

University of Waterloo
SENATE
Notice of Meeting

Date: Monday 28 February 2022

Time: 3:30 p.m.

Place: Microsoft Teams Videoconference

	OPEN SESSION		PAGE #
3:30	<p><u>Consent Agenda</u> Motion: To approve or receive for information by consent items 1-5 below.</p> <ol style="list-style-type: none"> 1. Minutes of the 17 January 2022 Meeting 2. Reports from Committees and Councils <ol style="list-style-type: none"> a. Senate Graduate & Research Council b. Senate Undergraduate Council 3. Report of the President <ol style="list-style-type: none"> a. Tenure and Promotion of Faculty Members b. Recognition and Commendation 4. Reports from the Faculties 5. Committee Appointments <p><u>Regular Agenda</u></p>	<p>Decision</p> <p>Information Information</p> <p>Information Information</p> <p>Information</p> <p>Decision</p>	<p>3</p> <p>9 11</p> <p>13 15</p> <p>17</p> <p>19</p>
3:35	6. Business Arising from the Minutes		
3:40	<ol style="list-style-type: none"> 7. Reports from Committees and Councils <ol style="list-style-type: none"> a. Senate Graduate & Research Council b. Joint Report Senate Undergraduate Council and Senate Graduate & Research Council c. Senate Undergraduate Council 	<p>Decision Decision</p> <p>Decision</p>	<p>21 23</p> <p>33</p>
4:00	8. Presentation* Waterloo Experience Accelerate Program, Norah McRae + guests	Information	
4:20	<ol style="list-style-type: none"> 9. Report of the President <ol style="list-style-type: none"> a. President's Update 	Information	
4:40	<ol style="list-style-type: none"> 10. Report of the Vice-President, Academic & Provost <ol style="list-style-type: none"> a. 2021/2022 Operating Budget Update b. Update 	<p>Information Information</p>	<p>37</p>
5:00	<ol style="list-style-type: none"> 11. Report of the Vice-President, Research & International <ol style="list-style-type: none"> a. Waterloo International: A review of 2021 – Ian Rowlands 	<p>Information Information</p>	<p>39</p>
5:20	12. Other Business		
<p>*Senators are invited to watch this <u>brief video</u> before the meeting.</p>			

CONFIDENTIAL SESSION			
5:25	13. Minutes of the 17 January 2022 Meeting	Decision	7
5:30	14. Business Arising from the Minutes		
5:35	15. Report of the President		
	a. Professor Emeritus/a Designation Recommendation	Decision	43
5:40	16. Reports from Committees and Councils		
	a. Honorary Degrees Committee	Decision	45
5:45	17. Other Business		

KJJ/dg
17 February 2022

Karen Jack
University Secretary
Secretary to Senate

University of Waterloo
SENATE
Minutes of the Monday 17 January 2022 Meeting

Present: John Abraham, Sheila Ager, Jean Andrey, Sandra Banks, Lisa Bauer-Leahy, Michael Beauchemin, Anne Bordeleau, Carmen Bruni, Jeff Casello, Trevor Charles, Robyn Clarke, Joan Coutu, Neil Craik, Lori Curtis, Kristine Dalton, Charmaine Dean, David DeVidi, Nenone Donaldson, Catherine Dong, Benjamin Easton, Wendy Fletcher, Cindy Forbes, George Freeman, Martha George, Mark Giesbrecht, Moira Glerum, Vivek Goel (chair), Onurcan Gokkaya, David Ha, Kevin Hare, Dennis Huber, Natalie Hutchings, Karen Jack (secretary), Martin Karsten, Achim Kempf, Zabeen Khamisa, Jennifer Kieffer, Alysia Kolentsis, Christiane Lemieux, Robert Lemieux, Xianguo Li, Lili Liu, Kristina Llewellyn, Ellen MacEachen, Carol Ann MacGregor, Peter Meehan, Ian Milligan, Zoran Miskovic, Graham Murphy, Richard Myers, Beth Namachchivaya, Cathy Newell Kelly, Oudy Noweir, Daniel O'Connor, Troy Osborne, Nicholas Pfeifle, Luke Potwarka, William Power, Neil Randall, James Rush, Naima Samuel, Matthew Schwarze, Marcus Shantz, Harkirat Singh Dhillon, Siv Sivaloganathan, Siva Sivoththaman, Bruno Tremblay, Sharon Tucker, Graeme Turner, Diana Vangelisti, Johanna Wandel, Mary Wells, Stan Woo, Nancy Worth, Clarence Woudsma, En-Hui Yang,

