Program Effective Date: Fall 2026

Requested by: Urs Hengartner, Associate Professor and Program Developer

Prepared by: Justin Kieffer, Faculty Relations Manager, Mathematics, Co-operative Education

Executive Summary

The Faculty of Mathematics has expressed intent to add a program-level work integrated learning (WIL) experience (co-op) option to their master's program for fall 2026. The co-op components of the degree will be fully administered by Co-operative & Experiential Education (CEE) with the work integrated learning (WIL) component included as a milestone degree requirement. The university has embarked on a Graduate Work Integrated Learning project with graduate co-op requirements and enhanced students support in scope. These new requirements and supports will come into effect in fall 2025 and are reflected in this document.

CEE will utilize existing staff, resources, and co-op processes across the portfolio, to support this new program, as it does for other graduate co-op programs in Mathematics. CEE will complete a new program plan with input from the program and will work with the program in the coming months to address system and records processing needs, WIL programming and job development opportunities.

With the understanding of a cap of 25 students for the first three years, starting in fall 2026, CEE supports in principle the proposed new MMath Cybersecurity and Privacy Co-op program and will collaborate with the academic unit on the development and administration of co-op components of the degree. We recommend that the sequence include a standard eight-month work term.

Recent analysis of co-op jobs indicates there is an existing, robust pool of jobs that are relevant for graduate students in the Cybersecurity and Privacy program. This existing pool along with on-going business development, combined with increasing employer interest in roles supporting cybersecurity and privacy, and the recognition of the expertise and skills that graduate-level programs provide will enable CEE to support the co-op job requirements for this program. Employers feedback indicates a preference towards longer work term for graduate students (8 months) so that the student can engage in more significant work projects.

CEE recommends the Cybersecurity and Privacy program consider the following:



- Ensure admission requirements include direct admission to the coop/internship program so that potential barriers for international students who are required to obtain a co-op work permit to work in Canada are reduced.
- Ensure co-op degree requirements in the graduate calendar include the following requirements:
 - A standard sequence that includes two work terms
 - Satisfactory completion of one standard work term*
 - Satisfactory completion of the additive course, WIL601**
 - completion of a work report/reflection.

* Students may opt for only one work term with program approval through completion of the sequence change form.

**WIL-601 is normally completed two terms before the scheduled work term

- Review the implications of involvement in co-op as related to items such as, but not limited to, student statuses, co-op fee schedule, funding packages and scholarships.

CEE, with leadership from Faculty Relations Manager, Mathematics will:

- Together with the program, determine success measures that link the program learning outcomes with criteria for co-op success that clarify the expectation for quality work terms
- Complete an industry and job analysis for the MMath Cybersecurity and Privacy program as a basis for an Employer Relations opportunity development strategy. This report is attached as part of the package provided to the program.
- Collaborate with the Associate Director, Graduate Studies for the Faculty of Mathematics, and the Graduate Officer/Coordinator to work through the Co-op program plan, as well as processes to support students who may not successfully complete mandatory co-op requirements.
- Support programs with content for recruitment materials and recommended student communication (e.g., information on resources and supports) ahead of the start of studies and during orientation programming.

Work-Integrated Learning at UW

Co-operative Education is a form of work integrated learning (WIL), which allows students to apply classroom learning to the workplace and, likewise, connect workplace learning to their degree and areas of specialization. For those students who are seeking a stronger connection between their studies and industry, the University of Waterloo's co-op programs distinguish it amongst Canadian institutions. Furthermore, CEE provides a robust system of support for students (domestic and international visa) seeking work experiences in Canada or internationally.

Benefits go beyond the students. Industry partners benefit by gaining access to a wider range of grad students who bring varied experiences personally, professionally, and



academically. All stakeholders will benefit from opportunities for idea exchange and strengthened connection between academic research and innovations in industry.

Introducing a new co-op plan aligns with the strategic focus on [GradWIL](#) at an institutional level and will continue to reinforce UW as a WIL leader for both undergraduate and graduate programs.

The key components of a [quality WIL experience](#) are pedagogy, experience, assessment and reflection, or P.E.A.R. Making sure all four elements are included in the development of program-level WIL are critical for creating a quality WIL experience.

- Pedagogy – includes the academic course content and the WIL curriculum
- Experience – meaningful and aligned appropriately with the WIL model
- Assessment – including the learning outcomes for the program + Future Ready Talent Framework
- Reflection – on the WIL experience and in alignment with the idea of “purposeful work”

Co-op Program Structure

The Cybersecurity and Privacy Co-op program, as with other graduate co-op programs, will follow the existing co-op model. All co-op students are responsible for following the procedures, [roles and responsibilities](#) of co-op students.

Co-op and internship students will be required to complete [WIL 601](#) prior to their first co-op recruitment term (for full-time students, typically completed in their first study term). In WIL 601 students will identify, evaluate and articulate current skillsets and the competencies they are developing in graduate school, as well as critically reflect on their career values and goals.

The Centre for Career Development (CCD) provides career and co-op preparation resources and services (e.g.: resume, cover letter, interview preparation, job search, etc.) for all graduate students. These services are accessed more readily when promoted by the academic program or incorporated into existing courses. Additional collaboration between Science & Business, Student and Faculty Relations and CCD may be required prior to Fall 2026 to establish how existing services and staff will be utilized.

Co-op work terms must meet [standard work term requirements](#) for all graduate students. Cybersecurity and Privacy Co-op students will have access to the co-op job boards through WaterlooWorks or may arrange their own employment externally, which must be approved by CEE. During the experience, graduate students will be supported by Co-op Advisors through site visits, e-check-ins, and work term ratings. Employers will evaluate the work performance of students via the [Student Performance Evaluation](#) (SPE); a rating of ‘marginal’ or above will grant the student credit for the work term. A COOP course will be recorded on the transcript with an ‘CR’ or ‘NCR’



based on this evaluation.

Students in co-op programs normally graduate on a study term, as proposed in the sequence. The program will facilitate a work report or reflection assignment post-experience, which will also be a co-op degree milestone. CEE is currently developing a graduate-level work term reflection – more information to follow.

To evaluate program effectiveness and WIL outcomes, the CEE Faculty Relations Manager, Mathematics, will monitor key metrics annually to ensure program quality.

Co-op Sequence

Students in Cybersecurity and Privacy will have two work terms scheduled in their sequence and be required to complete at least one standard co-op work term. Strategically, this would provide a longer immersive work experience for students, which is particularly appealing to industry partners, and would be consistent with other UW graduate co-op plans.

Students and employers will benefit as this allows better integration of learning in both the classroom and workplace.

The proposed program will have students scheduled for spring and fall work terms, consistent with other graduate co-op sequences.

A student may decide to only complete a single 4-month work term to meet co-op requirements and can do so through updating their co-op sequence with program approval.

Students are strongly encouraged to complete their 8-month work term with the same employer, however, completing two work terms with separate employers is permitted.

Typically, the work report/reflection is completed during a student's final work term, the work report/reflection needs to be submitted and approved prior to the completion of their final academic term.

Cybersecurity and Privacy Co-op Sequence:

	Fall	Winter	Spring	Fall	Winter
Standard Sequence	Study WIL-601	Study Job search term	Work Term	Work Term	Study Completion of Work Report



Co-op Admissions

As indicated in the Cybersecurity and Privacy program proposal, students will be directly admitted into the Cybersecurity and Privacy Co-op plan. The academic unit will establish a specific process and criteria for admissions into this new program.

There are a range of benefits to the direct entry structure, including CEE's ability to forecast earlier the number of students expected to be scheduled for a work term from the program and adjust employer and student-facing resources as necessary. Most notably, CEE can assist visa students in their work permit applications upon program admission, ensuring work terms are not negatively impacted by processing times.

Where there is demand for co-op, admissions consideration should be given to the value and intention of a WIL experience, as academic standing is not always an indicator of workplace success. Additionally, graduate students bring a range of personal, professional, and academic experiences and so while the more experienced students may ultimately be successful in finding co-op employment, they arguably may not be the students to benefit most from the WIL experience.

Degree Requirements

Graduate students completing the co-operative education degree requirements will receive a "Co-operative Education" degree designation. These requirements include the following:

- Successful completion of WIL-601
- Complete a minimum of 1 standard co-op work term and receive a Student Performance Evaluation of "marginal" or better
- Complete a work report/reflection requirement administered by the academic department (CEE will have a work reflection option available by summer 2025)

Graduate Student Support

Cybersecurity and Privacy graduate co-op students will be assigned to a Co-op Advisor who will provide support and resources throughout the student's program of study.