Guests: Jean Becker, Bruce Campbell, Aldo Caputo, Benoit Charbonneau, Donna Ellis, Anna Esselment, Aiman Fatima, Barbara Forrest, Brian Forrest, Anne Galang, Amanda Garcia, Sanjeev Gill, Diana Goncalves, Michael Grivicic, Sarah Hadley, Candace Harrington, Narveen Jandu, Ross Johnston, Andrea Kelman, Nick Manning, Ben McDonald, Norah McRae, Bessma Momani, Kristiina Montero, Liz Nilsen, Fayaz Noormohamed, Mary Power, Andrea Prier, Chris Read, Ian Rowlands, Daniela Sesar-Hencic, Marianne Simm, Allan Starr, Kerry Stryker, Sherri Sutherland, Brandon Sweet, Mathew Thijssen, Sean Thomas, Marilyn Thompson, Richard Wikkerink

Absent: Nasser Mohieddin Abukhdeir, Mike Ashmore*, Dominic Barton*, Paul Fieguth*, Kelly Grindrod, Veronica Kitchen*, Blake Madill*, Samantha Meyer, Erin O'Connell, Chao Tan, Paul Ward, Samer Zu'Mot

*regrets

OPEN SESSION

CHAIR'S REMARKS

The chair welcomed members to the meeting and extended a warm welcome on behalf of Senate to Nenone Donaldson, the new vice-president, advancement. He advised that following some feedback received after the November Senate meeting, more time will be provided during voting to allow the opportunity to record dissenting votes and abstentions. He also advised that the Senate Executive Committee will consider voting in its governance review deliberations.

Consent Agenda

Senate heard a motion to approve or receive for information the items on the consent agenda.

Hare and Randall.

- 1. MINUTES OF THE 15 November 2021 MEETING**
Senate approved the minutes of the meeting.
- 2. REPORTS FROM COMMITTEES AND COUNCILS**
 - a. Senate Graduate & Research Council**
Senate received the report for information.
 - b. Senate Undergraduate Council**
Senate received the report for information.

3. REPORT OF THE PRESIDENT

Recognition and Commendation

Senate received the report for information.

4. REPORTS FROM THE FACULTIES

Senate received the reports for information.

The question was called and the motion carried unanimously.

Regular Agenda

5. BUSINESS ARISING FROM THE MINUTES

There was no business arising.

6. REPORTS FROM COMMITTEES AND COUNCILS

a. Senate Graduate & Research Council

Program Changes: Faculty of Arts

Senate heard a motion to approve the addition of a regular online/virtual classroom in the part-time stream of the Master of Taxation (MTax) program, effective 1 May 2022.

Casello and Ager. Carried unanimously.

Senate heard a motion to approve making the Graduate Studies Internship milestone optional, rather than required, for the MASc in Industrial and Organizational Psychology, effective 1 May 2022.

Casello and Ager. Carried unanimously.

Program Change: Faculty of Environment

Senate heard a motion to approve the addition of a PhD in Sustainability Management – Water program, effective 1 May 2022.

Casello and Andrey. Carried unanimously.

b. Senate Undergraduate Council

Academic Plan Changes – Faculty of Mathematics – Computational Mathematics

Senate heard a motion to approve changes to the honours computational mathematics and the computational mathematics minor academic plan, effective 1 September 2022.

DeVidi and Giesbrecht.

Following confirmation that the change is not mandated to be retroactive, the question was called and the motion carried unanimously.

c. University Committee on Student Appeals

DeVidi spoke to the report distributed with the agenda and advised that he learned through discussions with the associate deans who manage student discipline matters that some increases in certain offences probably results from the significant increase in online learning. He advised that there was an increase in the misuse of tutoring online services; that asynchronous delivery created opportunities for excessive collaboration and cheating; and that the increase in offences has meant a corresponding increase in workload for many people across the institution. DeVidi shared some of the mitigating strategies that have been developed to help to address these matters and he spoke about some of the work being done in the Academic Integrity Office on this front.

In response to questions, DeVidi spoke about some challenges in the categorization of offences, and he confirmed that the incidence of repeat offences is quite low.