Ahead of the work term, Co-op Advisors provide 1-1 consults, facilitated peer-to-peer sessions, panel presentations by employers, support for job search, and ensuring connection to key resources such as WaterlooWorks. Once a work term has been secured, the co-op advisor will continue to provide support through work term consults, e-check-ins and availability for support through messages or 1-1 meetings.

The [Centre for Career Action](#) (CCA) is in the Tatham Centre at the Waterloo campus and provides support to undergrad and grad students (whether in co-op or not), alumni and



staff with co-op and career planning and preparation. Existing services include 1:1 appointments for resumes, cover letters, interview skills, work search, career planning and others, 1:1 drop-ins, workshops, both on and offline resources and supports all offered through a dedicated team of existing co-op and career staff.

Job Development

CEE conducted analysis of recent job postings and employment metrics into several co-op programs (both undergraduate and graduate) in which the required skillsets, interests and academic offerings align with the expected types of co-op opportunities students in the Cybersecurity and Privacy program may pursue.

This analysis indicated that many significant organizations who are aware of the risks of attacks into their computer systems are actively involved in hiring co-op students. At the same time, employers who focus on privacy and security related solutions and products and are also highly engaged in Waterloo's co-op program.

A keyword search of co-op jobs postings between 2020 and 2023 identified more than 950 postings that mention cybersecurity within the job description. These include jobs posted by more than one hundred different employers including Blackberry, Arctic Wolf Networks Inc, Centre of Excellence in Next Generation Networks, Deloitte, University of Waterloo and Telus. Roles include Software Developer, UX Designer, Cyber Risk Services Analyst, and Threat Operations Engineering.

- Network Security: Understanding of firewalls, VPNs, IDS/IPS, and network protocols.
- Penetration Testing: Ability to identify and exploit vulnerabilities in systems and networks.
- Incident Response: Skills in detecting, responding to, and mitigating security incidents.
- Security Information and Event Management (SIEM): Experience with SIEM tools like Splunk, ArcSight, or QRadar.
- Cryptography: Knowledge of encryption algorithms, key management, and secure communication protocols.
- Cloud Security: Familiarity with securing cloud environments such as AWS, Azure, or Google Cloud.



- **Endpoint Security:** Understanding of securing endpoints like desktops, laptops, and mobile devices.

Evaluation of similar undergraduate and graduate programs show strong overall employment, driven by the large number of jobs targeted to these students each term. It is expected that students in the Cybersecurity and Privacy program will be presented with many software related jobs, which will include a robust subset of cybersecurity related jobs. A job posting cluster titled “Cybersecurity and Cryptography” already exists and will help students identify relevant job opportunities. CEE will develop appropriate graduate student job search resources and supports.

CEE’s Data, Analytics and Reporting Team has compiled a comprehensive report delving further into job postings, employment and student satisfaction, along with external industry analysis and is included as part of the program proposal response.

Student Status and Fees

Graduate co-op students have their term status changed to co-op and, pending approval of a fee schedule proposal, will pay a [co-op fee](#) during study terms. Students in programs with two sequenced work terms will be assessed three co-op fees (pending approval by the Board). Participation in graduate co-op may have implications for student statuses, funding packages and scholarships. The program will need to investigate further and make students aware of this.

International Students and Work Experiences

The CEE international team will support work terms held outside of Canada, adhering to UW and Global Affairs Canada (GAC) travel policies and advisories.

Students studying on a visa must obtain a co-op work permit in order to find employment for a co-op work term. Applying for a co-op work permit in Canada can take several months, with recent processing times taking at least six months. Admission requirements should include direct admission to the coop program so that potential barriers for international students who are required to obtain a co-op work permit to work in Canada are reduced. This also allows CEE to identify co-op students as early as possible.

Co-op Program Plan

Following all levels of academic program approval for this new program and before the first term of admission, a Co-op Program Plan will be required. The Co-op Program Plan is a checklist of information, records, system, communications, etc., that ensure CEE administered co-op plans are set-up appropriately and necessary decisions are made. This is a collaborative activity led by the Faculty Relations Manager and the academic unit.



UNIVERSITY OF WATERLOO



NEW PROGRAM PROPOSAL*

MASTER OF CYBERSECURITY AND PRIVACY (MCP)

Submitted to the
Ontario Universities Council on Quality Assurance

VOLUME II – FACULTY CURRICULA VITAE

AUGUST 2026

***NOTE:** This template **must** be used for submission of a new program proposal.

Please consult the University of Waterloo [Institutional Quality Assurance Process](#) and the [Quality Assurance Framework](#) (QAF) for details or the [Academic Quality Enhancement Office](#).

****Volumes I, II must be reviewed and approved by the Academic Quality Enhancement Office, GSPA and IAP prior to submission to your Faculty Council****

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Summary of Faculty Qualifications

For each faculty member listed in Vol. I, Section 2.6, “*Number and Quality of Core Faculty*”, the table below summarizes the relevant courses taught over the past seven years, along with the corresponding teaching terms. Overall, the table demonstrates the extensive experience these faculty members possess in teaching subjects aligned with the proposed program.

Instructor Name	Course Number	Course Name	Teaching Terms
Aafer, Yousra	CS 858	Mobile Platform Security	W20, F21, F22, W23, F23
	CS 658	Computer Security and Privacy	F20, W21, F22
	CS 858	Topics on Mobile & IoT Security	F23, F24
	CS 653	Software and Systems Security	W24, F24
Asokan, N.	CS 658	Computer Security and Privacy	S20, S21
	CS 858	Selected Topics in Systems Security	W21, W22, W23
	CS 858	Trustworthy Machine Learning	F25
Barradas, Diogo	CS 858	Internet Censorship & Surveillance	W22, W23
	CS 658	Computer Security and Privacy	S22, S23
	CS 798	Digital Forensics and Incident Response	W24, W25
	CS 659	Privacy, Cryptography, Network and Data Security	S25, W25, S25
Cleve, Richard	CS 768 / CO 681	Quantum Information Processing	F19, F20, F21, F22, F23, F24, F25
Cohen, Robin	CS 692	Social Implications of Computing	S25
Goldberg, Ian	CS 658	Computer Security and Privacy	F18, S19, S22, S23
	CS 858	Privacy Enhancing Technologies	F18
	CS 858 / SOC 701	Surveillance and Privacy	F20
	CS 798	Privacy in Computation and Communication	S24, F25
Gorbunov, Sergey	CS 658	Computer Security and Privacy	W20
	CS 858	Cryptography & Blockchain Technologies	F20
Gosset, David	CO 781	Quantum Algorithms	S19, S21
Grossman, Maura	CS 798	AI: Law, Ethics, and Policy	F18, F19, S23
Hajiabadi, Mohammad	CS 758	Cryptography/Network Security	F21
	CS 858	Encrypted Computation	W23
	CS 698	Foundations of Modern Cryptography	F23, F25

	CS 659	Privacy, Cryptography, Network and Data Security	W24
	CS 858	Topics in Secure Computation	W25, W26
He, Xi	CS 848	Privacy and Fairness in Data Science	F19
	CS 848	Building Privacy-Aware Database Systems	W21
	CS 848	Practical Privacy for Data Analysis and ML	F24
Hengartner, Urs	CS 658	Computer Security and Privacy	W18, F19, F21, F23
	CS 858	User Authentication	F22, F24
	CS 659	Privacy, Cryptography, Network and Data Security	F25
Jaques, Samuel	CO 789	Post-Quantum Cryptography	W24
	CO 685	Public-Key Cryptography	F24, F25
	CO 687	Applied Cryptography	W25, W26
Jao, David	CO 685	Public-Key Cryptography	F18, F19, F20, F21, F22, F23
	CO 687	Applied Cryptography	F21
Kamath, Gautam	CS 860	Algorithms for Private Data Analysis	F20, F22
Kerschbaum, Florian	CS 658	Computer Security and Privacy	F18, F20
	CS 858	Security and Privacy for AI and Machine Learning	F19, W25
	CS 858	Advanced Topics in Data Security & Privacy	W22
	CS 659	Privacy, Cryptography, Network and Data Security	W26
Leung, Debbie	CO 781	Theory of Quantum Communication	F20
Maiyya, Sujaya	CS 848	Privacy Enhancing Data Systems	W24
	CS 848	Building Private Data Systems	F25
Menezes, Alfred	CO 687	Applied Cryptography	W18, W19, W20, W21, W22, W23, W24
Molnar, Adam	SOC 719	Law, Tech, & Society	W21, W22, W26
Stebila, Douglas	CO 789	Lattice-Based Cryptography	W19
	CO 687	Applied Cryptography	F19, F20, F22, F23, F24, F25
	CO 789	Cryptographic Protocols	S22
Watson, Stacey	CS 653	Software and Systems Security	S24
	CS 698	Secure Programming	F24, W26
Whitson, Jennifer	CS 858 / SOC 701	Surveillance and Privacy	F20

Xu, Meng	CS 858	Offensive and Defensive Approaches to Software Security	F22
	CS 658	Computer Security and Privacy	W23
	CS 653	Software and Systems Security	S23, W24, F24, W25, S25
	CS 858	Software Security via Program Analysis	S24
Zhang, Hongyang	CS 858	Security and Privacy of Machine Learning	F22

Some of the faculty members have also won awards for their teaching excellence.

- Profs. Cohen, Jao, and Menezes have won the Faculty of Mathematics Award for Distinction in Teaching.
- Profs. Cohen and Menezes have received the University of Waterloo Distinguished Teaching Award.
- Prof. Cohen has won the Online Teaching Award from the University of Waterloo's Centre for Extended Learning.
- Prof. Grossman has received the Faculty Teaching Award from Osgoode Hall School, York University.
- Profs. Asokan, Goldberg, Jao, Lütkenhaus, Menezes, Molnar, and Whitson have won Outstanding Performance Awards from the University of Waterloo. These awards recognize faculty members for their outstanding contributions to research and teaching.

The faculty members possess strong scholarly records; refer to Vol. I, Section 2.8 for further details.

Curricula Vitae

Full CVs - [Master of Cybersecurity and Privacy CVs.pdf](#)

Prior to form submission, review the [new graduate program instructions](#). For questions about the form submission, contact [Trevor Clews](#), Graduate Studies and Postdoctoral Affairs.

Faculty: Mathematics

Program: Master of Cybersecurity and Privacy (MCP)

Program contact name(s): Urs Hengartner & David Jao

Form completed by: Urs Hengartner

Note: new courses and milestones also require the completion/submission of the SGRC Graduate Studies Course/Milestone form ([PC docx version](#)).

Proposed effective date: Term: Fall Year: 2027

[Graduate Studies Academic Calendar \(GSAC\)](#) section (include the link to the section (web page) where the new program will be located):

<https://uwaterloo.ca/graduate-studies-academic-calendar/mathematics>

Proposed Graduate Studies Academic Calendar content:

MASTER OF CYBERSECURITY AND PRIVACY (MCP)

- **Faculty**
 - Faculty of Mathematics
- **Academic unit**
 - Dean of Mathematics Office
- **Admit term(s)**
 - Fall
 - Winter
 - Spring
- **Delivery mode**
 - On-campus
- **Registration option(s)**
 - Full-time
 - Part-time
- **Study option(s)**
 - Coursework
- **Length of program**
 - Full-time: 3 terms (12 months)
 - Part-time: 9 terms (36 months)
- **Admission requirements: Minimum requirements**

Proposed Graduate Studies Academic Calendar content:

- Students in the Master of Cybersecurity and Privacy (MCP) - Co-operative Program can apply to transfer into the Master of Cybersecurity and Privacy (MCP) Program after completing at least two academic terms. Admittance will be decided by the Program Director on a case-by-case basis.
- Applicants to the Master of Cybersecurity and Privacy (MCP) - Co-operative Program who meet the admission requirements and who have completed an undergraduate degree that included either a co-op or internship experience related to cybersecurity and privacy, or who have Canadian industry experience related to cybersecurity and privacy can apply to transfer into the Master of Cybersecurity and Privacy (MCP) Program in term 1. The transfer must be approved by the Program Director and must take place before the student is matriculated (made active in their program).

- **Degree requirements**

- Students must complete the course and milestone requirements listed below in addition to the [Graduate Academic Integrity Module \(Graduate AIM\)](#).

- **Coursework option: Course requirements**

- Students must complete at least 9 graduate courses (0.50 unit weight each): normally 3 core courses and 6 elective courses.
- Core courses:
 - Students are normally required to take the following core courses:
 - CO 687 Applied Cryptography
 - CS 653 Software and Systems Security
 - CS 659 Privacy, Cryptography, Network and Data Security
 - At the discretion of the Program Director, substitutions may be allowed.
- Elective courses:
 - Students must take enough additional elective courses to fulfill the 9-course requirement. These courses must normally be taken from the following list of graduate courses. Courses not on this list are subject to the approval of the Program Director.
 - CO 681 / CS 768 / AMATH 871 / PHYS 767 / PMATH 871 / QIC 710 Quantum Information Processing
 - CO 685 Mathematics of Public-Key Cryptography
 - CO 781 Topics in Quantum Information (*) (**)
 - CO 789 Topics in Cryptography (**)
 - CS 647 Software Testing, Quality Assurance and Maintenance
 - CS 758 Cryptography / Network Security
 - CS 848 Advanced Topics in Databases (*) (**)
 - CS 858 Advanced Topics in Cryptography, Security and Privacy (**)
 - CS 860 Advanced Topics in Algorithms and Complexity (*) (**)
 - CYBR 701 Cybersecurity and Privacy Project
 - GGOV 664 / SOC 721 Law, Tech, & Society
 - Notes: (*) CO 781, CS 848, and CS 860 should be on a topic in cybersecurity or privacy; they are subject to the approval of the Program Director. (**) CO 781, CO 789, CS 848, CS 858, and CS 860 can each be taken multiple times as long as it is a different topic each time.
 - Students must choose their elective courses such that the following conditions are met:
 - At least 1 of the elective courses must be:
 - CS 647 Software Testing, Quality Assurance and Maintenance
 - CS 848 Advanced Topics in Databases

Proposed Graduate Studies Academic Calendar content:

- CS 858 Advanced Topics in Cryptography, Security and Privacy (topic must be in the [“Hardware and Software Systems” area](#))
- At the discretion of the Program Director, substitutions may be allowed.
- At least 1 of the courses must be at the CO 700 or CS 800 level.
- To remain in good academic standing, students must maintain an average of 75%. Progress reports are not required; however, the Program Director will review students’ overall average every term. Students whose average falls below the program’s minimum requirements may be required to withdraw from the program. Students must obtain a 70% in any given course for it to count towards their degree.
- **Coursework option: Milestone requirements**
 - **Ethics Workshop**
 - Students must complete a 3-day workshop on “Ethics in Cybersecurity and Privacy” that will be offered at least once a year.

Department/School website

<https://uwaterloo.ca/math/>

SCS and C&O approval dates (mm/dd/yy): 03/11/26 and 03/23/26

Reviewed by GSPA/AQuE (for GSPA/AQuE use only) ☒ **date** (mm/dd/yy): 03/25/26

Faculty approval date (04/28/26):

Senate Graduate Council (SGC) approval date (mm/dd/yy):

Senate approval date (mm/dd/yy) (if applicable):

Prior to form submission, review the [new graduate program instructions](#). For questions about the form submission, contact [Trevor Clews](#), Graduate Studies and Postdoctoral Affairs.

Faculty: Mathematics

Program: Master of Cybersecurity and Privacy (MCP) - Co-operative Program (direct entry)

Program contact name(s): Urs Hengartner & David Jao

Form completed by: Urs Hengartner

Note: new courses and milestones also require the completion/submission of the SGRC Graduate Studies Course/Milestone form ([PC docx version](#)).

Proposed effective date: Term: Fall Year: 2027

[Graduate Studies Academic Calendar \(GSAC\)](#) section (include the link to the section (web page) where the new program will be located):

<https://uwaterloo.ca/graduate-studies-academic-calendar/mathematics>

Proposed Graduate Studies Academic Calendar content:

MASTER OF CYBERSECURITY AND PRIVACY (MCP) - CO-OPERATIVE PROGRAM (DIRECT ENTRY)

- **Faculty**
 - Faculty of Mathematics
- **Academic unit**
 - Dean of Mathematics Office
- **Admit term(s)**
 - Fall
- **Delivery mode**
 - On-campus
- **Registration option(s)**
 - Full-time
- **Program type(s)**
 - Co-operative
- **Study option(s)**
 - Coursework
- **Length of program**
 - 5 terms (20 months), normally comprising 3 study terms and 2 work terms. Students can choose to reduce the number of work terms to a single one, which would shorten their

Proposed Graduate Studies Academic Calendar content:

program to 4 terms (16 months).

- **Admission requirements: Minimum requirements**

- Honours Bachelor's degree or equivalent in computer science, mathematics or a related field, with a minimum overall average of 78%.
- Experience or background knowledge in at least one of: Operating Systems, Distributed Systems, Cryptographic Implementation and Deployment, and/or Networking and Computer Programming.
- [English language proficiency \(ELP\)](#) (if applicable)
- Note: Applicants who meet the above admission conditions and who have completed an undergraduate degree that included either a co-op or internship experience related to cybersecurity and privacy, or who have Canadian industry experience related to cybersecurity and privacy can apply to transfer to the Master of Cybersecurity and Privacy (MCP) Program. The transfer must be approved by the Program Director and must take place in term 1 before the student is matriculated (made active in their program).