7. REPORT OF THE PRESIDENT

Strategic Plan Theme: Developing Talent for a Complex Future

The president advised Senators that today's strategic plan theme update is meant to enhance their understanding of key initiatives and he invited members to offer suggestions for refinement in the future. He invited Rush to provide an introduction and a brief reminder of the plan's thematic spotlights, which he did. Rush introduced Norah McRae, associate provost, co-operative and experiential education who spoke to the Future Ready Talent Framework (FRTF). Members heard about: the four categories (expand and transfer expertise; develop self; build relationships; design and deliver solutions); and FRTF in action with stakeholders. DeVidi spoke to the Teaching Innovation Incubator. Members heard about: context; vision; the reasons for having a teaching incubator; the concept. Casello spoke to interdisciplinary course offerings led by emerging scholars, advising senators about: the strategic commitment, an interdisciplinary course proposal; benefits and impacts. Senate next heard remarks from Casello and McRae regarding Graduate Student Work – Integrated Learning, or "GradWIL". Members heard: the strategic commitment, the benefits of GradWIL; the background of WIL at the graduate level; the vision and proposal. The presentation concluded with remarks from Sanjeev Gill, associate vice-president, innovation who spoke to WATSPEED. Members heard: why it is important, and why now; the alignment to the strategic plan; consultations undertaken to date; faculty partnership opportunities and challenges.

In response to a question about where ethical and decolonization considerations fit within this theme, confirmation from the provost and the president that the themes are not isolated from one another, much cross-fertilization exists, and that these topics will arise in future strategic plan conversations. In discussion: experts in the Centre for Extended Learning are being engaged with teaching incubator activities; ways to promote interdisciplinarity; potential new models for graduate student supervision. Rush thanked senators for their engagement and feedback and the president offered thanks to everyone involved in the various exciting initiatives.

Senate Governance Review Terms of Reference

Following the president's review of the terms of reference and advice that consultations with senators will follow, he encouraged members to participate in the consultations and invited senators also to reach out with any feedback or comments to the secretary too.

Update

The president provided senators with a general update including: condolences for recently deceased members of the community; kudos for some recent recognitions of Waterloo individuals including those recently announced to the Order of Canada (Geoffrey Fong and Rick Haldenby); some institutional achievements; notable research and researchers; some innovation, entrepreneurship and business achievements; some arts and culture and societal achievements; some comments about his recent op-ed in *Maclean's*; a COVID-19 update.

8. REPORT OF THE VICE-PRESIDENT, ACADEMIC & PROVOST

In his report, Rush provided an operational update about: winter 2022 enrollments; current student enrollments in essential in-person activity and the coming return to in-person learning and working arrangements; library programs and services; supports for students, including international and co-op students; an update on the "SHIFT: Neutral" investments.

In discussion: clarity regarding class enrollment numbers; clarification from Mat Thijssen, director of sustainability that climate-change related targets have not changed since 2020; and, in response to questions regarding the review of Policies 76 and 77, Rush and Curtis confirmed that productive discussions continue at the Faculty Relations Committee and that future communications from the

committee will offer clarity on next steps. The president expressed his thanks to those working on these important policies.

9. REPORT OF THE VICE-PRESIDENT, RESEARCH & INTERNATIONAL

Dean provided a brief review of the highlights of her report and noted prestigious awards being received by University of Waterloo researchers.

10. OTHER BUSINESS

There was no other business.

Senate convened in confidential session.

20 January 2022

Karen Jack
University Secretary

CONFIDENTIAL SESSION

The Confidential Session Minutes have been removed.

The meeting was adjourned at 5:37 p.m.

20 January 2022

Karen Jack
University Secretary

This page intentionally left blank.

University of Waterloo
SENATE GRADUATE & RESEARCH COUNCIL
Report to Senate
28 February 2022

Senate Graduate & Research Council met on 10 January 2022 and agreed, in accordance with [Senate Bylaw 2](#) (section 4.03), to forward the following item to Senate for information as part of the consent agenda.

Further details are available at: <https://uwaterloo.ca/secretariat/committees-and-councils/senate-graduate-research-council>

FOR INFORMATION

RESEARCH INSTITUTE

On behalf of Senate, council approved a 12-month extension of the mandate for the Cybersecurity and Privacy Institute due to challenges and delays to business processes caused by the COVID-19 pandemic. The revised centre renewal date is 31 May 2023.