- **Admission requirements: Application materials**

- Résumé/Curriculum Vitae
- Program-specific questions (PSQ)
- Statement of interest
- Transcript(s)

- **Admission requirements: References**

- Number of references: 3
- Type of references: at least 2 academic sources

- **Degree requirements**

- Students must complete the course and milestone requirements listed below in addition to the [Graduate Academic Integrity Module \(Graduate AIM\)](#).
- The program includes completion of 1-2 required work terms. The work term(s) typically takes place in term 3 (or terms 3 and 4). The work term(s) must meet Co-operative and Experiential Education (CEE) standard work term requirements and program requirements. Students should apply to jobs related to their program of study. Note: the program must start and end on an academic term.
- Students are required to complete WIL 601 Career Foundations for Work-Integrated Learning in their first academic term of their co-op program. Students must complete WIL 601 in addition to the program's course requirements.

- **Coursework option: Course requirements**

- Students must complete at least 9 graduate courses (0.50 unit weight each): normally 3 core courses and 6 elective courses.
- Core courses:
 - Students are normally required to take the following core courses:
 - CO 687 Applied Cryptography
 - CS 653 Software and Systems Security
 - CS 659 Privacy, Cryptography, Network and Data Security
 - At the discretion of the Program Director, substitutions may be allowed.
- Elective courses:

Proposed Graduate Studies Academic Calendar content:

- Students must take enough additional elective courses to fulfill the 9-course requirement. These courses must normally be taken from the following list of graduate courses. Courses not on this list are subject to the approval of the Program Director.
 - CO 681 / CS 768 / AMATH 871 / PHYS 767 / PMATH 871 / QIC 710 Quantum Information Processing
 - CO 685 Mathematics of Public-Key Cryptography
 - CO 781 Topics in Quantum Information (*) (**)
 - CO 789 Topics in Cryptography (**)
 - CS 647 Software Testing, Quality Assurance, and Maintenance
 - CS 758 Cryptography / Network Security
 - CS 848 Advanced Topics in Databases (*) (**)
 - CS 858 Advanced Topics in Cryptography, Security and Privacy (**)
 - CS 860 Advanced Topics in Algorithms and Complexity (*) (**)
 - CYBR 701 Cybersecurity and Privacy Project
 - GGOV 664 / SOC 721 Law, Tech, & Society
 - Notes: (*) CO 781, CS 848, and CS 860 should be on a topic in cybersecurity or privacy; they are subject to the approval of the Program Director. (**) CO 781, CO 789, CS 848, CS 858, and CS 860 can each be taken multiple times as long as it is a different topic each time.
 - Students must choose their elective courses such that the following conditions are met:
 - At least 1 of the elective courses must be:
 - CS 647 Software Testing, Quality Assurance and Maintenance
 - CS 848 Advanced Topics in Databases
 - CS 858 Advanced Topics in Cryptography, Security and Privacy (Topic must be in the [“Hardware and Software Systems” area](#))
 - At the discretion of the Program Director, substitutions may be allowed.
 - At least 1 of the courses must be at the CO 700 or CS 800 level.
 - To remain in good academic standing, students must maintain an average of 75%. Progress reports are not required; however, the Program Director will review students’ overall average every term. Students whose average falls below the program’s minimum requirements may be required to withdraw from the program. Students must obtain a 70% in any given course for it to count towards their degree.
- **Coursework option: Milestone requirements**
 - **Ethics Workshop**
 - Students must complete a 3-day workshop on “Ethics in Cybersecurity and Privacy” that will be offered at least once a year.
 - **Graduate WIL Reflective Report**
 - The Graduate WIL Reflective Report requires students to critically reflect on their co-op work term experience, connecting academic knowledge to practical tasks and professional development. Students must complete one reflective report per required work term. The report is administered, evaluated, and graded by the Centre for Work-Integrated Learning.

Department/School website

<https://uwaterloo.ca/math/>

SCS and C&O approval dates (mm/dd/yy): 03/11/26 and 03/23/26

Reviewed by GSPA/AQuE (for GSPA/AQuE use only) ☒ date (mm/dd/yy): 03/25/26

Faculty approval date (04/28/26):

Senate Graduate Council (SGC) approval date (mm/dd/yy):

Senate approval date (mm/dd/yy) (if applicable):

Prior to form submission, review the [instructions](#). For questions about the form submission, contact [Trevor Clews](#), Graduate Studies and Postdoctoral Affairs (GSPA).

Faculty: Mathematics

Effective date: Term: Fall Year: 2027

Milestone

Note: milestone changes also require the completion/submission of the [Graduate Studies Program Revision Template](#).

- ☐ New: Choose an item.
- ☐ Inactivate: Choose an item.
- ☐ Revise: from Choose an item. to Choose an item.

Course

Note: some course changes also require the completion/submission of the [Graduate Studies Program Revision Template](#).

- ☒ New: Complete all course elements below
- ☐ Inactivate: Complete the following course elements:
Course subject code, Course number, Course title
- ☐ Revise: Complete all course elements below to reflect the proposed change(s) and identify the course elements being revised (*e.g. Course description, Course title*):

Course elements (complete as indicated above. Review the [glossary of terms](#) for details on course elements)

Course subject code: CYBR

Course number: 701

Course title (max. 100 characters including spaces): Cybersecurity and Privacy Project

Course short title (max. 30 characters including spaces): Cybersecurity Privacy Project

Grading basis: Numerical

Course credit weight: 0.50

Course consent required: Department

Course description: The student will undertake a significant project on a topic related to cybersecurity and privacy, under the supervision of a faculty member; program director approval required.

Course component(s): Reading (RDG) Lecture (LEC) Project (PRJ) Choose an item.

Primary course component: Reading (RDG)

Requisites (identify antirequisites, corequisites, or prerequisites if applicable to the course):

Prerequisites: Master of Cybersecurity and Privacy students only.

Special topics course: Yes ☐ No ☒

Special topics course total completions allowed (max. 30):

Can students enrol in multiple sections of the same special topics course in the same term? Yes ☐ No ☐

Cross-listed course: Yes ☐ No ☒

If yes, list the course subject code(s) and number(s) that this course is/will be cross-listed with:

Note: cross-listed courses must share all course elements except the subject code(s), course number(s), and requisites, and require a separate Graduate Studies Course/Milestone form submission for each course.

Rationale for request:

One elective course in the Master of Cybersecurity and Privacy program may be replaced by a significant project (CYBR 701) under the supervision of one or more faculty members. The project gives the student the opportunity to plan and carry out a research project.

Form completed by: Urs Hengartner

Reviewed by GSPA (for GSPA use only) ☒ date (mm/dd/yy): 02/11/26

SCS and C&O approval dates (mm/dd/yy): 03/11/26 and 03/23/26

Graduate Faculty Sub-Committee approval date (03/30/26):

Faculty Council approval date (04/28/26):



EXTERNAL REVIEWERS' REPORT FOR NEW PROGRAMS

Reviewers' Report on the Proposed Master's Program in Cybersecurity and Privacy at the University of Waterloo.

Name: Carlisle Adams

Department/School: Electrical Engineering and Computer Science

Institution: University of Ottawa

Institution Address: 800 King Edward Avenue, Ottawa, ON, Canada K1N 6N5

Email: cadams@uottawa.ca

Name: Karthik Pattabiraman

Department/School: Electrical and Computer Engineering

Institution: University of British Columbia

Institution Address: 5500-2332 Main Mall, Vancouver, BC, Canada V6T 1Z4

Email: karthikp@ece.ubc.ca

SUMMARY

The proposed Master's in Cybersecurity and Privacy (MCP) program is a strong, carefully designed degree that will likely be highly competitive among similar programs in Canada and internationally. A unique strength of this program is the breadth of material offered to its students: courses cover introductory to advanced cryptography, system security, software security & secure programming, privacy technologies, quantum information, databases, organizational security, law, and digital forensics (among other topics).

Another strength of this coursework Master's program is that it includes an 8-month co-op work term; students will therefore benefit from direct hands-on cybersecurity work experience in industry prior to graduation.

Finally, the courses in this program will be taught by professors in computer science and in combinatorics & optimization (along with selected other departments) who have significant expertise in the course material; many of these professors are known internationally for their contributions to the various topics covered in MCP.

This program is likely to be highly successful for the foreseeable future. Our recommendations, intended to strengthen the program even further, include increasing the length and depth of the required ethics course, hiring at least one more staff position and at least one more

teaching position, and increasing the machine learning and generative AI (ML / GenAI) content in the course offerings. Please see the full list of recommendations (and the corresponding rationale for each) in Section 4.

1. DETAILS OF THE SITE VISIT

1.1 Outline of the Visit

The visit of the evaluators took place entirely online during the week of May 25-29, 2026. Because it was an online visit, there was no opportunity to see the facilities or to engage in any other activities (such as campus tours, etc.). However, we did have online interviews with a good number of individuals and groups; these interviews allowed us to ask questions, seek information or clarification, and generally become aware of the important aspects of the proposed program. Over the course of the week, we met with

- **Justin Wan** (AVP, Grad Studies and Postdoctoral Affairs) and **Angela Christelis** (Director, Academic Quality Enhancement)
- **David Jao** (Chair, Dept. of C&O, and Program Co-Developer) and **Urs Hengartner** (School of Computer Science, and Program Co-Developer)
- **Raouf Boutaba** (Director, School of Computer Science)
- **Jochen Koenemann** (Dean, Faculty of Mathematics)
- **Christine McWebb** (AVP, Faculty and Academic Life (substitute for Provost))
- *Faculty who will be teaching some of the courses:* **Florian Kerschbaum, David Jao, Meng Xu, Stacey Watson, Adam Caulfield** (postdoc), and **Urs Hengartner**
- **Adam Molnar** (Interim Executive Director, Cybersecurity and Privacy Institute (CPI))
- *Faculty who will be teaching some of the courses:* **Alec Cram, Douglas Stebila, Ian Goldberg, Sam Jaques, and Adam Molnar**
- **Marie Kahkejian** (Graduate Coordinator, MDSAI Program)
- **Rebecca Hutchinson** (Liaison Librarian) and **Nancy Collins** (Head, Information Services and Resources)
- **Samer Al-Kiswany** (Director of Infrastructure, School of Computer Science)
- **Justin Kieffer** (Co-op Faculty Relations Manager)
- **Maura Grossman** (Creator of the MDSAI ethics workshop)
- **Brian Ingalls** (Associate Dean, Graduate Studies)

In addition, we met regularly with, and were given significant support from, **Valerie Dusallant-Fernandes**, Associate Professor in the Department of French Studies, who was the internal UW faculty member assigned to support us with the overall interview and evaluation process.

1.2 Effectiveness

The site visit, despite being entirely online, was very well organized, efficient, and productive. There were no technical issues of any kind throughout the week, and all participants connected to our meetings exactly on time. Everyone was fully engaged, very personable, and ready to answer our questions and assist in any way they could with getting us the information we were seeking. We could not think of any way that the logistics of the visit could have been improved.

The proposal brief ("Volume 1") was thorough, informative, and very clearly written. It was extremely useful in preparing us for the visit and gave us an ideal basis for the formulation of our questions and discussions during the interviews.

2. EVALUATION CRITERIA

2.1 Objectives

The proposal brief ("Volume 1") discusses in some detail the University of Waterloo's Mission and Strategic and Academic Plans, as well as the University of Waterloo's Graduate Degree Level Expectations. Consistency / alignment of the proposed program with these plans and expectations was clearly and appropriately communicated. There is no doubt that the proposed program has been designed such that all these objectives will be met.

The name of the program (*Master's in Cybersecurity and Privacy*) clearly describes the content of the program and will advance the objectives of the program much more effectively than a more generic name (such as *Master of Mathematics in Computer Science*, or *Master of Mathematics in Combinatorics and Optimization*).

2.2 Admission requirements

The admission requirements specified for the proposed program are clearly explained and appropriately aligned with the stated learning outcomes. Because this is a graduate program (at the Master's level), a minimum GPA and English language proficiency requirements are given. There is no requirement for prior work experience, although students with prior work/internship experience directly in cybersecurity and privacy may choose to omit the co-op terms from this proposed degree. It is noted that applicants without sufficient background may be admitted to the program with probationary admission conditions.

2.3 Structure

The structure and regulations of the proposed program are clearly appropriate to meet the specified learning outcomes and Degree Level Expectations.

Since this is a coursework Master's program, there is a clear and achievable length of time to complete the degree: five semesters (9 courses taken over 3 academic terms and 2 terms of co-op). The program will thus typically be completed in less than 2 years (i.e., in 20 months), and can be completed in as little as 12 months if the co-op terms are omitted (for those students that already have prior relevant work experience).

2.4 Program Content

The content of the proposed program has significant breadth and depth, and reflects very well the current state of the discipline. Some of the courses in the program have been taught at UW for many years; these are fundamental courses that are required for anyone wishing to learn about this field. Many other courses are quite new (i.e., created in the past 1-3 years) and some are brand new courses still being developed. All courses have been chosen so that students will be exposed to the state-of-the-art in these fields.

As mentioned at the beginning of this document, the breadth of material in this proposed program is distinctive and unique among similar programs elsewhere. The default 8-month co-op term is also distinctive and should be a significant draw for students.

Due to the fact that this is a coursework Master's program, there are no research requirements for degree completion.

All courses in this proposed program are graduate courses and so students will be guaranteed to meet the "at least two-thirds graduate courses" requirement.

2.5 Mode of Delivery

The proposed mode of delivery for this program is full-time, in-person only. This was discussed during several of our interview sessions. It is generally agreed that in-person classes have many benefits and are a very appropriate way to meet the intended learning outcomes and Degree Level Expectations.

However, programs that are partially, or completely, offered online also have a number of benefits, particularly for working professionals who want to take a program on the side to

upgrade their skills, or for students within or outside Canada who may not be able to physically move to Waterloo for the three academic semesters of the program.

Once the proposed program has been successfully running for a few years, it would be worth carefully exploring the pros and cons of offering an online option.

2.6 Assessment of Teaching and Learning

The proposed program consists of three main academic elements: three core courses which must be taken by all students; fifteen elective courses (one of which may optionally be replaced with a project in the final semester) from which each student must choose six; and two co-op terms (which may optionally be replaced with one, or none, depending on the prior work experience of the student). These elements all fit well within the program and work together to build the overall skill level of the students.

The proposed assessment methods are typical of university programs at both the undergraduate and graduate levels: assignments, projects, presentations, midterm exams, final exams, and reflective reports. These will be effective in showing student achievement of program learning outcomes and Degree Level Expectations.

Course assessment outcomes will be combined with student evaluations of course content and the instructor's delivery, as well as with employer feedback regarding co-op work terms and periodic external surveys. All of this data will be used to demonstrate the level of performance of students and to assess the overall quality of the program. Regular review of this data will facilitate continuous improvement of the program.

2.7 Resources

The School of Computer Science and the Department of Combinatorics and Optimization appear to have carefully planned their use of existing human and physical resources so that this proposed program can be delivered effectively. Current and new courses, as well as infrastructure, computing resources, co-op services, and library resources will all be available to students both within and outside this proposed program – this means that the program can be offered without requiring much in terms of additional resources.

It appears that the Faculty and University have committed to the provision of additional computing resources, if needed for this program, as well as the hiring of one or two additional professorial positions if needed. This will help to ensure that the program can be delivered effectively.

In our interview with the Graduate Coordinator of the MDSAI program, it became clear that

administration of MDSAI is almost a full-time position (she does have some other duties as well). Given that MDSAI had 58 students enrolled in the co-op option and 2-3 in the non-co-op option in the fall of 2025, and that the proposed MCP program is projecting a steady-state enrollment of approximately 60 students per year, it appears that 1 additional staff person will need to be hired to administer MCP within the first 2-3 years.

Adjunct / sessional faculty will not play a large role in the delivery of the program, but may be used to teach one or more of the 3 core courses. It is anticipated that these instructors will typically be senior PhD students or postdoctoral fellows of the CrySP (Cryptography, Security and Privacy) research group in the School of Computer Science who have at least audited a previous offering of the course they will teach. Thus, their expertise should meet expectations regarding the quality of the student experience.

The existing academic support services (library, co-op, computing resources, etc.) appear to be sufficient, appropriate, and effective for the delivery of the proposed program.

For the proposed Master's program, the faculty who have been designated to teach the courses are of very good quality, with sustained track records of scholarship, innovation, and teaching in the topics of MCP. There is no question that the MCP students will be exposed to a rich and appropriate intellectual climate.