ACADEMIC PROGRAM REVIEWS

On behalf of Senate council approved, as presented:

- Two-Year Progress Report: Quantum Information Collaborative
- Two-Year Progress Report: Applied Mathematics
- Two-Year Progress Report: Environment and Business, Sustainability Management, Economic Development and Innovation
- Two-Year Progress Report: International Development and Master of Development Practice

GRADUATE AWARDS

On behalf of Senate, council approved the Yang Family Graduate Scholarship in Electrical & Computer Engineering (endowment) and Jain Family Award for Entrepreneurship (trust).

/mh kw Jeff Casello
Associate Vice-President, Graduate Studies and
Postdoctoral Affairs

Charmaine Dean
Vice President, Research & International

This page intentionally left blank.

University of Waterloo
SENATE UNDERGRADUATE COUNCIL
Report to Senate
28 February 2022

Senate Undergraduate Council met on 11 January 2022 and agreed to forward the following items to Senate. Council recommends that these items be included for information or approval, as noted, in the consent agenda.

Further details are available at: uwaterloo.ca/secretariat/committees-and-councils/senate-undergraduate-council

FOR INFORMATION

ACADEMIC PROGRAM REVIEWS

Council reviewed and approved the [following reports](#) on behalf of Senate:

- Final Assessment Report (FAR) Medieval Studies
- Two-Year Progress Report (PR) Mathematics/Business Administration, Mathematics/Chartered Professional Accountancy, Mathematics/Financial Analysis and Risk Management
- PR Mathematical Studies
- FAR Speech Communications
- PR Philosophy
- PR Classical Studies
- PR English Language and Literature

MINOR PLAN & CURRICULAR MODIFICATIONS

Council approved the following on behalf of Senate:

- minor plan changes for the Faculty of Arts (French Teaching Specialization, International Studies Minor); Faculty of Science (Biophysics Minor).
- course changes for the Faculty of Arts (accounting and financial management, arts, Germanic and Slavic studies, Spanish and Latin American studies); Faculty of Science (physics).
- course inactivations for the Faculty of Arts (accounting and financial management, French studies); Faculty of Science (physics).

/rmw

David DeVidi
Associate Vice-President, Academic

This page intentionally left blank.

TENURE AND PROMOTION OF FACULTY MEMBERS

This report provides a summary of the 2020/21 tenure and promotion cycle carried out under [Policy 77 – Tenure and Promotion](#). The following individuals were awarded tenure and/or promoted, effective 1 July 2021 and are reported to Senate for information in accordance with Section 6. of the policy.

Tenure

Tenure provides institutional support for faculty members' academic freedom. This enables them to pursue and disseminate knowledge and the attainment of understanding through their scholarship and teaching, all in an atmosphere in which free inquiry and discussion are fostered. Tenure provides faculty members with an environment conducive to their long-term scholarly work, and the University is assured of a continuing group of teachers and scholars committed to the University, around which it can plan and from whom it can draw its academic leadership.

Promotions

When assistant professors are granted tenure, they are also promoted to the rank of associate professor. Promotions of associate professors to the rank of professor recognizes a high order of achievement in their scholarship and teaching, and satisfactory performance in their service. A continuous program of scholarship with positive peer review by nationally and internationally recognized scholars is essential for promotion to professor.

Timing

Following initial appointments usually totalling six years, faculty members may apply for tenure. Tenured associate professors normally serve five years at that level before applying for promotion to professor.

Process

Tenure and Promotion Committees at the department, Faculty, and University levels consider applications and make recommendations to the next level. The University Tenure and Promotion Committee makes recommendations to the president on tenure and promotion cases, and on the comparability of standards across the University. The president considers the recommendations and renders decisions.

The cases below followed this process and were decided upon by the previous president.

FOR INFORMATION

Awarded Tenure and Promoted to Associate Professor:

Bachmann, Chris – Civil and Environmental Engineering

Barry, Janice – School of Planning

Bauer, Tim – School of Accounting and Finance

Browne, Ryan – Statistics and Actuarial Science

Collins, Andrea – School of Environment, Resources and Sustainability

Dow, Christine – Geography and Environmental Management

Fulfer, Katy – Philosophy
Hutton, Jane – School of Architecture
Meehan, Sean – Kinesiology
Montesano, John – Mechanical and Mechatronics Engineering
Morita, Plinio – School of Public Health and Health Systems
Musselman, Kevin – Mechanical and Mechatronics Engineering
Presslee, Adam – School of Accounting and Finance
Pushin, Dmitry – Physics and Astronomy
Rhebergen, Sander – Applied Mathematics
Rice, Greg – Statistics and Actuarial Science
Simakov, David – Chemical Engineering
Skinner, Kelly – School of Public Health and Health Systems
Snelgrove, Ryan – Recreation and Leisure Studies
Trant, Andrew – School of Environment, Resources and Sustainability
Wilkins-Laflamme, Sarah – Sociology and Legal Studies
Willett, Tom – Systems Design Engineering
Wong, Samuel – Statistics and Actuarial Science
Wong, William Wai Lun – School of Pharmacy
Wood, Laura – Recreation and Leisure Studies
Worth, Nancy – Geography and Environmental Management
Yu, Yaoliang – Computer Science

Awarded Tenure:

Gostick, Jeff – Chemical Engineering

Promoted to Professor:

Basu, Dipanjan – Civil and Environmental Engineering
Basu, Nandita – Civil and Environmental Engineering
Bordeleau, Anne – School of Architecture
Danisch, Robert – Communications Arts
Dubin, Joel – Statistics and Actuarial Science
Golab, Lukasz – Management Sciences
Gzara, Fatma – Management Sciences
Huang, Alan – School of Accounting and Finance
Karigiannis, Spiro – Pure Mathematics
Karsten, Martin – Computer Science
Krivodonova, Lilia – Applied Mathematics
Lau, Lap Chi – Computer Science
Liston, Maria – Anthropology
Mehlenbacher, Brad – English Language and Literature
Nielsen, Christopher – Electrical and Computer Engineering
Peterson, Sean – Mechanical and Mechatronics Engineering
Smucker, Mark – Management Sciences
Statiev, Alexander – History
Tolmie, Sarah – English Language and Literature
Weng, Chengguo – Statistical and Actuarial Science
Wong, Alexander – Systems Design Engineering
Xu, Dinghai – Economics
Yu, Aiping – Chemical Engineering

**University of Waterloo
SENATE
Report of the President
28 February 2022**

FOR INFORMATION

Recognition and Commendation

Honours relating to Advancing Research for Global Impact

School of Accounting and Finance Associate Professor **Krista Fiolleau**, PhD and her co-authors Leslie Berger, PhD and Carolyn MacTavish, PhD, associate professors at Wilfrid Laurier, were awarded the Best Paper Award from the *Journal of Management Accounting Research* (JMAR). The journal is published by the American Accounting Association (AAA), the largest community of accountants in academia. The JMAR Best Paper Award is presented annually to the JMAR paper deemed to have the greatest potential impact on management accounting research.

(Adapted from the [Daily Bulletin, 12 January 2022](#))

The University of Waterloo has been designated **Research University of the Year** in the Canadian universities comprehensive tier by Research Infosource Inc. for the 14th consecutive year. Waterloo also ranked 13th in Canada's Top 50 Research Universities for sponsored research income with more than \$211 million. Among comprehensive universities, Waterloo placed first for corporate research income with more than \$31 million.

(Adapted from the [Daily Bulletin, 25 January 2022](#))

Honours relating to Developing Talent for a Complex Future

The Centre for Extended Learning proudly announced the first recipient of **James D. Leslie Graduate Award, Sarah Chan**. Sarah began the part-time, online Master of Math for Teachers (MMT) program in the Fall of 2016 and completed it in the Spring of 2020 with exceptional grades and a job that she loves which involves math and computer science outreach and professional development. Sarah's journey to complete the MMT took her from grief and depression to a successful career at Waterloo where she helps instill a love of learning in others.

(Adapted from the [Daily Bulletin, 19 January 2022](#))

Honours relating to Strengthening Sustainable and Diverse Communities

Four members of the University of Waterloo community are being honoured with a **Minister's Award of Excellence** for their noteworthy contributions. The 2020 awards were created to acknowledge the inspiring work of Ontario's faculty and staff in the early stages of the pandemic. The tradition continues with the addition of categories that recognize the work of Ontario's postsecondary institutions.