Students in the proposed MCP program are expected to study full-time and will not be supported financially by TA positions or RA bursaries. The co-op work terms will provide substantial remuneration (\$30K-\$40K expected), but this will not be sufficient to cover both tuition fees and living expenses, particularly for international students. There is a hope that the Cybersecurity and Privacy Institute (CPI) will approach industry partners and ask them to sponsor entrance scholarships for MCP – this has seen some success in the past but the scholarships have not been large and there have been very few of them. There is a concern, therefore, that many students will not have the financial means to enroll in the MCP program.

Given that this is a coursework Master's program, there will be very little supervisory load. Supervision will be required for the students that choose to replace a course in their final semester with a project, but it is expected that the number of students taking this option will be very small. (MDSAI, which has a very similar structure to the proposed MCP program, currently sees very few students choose a project each year.)

2.8 Quality Indicators

The faculty associated with all aspects of this proposed program have significant and widely-recognized expertise in the course topics. Collectively, their research output (particularly in terms of scholarly publications) is quite substantial, guaranteeing that students in this program will be exposed to the state-of-the-art of knowledge in these subjects and to the most recent novel developments that can be brought into the

classroom.

The program's structure, the services available at the University of Waterloo (infrastructure, co-op, library, etc.), and the faculty assigned to teach the proposed MCP courses will ensure the intellectual quality of the student experience.

3. ADDITIONAL COMMENTS

Because the courses in MCP are taught by professors in computer science, combinatorics & optimization, accounting & finance, physics & astronomy, and sociology & legal studies, interdisciplinarity is integral to the program. Regardless of their "home" department or background, the students in MCP will be exposed to students, professors, and course content from other disciplines. This is expected to be another strength and benefit of this program, particularly since cybersecurity / privacy problems and solutions inherently require an interdisciplinary lens in order to understand them deeply.

4. RECOMMENDATIONS

The proposed *Master's in Cybersecurity and Privacy* program looks very strong in content, has some desirable features that distinguish it from similar programs in Canada and elsewhere, and will contribute to meeting the recognized need for workers with this training and these skills. We believe that the program can be delivered exactly as described and that it would be effective and successful. Nevertheless, the following are some recommendations that we feel would strengthen the program further; we strongly suggest that all of these recommendations are given due consideration and incorporated into this program.

1. **Hire 1 additional staff person in the role of Graduate Coordinator for the MCP program.** As discussed in Section 2.7 above, this is approximately a full-time position that currently seems to be unaccounted for, but will be needed as this program grows to its expected enrollment.
2. **Extend and deepen the existing required ethics workshop.** Given the subject matter of this degree (i.e., cybersecurity and privacy), training in ethics is absolutely essential for these students. The current proposed ethics training is a pass/fail workshop delivered over a 3-day period. This seems far from adequate, given the complexities of the ethical questions and situations that arise in this field. The ethics workshop should be graded and should be delivered over at least half a semester (for example, 2 hours / week for 6 weeks). Ideally, some of the training should be given at the beginning of the MCP program, and some in the final semester (after the co-op work terms have been completed because the students may have encountered some real-world ethical situations in their places of work). It may also be valuable to have the ethics training

delivered in online classes of no more than 30 students at a time; such an environment has been shown to facilitate open discussion and sharing of opinions by students.

3. **The MCP program should incorporate more machine learning (ML) and generative AI (GenAI) content.** This is important material – increasingly so in recent years – and students in cybersecurity and privacy need to understand its potential benefits and harms. This content could be given in a single new elective course, but the risk is that many students may not choose this course among their six electives. Preferably, this material would be incorporated into many of the existing and proposed courses so that all students will have some exposure to these topics.
4. **More funding should be available for students.** As discussed in Section 2.7, the 8 months of co-op will not cover all the expenses of the students (especially the international students). Entrance scholarships or “early in-course scholarships” will be very helpful to students. If such scholarships can be sourced from industry partners, then the program can be delivered without any loss in revenue (e.g., \$17,000 of the tuition is paid to UW by the student and the remaining \$10,000 is paid to UW by an industry partner). Alternatively, MCP students could be offered TA positions within the School of Computer Science or the Department of Combinatorics and Optimization (depending on their background), but this would result in some loss of revenue for the Faculty.
5. **Hire 1 or 2 additional professorial positions to teach MCP courses.** The Faculty has already committed to these positions “if needed”. Given the extensive list of core and elective courses, the possibility of new courses being added over time, and the ongoing need to manage absences due to sabbaticals, sick leaves, parental leaves, and short- and long-term disability leaves, we feel that the hiring of at least one additional professorial position is already warranted.
6. **Co-op positions must be explicitly tailored to cybersecurity and/or privacy work.** The co-op office at UW has extensive experience in facilitating matches between student skills and company needs, but some additional training may be required for the co-op staff so that they can recognize when a posted job would be a good fit for an MCP student. A job that requires cybersecurity or privacy expertise may not be (often, will not be) in a company that has cybersecurity as its primary focus or product line and, conversely, a “cybersecurity company” may post specific co-op jobs that have little or nothing to do with actual cybersecurity (and could therefore be done successfully by any other co-op student). Understanding what constitutes a cybersecurity / privacy graduate-level co-op task will require some training.
7. **Continuously monitor the computing and IT infrastructure available to students.** It appears that the current infrastructure available to support the proposed MCP program is quite sufficient to meet the needs of the courses. However, increasing enrollments, evolving course requirements, availability of new technologies, and changing needs in other programs can cause the current infrastructure to become inadequate. The IT staff

should continue to assess the available resources on a regular basis to ensure that they remain appropriate and up-to-date.

8. **Consider coordinating with WATSPEED.** WATSPEED currently offers a course called *ISC2 Official CISSP Certification Training*. It may be worth connecting with them to see if any of the MCP courses can supplement or replace some modules in the WATSPEED course. The end benefit may be that when students complete the MCP program, they might be able to obtain CISSP certification more easily or more quickly (which may help them to qualify for certain types of jobs within the cybersecurity industry).

Signature:  (Carlisle Adams) Date: June 10, 2026

Signature:  (Karthik Pattabiraman) Date: June 10, 2026

Program and Dean Response to External Reviewers' Report Cybersecurity and Privacy (MCP) July 2026

General Commentary

We thank the reviewers for their recommendations. The recommendations show that the reviewers acquired a good understanding of the proposed program. The recommendations will improve the program's quality, and we will strive to implement them.

Program Response to External Reviewers' Recommendations

1. **Hire 1 additional staff person in the role of Graduate Coordinator for the MCP program.** As discussed in Section 2.7 above, this is approximately a full-time position that currently seems to be unaccounted for, but will be needed as this program grows to its expected enrollment.

Program Response

The proposal already mentions the requirement and assignment of a full-time Graduate Program Administrator to the proposed program. From Section 2.6 of the proposal: "The program will require and be assigned commensurate administrative staff support for its operations, which shall normally include a full-time Graduate Program Administrator or equivalent." It is unclear whether the reviewers missed this statement, or if they understand the statement and recommend additional hiring on top of the aforementioned. In the latter case, the proposal as written leaves room for such hiring if need arises.

Dean's response

The program response aligns with the plan for staff support, which may not be a 1.0 Graduate coordinator role, but will be commensurate with the needs of the program.

2. **Extend and deepen the existing required ethics workshop.** Given the subject matter of this degree (i.e., cybersecurity and privacy), training in ethics is absolutely essential for

these students. The current proposed ethics training is a pass/fail workshop delivered over a 3-day period. This seems far from adequate, given the complexities of the ethical questions and situations that arise in this field. The ethics workshop should be graded and should be delivered over at least half a semester (for example, 2 hours / week for 6 weeks). Ideally, some of the training should be given at the beginning of the MCP program, and some in the final semester (after the co-op work terms have been completed because the students may have encountered some real-world ethical situations in their places of work). It may also be valuable to have the ethics training delivered in online classes of no more than 30 students at a time; such an environment has been shown to facilitate open discussion and sharing of opinions by students.

Program Response

We largely agree with the reviewer's recommendation and decided to implement their two key suggestions: First, the ethics workshop now takes six weeks with one two-hour session each week. Second, the workshop is now graded. In consultation with the instructor of the MDSA1 ethics workshop, we decided not to implement the following two suggestions: First, we are not going to split the workshop into two parts. Given that MCP students could be in co-op or regular stream and that co-op could take one or two terms, scheduling the final part would be logistically challenging. Second, given the initial, targeted MCP class size of 35 students, we will not cap the size of the workshop at 30 students. However, we will monitor the impact of class size on the workshop's effectiveness when class size increases and may add another section if needed.

Dean's response

This recommendation is aligned with the Faculty's position on ensuring solid ethics training for our students. The program response is appropriate.

- 3. The MCP program should incorporate more machine learning (ML) and generative AI (GenAI) content.** This is important material – increasingly so in recent years – and students in cybersecurity and privacy need to understand its potential benefits and harms. This content could be given in a single new elective course, but the risk is that many students may not choose this course among their six electives. Preferably, this material would be incorporated into many of the existing and proposed courses so that all students will have some exposure to these topics.

Program Response

We are in full agreement with this recommendation. Several of the courses listed in the proposal already incorporate or are being revised to incorporate machine learning (ML) or

generative AI (genAI). For example, CS 653 has added one lecture on LLM-assisted program analysis in the S26 term, and the plan is to introduce more lecture content on the topics of (in)security of AI-generated code and agentic systems. In the proposal we have updated the descriptions of several courses (CS 653, CS 659, Digital Forensics and Incident Response, Foundations of Modern Cryptography, Privacy in Computation and Communication, Secure Programming) accordingly. The CO 700 and CS 800 level courses listed in the proposal are also likely to cover ML or genAI to at least some degree because these topics courses discuss current research. For example, there will be a CO 789 course in Winter 2027 on GenAI-assisted formal protocol verification.

Dean's response

This enhanced emphasis matches Faculty's interest in AI/ML training. The program is encouraged to continue to pursue opportunities for coverage of this content, and to ensure that the content remains relevant in this quickly-moving area.

4. **More funding should be available for students.** As discussed in Section 2.7, the 8 months of co-op will not cover all the expenses of the students (especially the international students). Entrance scholarships or “early in-course scholarships” will be very helpful to students. If such scholarships can be sourced from industry partners, then the program can be delivered without any loss in revenue (e.g., \$17,000 of the tuition is paid to UW by the student and the remaining \$10,000 is paid to UW by an industry partner). Alternatively, MCP students could be offered TA positions within the School of Computer Science or the Department of Combinatorics and Optimization (depending on their background), but this would result in some loss of revenue for the Faculty.

Program Response

We agree that the income during co-op may not be sufficient to cover all expenses incurred by students in the proposed program. As suggested by the reviewers, we will attempt to offer TA positions to MCP students. However, as per the University's agreement with the graduate student union, research-based graduate students have priority for TA positions, which will limit the number of positions available to MCP students. In general, given that the proposed program should provide additional revenue to the university, it is difficult for the university to provide more funding (or lower tuition). Therefore, our focus will have to be on bringing in funding opportunities from external sources, like industry partners. We will also monitor other potential sources. For example, the National Cybersecurity Consortium (NCC) has provided funding for cybersecurity training in the past.

Dean's response

There is currently no plan to use Faculty operating funds to support students in this program. Students will be eligible to apply for Teaching Assistantships, but under our new collective agreement with CUPE, those may be difficult to secure. The best path forward is to pursue partner sponsorships, as the program has described.

- 5. Hire 1 or 2 additional professorial positions to teach MCP courses.** The Faculty has already committed to these positions “if needed”. Given the extensive list of core and elective courses, the possibility of new courses being added over time, and the ongoing need to manage absences due to sabbaticals, sick leaves, parental leaves, and short- and long-term disability leaves, we feel that the hiring of at least one additional professorial position is already warranted.

Program Response

We are in full agreement with this recommendation. Our teaching plan for the MCP program and the regular CS graduate programs shows that CrySP faculty need to teach four CrySP courses each term. However, in the last eight terms, the average (median) number of taught CrySP courses was only 3.75 (3).

Dean's response

The current program development plan should provide sufficient teaching resources. We will continue to monitor need and will adjust resources as required.

- 6. Co-op positions must be explicitly tailored to cybersecurity and/or privacy work.** The co-op office at UW has extensive experience in facilitating matches between student skills and company needs, but some additional training may be required for the co-op staff so that they can recognize when a posted job would be a good fit for an MCP student. A job that requires cybersecurity or privacy expertise may not be (often, will not be) in a company that has cybersecurity as its primary focus or product line and, conversely, a “cybersecurity company” may post specific co-op jobs that have little or nothing to do with actual cybersecurity (and could therefore be done successfully by any other co-op student). Understanding what constitutes a cybersecurity / privacy graduate-level co-op task will require some training.

Program Response

We discussed this recommendation with Justin Kieffer, the Math Faculty Relations Manager in Co-operative Education. When listing a co-op job, employers can indicate an advertising

cluster. There already is a “Cybersecurity and Cryptography” cluster, to which the MCP program would be added. Co-op staff ensure that a job description matches its advertising cluster. To help co-op staff with this process, we agreed to jointly develop training methods. For example, this could be a guidance document or an online training session where sample job descriptions are reviewed and classified. For existing programs, like MDSAI, co-op staff also periodically report data, such as job descriptions, back to the program director so that they can ensure that a program still aligns with its students' co-op jobs. Overall, we support the recommendation to provide training to co-op staff.

Dean's response

The Faculty is in support of the Program's response.

- 7. Continuously monitor the computing and IT infrastructure available to students.** It appears that the current infrastructure available to support the proposed MCP program is quite sufficient to meet the needs of the courses. However, increasing enrollments, evolving course requirements, availability of new technologies, and changing needs in other programs can cause the current infrastructure to become inadequate. The IT staff should continue to assess the available resources on a regular basis to ensure that they remain appropriate and up-to-date.

Program Response

We are in full agreement with this recommendation. IT staff in the Cheriton School of Computer Science and the Faculty of Mathematics already monitor infrastructure needs for existing programs and courses. Course computing requirements are collected from instructors ahead of each term, additional compute capacity is added when needed for large enrollments, and software licenses are acquired as required by courses. Computing infrastructure is also upgraded periodically to keep pace with growing demands. The proposed program will take advantage of these existing processes. No new processes are needed.

Dean's response

The program has accurately described how the required supports will be provided. IT in the Faculty of Mathematics is currently undergoing a reorganization. We will ensure that this new program's needs are prioritized through that process.

- 8. Consider coordinating with WATSPEED.** WATSPEED currently offers a course called *ISC2 Official CISSP Certification Training*. It may be worth connecting with them to see if

any of the MCP courses can supplement or replace some modules in the WATSPEED course. The end benefit may be that when students complete the MCP program, they might be able to obtain CISSP certification more easily or more quickly (which may help them to qualify for certain types of jobs within the cybersecurity industry).

Program Response

We discussed this recommendation with the WatSPEED leadership. The ISC2 Official CISSP Certification Training course is not taught by WatSPEED but by ISC2. WatSPEED provides vouchers that allow students to take this course. It would be possible for WatSPEED to teach the modules of the course. In such a setup, as suggested by the reviewers, MCP courses could replace some of the modules. However, ISC2 has strict requirements in terms of course material. These requirements would be difficult to fulfill given that six of the nine courses that an MCP student needs to take are elective and that it is impossible to control the specific content of a course due to academic freedom. Therefore, we decided not to implement this suggestion. However, we will provide a discount to MCP students who want to take the WatSPEED course in question (and potentially other relevant WatSPEED courses). As suggested in the recommendation, this discount should make it easier for MCP students to obtain CISSP certification. In addition, we have agreed with the WatSPEED leadership to explore other collaboration opportunities. For example, some MCP courses could be provided in a modified version as WatSPEED courses. Incoming MCP students who took such a WatSPEED course in the past would get credit for this course. This credit would make the MCP program more attractive. Overall, we support the recommendation for coordination with WatSPEED.

Dean's response

The program response is appropriate. Related, we have recently been approached about opportunities to engage with members of the Royal Canadian Air Force as they expand recognitions of programs with a cyber/security focus that would be relevant training for Aerospace Engineering Officers. That could present another avenue for certification training.

Recommendations Not Selected for Implementation

Our intent is to implement all recommendations to the degree outlined above.

Signature of Approval

Chair/Director



Date

August 25, 2026

For Information**Open Session**

To: Senate Graduate Council
From: Angela Christelis,
Director, Academic Quality Enhancement
Date of Meeting: September 15, 2026
Agenda Item: **10. New Program Approval Process**

Recommendation/Motion

This item is being brought forward for information.

Summary

This presentation will provide an update on the implementation of the new process for new program development and approvals.

Proposal/Rationale

The new program approval process was recently revised in response to a recommendation stemming from the AVPA portfolio review. This presentation will update the committee on the transition to, and implementation of, the new process.

Documentation Provided

N/A

For Approval**Open Session**

To: Senate Graduate Council

From: Jennifer Coghlin
Associate Registrar, Enrolment Services and Academic Policy

Date of Meeting: September 15, 2026

Agenda Item: **11. Academic Calendar Dates for 2027-2028**

Recommendation/Motion

To recommend that Senate approve the 2027-2028 academic calendar dates and guidelines for determining academic dates, as presented.

Summary

The academic calendar dates lay out major academic milestones throughout the year and provide guidance to units throughout the campus community as they conduct academic planning within their respective areas.

Proposal/Rationale

The academic calendar dates and guidelines for determining academic calendar dates are brought forward to Senate Graduate Council each year for recommendation for approval by Senate, to be included in the next year's Graduate Studies Academic Calendar.

Jurisdictional Information

As outlined in the council's [Terms and Reference](#), Senate Graduate Council is empowered to make recommendation and approvals on behalf of Senate for a variety of matters:

- Receive for information and make recommendation to Senate as appropriate with respect to governance, regulations, policies, and matters relating to graduate education and Studies at the University.

Governance Path

Senate Graduate Council: September 15, 2026

Senate: November 23, 2026

Documentation Provided

2027-2028 Academic Calendar Dates and Guidelines for Determining Academic Dates

Academic Calendar Dates, 2027-2028

	Fall 2027	Winter 2028	Spring 2028
Co-operative Work Term Begins	Sept. 7 (T)	Jan. 10 (M)	May 8 (M)
Classes Begin	Sept. 8 (W)	Jan. 10 (M)	May 8 (M)
Holidays	Oct. 11 (M) – Thanksgiving	Feb. 21 (M) – Family Day Apr. 14 (F) – Good Friday	May 22 (M) – Victoria Day July 1 (S) – Canada Day July 3 (M) – For Canada Day Aug. 7 (M) – Civic Holiday
Reading Week	Oct. 9-17 (S-U)	Feb. 19-27 (S-U)	N/A
Convocation	Oct. 22, 23 (F, S)	N/A	June 13-17 (T-S)
Classes End	Dec. 7 (T)	Apr. 7 (F)	Aug. 1 (T)
Make-up Day(s) for in-term holidays	N/A	N/A	July 31 (M) for May 22 (M) Aug. 1 (T) for July 3 (M)
Pre-Examination Study Day(s)	Dec. 8 (W)	Apr. 10, 11 (M, T)	Aug. 2, 3 (W, R)
Examinations Begin	Dec. 9 (R)	Apr. 12 (W)	Aug. 4 (F)
In-Person Exam Days for Online Courses	Dec. 15 (W) Dec. 16 (R) Dec. 17 (F) Dec. 18 (S)	Apr. 19 (W) Apr. 20 (R) Apr. 21 (F) Apr. 22 (S)	Aug. 9 (W) Aug. 10 (R) Aug. 11 (F) Aug. 12 (S)
Examinations on Sunday	Dec. 12 (U)	N/A	N/A
No Exams on the Following Days	Dec. 19 (U)	Apr. 14 (F) Apr. 15 (S) Apr. 16 (U) Apr. 23 (U)	Aug. 5 (S) Aug. 6 (U) Aug. 7 (M) Aug. 13 (U)
Examinations End (including Emergency Day)	Dec. 23 (R)	Apr. 29 (S)	Aug. 19 (S)
Co-operative Work Term Ends	Dec. 23 (R)	Apr. 28 (F)	Aug. 18 (F)
Teaching weeks/days	60 days	60 days	60 days
Pre-examination Study Day(s)	1	2	2
Examination days	13 + 1 emergency day	13 + 1 emergency day	11 + 1 emergency day

Symbols and abbreviations:

(M) Monday, (T) Tuesday, (W) Wednesday, (R) Thursday, (F) Friday, (S) Saturday, (U) Sunday, N/A – Not Applicable

Guidelines for Determining Academic Calendar Dates

The following are principles and guidelines either formally agreed upon by Senate or adopted as common practice in determining the dates for the academic year.

1. That the practice of setting dates for each academic year continues to be an annual exercise.
2. That there be no fewer than 60 teaching days in a term. A clear rationale for fewer than 60 teaching days must be communicated to Senate at the time calendar dates are approved. In calculating teaching days in a term, Saturdays, Sundays, and statutory or University holidays are excluded.
3. That attention be given to balancing the number of meets in courses. Where an imbalance may occur because of public holidays, the class schedule for a day different than the calendar day can be used to balance the number of course meets.
4. That fall convocation be the Friday and Saturday that fall in the third full week (beginning Sunday) of October.
5. That spring convocation be the Tuesday to Saturday in the second full week (beginning Sunday) in June.
6. That the Reading Weeks occur in all faculties in the fall and winter terms. They must begin on the Saturday before the public holidays of Thanksgiving Day and Family Day and will end on the following Sunday.
7. That fall term classes in September begin on the Wednesday following the Labour Day holiday.
Exception: The Fall Term begins on Tuesday, September 8th when Labour Day is September 7th.
8. That the start date for winter term be set as follows:
 - If January 1st is a Sunday, then start of classes is Monday, January 9th.
 - If January 1st is a Monday, then start of classes is Monday, January 8th.
 - If January 1st is a Tuesday, then start of classes is Monday, January 7th.
 - If January 1st is a Wednesday, then start of classes is Monday, January 6th.
 - If January 1st is a Thursday, then start of classes is Monday, January 5th.
 - If January 1st is a Friday, then start of classes is Monday, January 11th.
 - If January 1st is a Saturday, then start of classes is Monday, January 10th.
9. The start date for spring term be set as follows:
 - If May 1st is a Sunday, then start of classes is Monday, May 9th.
 - If May 1st is a Monday, then start of classes is Monday, May 8th.
 - If May 1st is a Tuesday, then start of classes is Monday, May 7th.
 - If May 1st is a Wednesday, then start of classes is Monday, May 6th.
 - If May 1st is a Thursday, then start of classes is Monday, May 5th.
 - If May 1st is a Friday, then start of classes is Monday, May 11th.
 - If May 1st is a Saturday, then start of classes is Monday, May 10th.
10. That there be no fewer than one pre-examination study day and when possible, two pre-examination study days (excluding Saturday, Sunday, and holidays) between the end of classes and the beginning of final examinations. A clear rationale for using fewer than two days or Saturday, Sunday, and holidays as pre-examination study days, must be communicated to Senate at the time calendar dates are approved.

11. That there be no fewer than 13 final examination days in the fall and winter terms, and 11 final examination days in the spring term. In addition, one Emergency Day with no scheduled final examinations is added to the end of the Final Examination Period.
12. In calculating final examination days, Saturdays which fall within the period are included, whereas Sundays and public or University holidays are excluded.
Exceptions:
 Final examinations will not be scheduled on the Saturday following Good Friday when that day falls within the Final Examination Period or the Saturday of the Civic Day weekend.
 The first Sunday within the Final Examination Period may be used when required to accommodate the prescribed number of final examination days in the fall term.
13. That in the fall term no final examinations be scheduled beyond December 22nd. The Emergency Day cannot be scheduled beyond December 23rd.
14. That final examinations for online courses be scheduled on **a consecutive Wednesday, Thursday, Friday and Saturday** ~~any Friday evening or Saturday~~ within the Final Examination Period. And that final examinations for courses with both online sections and on-campus sections be scheduled together wherever possible.
15. ~~Grades due dates for on-campus courses that have a scheduled final examination are normally scheduled seven days from the date of the final examination. Grades for online courses that have a scheduled final examination are due on the last day of the grades submission period. Grades for all courses without a scheduled final examination are normally due 14 days after the start of examinations.~~
16. Co-op work terms are expected to be 16 weeks in duration. Actual start and end dates may vary depending on employer or student requirements in consultation with Co-operative Education.

Guidelines that Require Exceptions with Rationale:

Guideline 10

...That there be no fewer than one pre-examination study day and when possible, two pre-examination study days (excluding Saturday, Sunday, and holidays) between the end of classes and the beginning of final examinations.

With 2027 fall term classes beginning September 8, 2027, in order to complete the fall term final exam period by December 22, 2027 (with the Emergency Day scheduled on December 23, 2027), only one pre-examination study day can be accommodated.

Guideline 12

... The first Sunday within the examination period may be used when required to accommodate the prescribed number of examination days in the Fall Term.

With 2027 fall term classes beginning September 8, 2027, the first Sunday within the fall final exam period is required for scheduling exams.

Guideline 14

...That final examinations for online courses be scheduled on any Friday evening or Saturday within the Final Examination Period. And that final examinations for courses with both online sections and on-campus sections be scheduled together wherever possible.

For 2028, Easter falls within the spring term final exam period. Due to this, final examinations for online courses will need to be scheduled on the first consecutive Wednesday (evening), Thursday (evening), Friday (evening), and Saturday (all day).

Prepared by:
R. Darling, Registrar, September 2026