The winners are:

- **Dr. Heather Hall** (Faculty of Environment) and **Dr. Mark Servos** (Faculty of Science) in the category of Everyday Heroes. The Everyday Heroes award recognizes faculty and staff who stepped up and made a difference during the pandemic and the 2020/2021 school year.
- **Angela Pause** (Faculty of Engineering) in the category of Equality of Opportunity. The Equality of Opportunity award recognizes faculty and staff who have excelled at opening postsecondary education to marginalized and underrepresented groups.
- **Lucas Wen Tang** (Faculty of Engineering) in the category of Rising Star. The Rising Star award recognizes grad students or faculty under 35 and already making a difference in education, inspiring students, or conducting innovative research in the postsecondary education sector.

(Adapted from the [Daily Bulletin, 28 January 2022](#))

This page intentionally left blank.

University of Waterloo
REPORT TO SENATE FROM THE FACULTIES
28 February 2022

FOR INFORMATION

The Faculty Reports for Senators' information regarding the variety of appointments, reappointments, special appointments, leaves, and other matters of interest about individuals in the Faculties are available at the [Senate agenda page](#)¹.

¹ https://uwaterloo.ca/secretariat/sites/ca.secretariat/files/uploads/files/all_faculties_feb_2022_1.pdf

This page intentionally left blank.

University of Waterloo
SENATE
Report to Senate
28 February 2022

FOR APPROVAL

Committee Appointments

The **Distinguished Teacher Awards** (DTA) are awarded to exemplary instructors at the University of Waterloo. The awards are open to all who teach at the University, and the main criterion of the award is a record of excellent teaching at Waterloo of usually at least five years' time. The committee considers: evidence of intellectual vigour and communication skills in the interpretation and presentation of subject matter; evidence of educational impact beyond the classroom; the instructor's concern for and sensitivity to the needs of students; and a clear indication that the nominee has a favourable and lasting influence on students, and, where relevant, on colleagues. The DTA is awarded to four instructors annually and individuals are announced at the March meeting of Senate.

The committee is appointed by Senate and consists of three undergraduate students (nominated by Waterloo Undergraduate Student Association), two graduate students (nominated by the Graduate Student Association), one alumni representative, four members of faculty (typically previous winners of the award), and the associate vice-president, academic as chair.

Motion: To approve the following appointments (note, only part of the membership changes each year):

Faculty: Cynthia Richard; Wei-Chau Xie; Suzanne Kearns

Undergraduate: Nicole Wilson; Mathumy Sivatheesan; Garvita Batra

Graduate: Giuseppe Femia; Joseph Varga

Alumni: Tiffany Bradley

Chair AVPA: David DeVidi

The **Amit & Meena Chakma Award for Exceptional Teaching by a Student** (AETS) awards are open to all students who have a formal teaching role at the University of Waterloo. Up to four awards are given annually in recognition of excellence in teaching of all kinds by registered students (e.g., teaching assistant, laboratory demonstrator, sessional lecturer). The selection committee considers intellectual vigour and communication skills in the interpretation and presentation of subject matter. Concern for and sensitivity to the academic need of the students is an important criterion.

The committee is appointed by Senate and consists of three undergraduate students (nominated by Waterloo Undergraduate Student Association), two graduate students (nominated by the Graduate Student Association), two members of faculty, and the associate vice-president, graduate studies and postdoctoral affairs as chair.

Motion: To approve the following appointments (note, only part of the membership changes each year):

Undergraduate: Komal Gill; Kristine Voong; Zurie Campbell

Graduate: Becky Anderson; Jennifer Reid

Faculty: Anindya Sen

Chair: Jeff Casello

This page intentionally left blank.

University of Waterloo
SENATE GRADUATE & RESEARCH COUNCIL
Report to Senate
28 February 2022

Senate Graduate & Research Council met on 10 January 2022 and agreed, in accordance with [Senate Bylaw 2](#) (section 4.03), to forward the following item to Senate for approval as part of the regular agenda.

Further details are available at: <https://uwaterloo.ca/secretariat/committees-and-councils/senate-graduate-research-council>

FOR APPROVAL

"SUB-CENTRING" OF RESEARCH INSTITUTE

- 1. Motion:** To approve, as presented, the Waterloo Institute for Social Innovation and Resilience (WISIR) becoming a sub-centre of the Waterloo Institute for Complexity and Innovation (WICI); and in doing so recognizes that WISIR is dissolved in its own right as a separate Senate Institute.

Rationale: The Waterloo Institute for Social Innovation and Resilience (WISIR) and Waterloo Institute for Complexity and Innovation (WICI) are currently two Senate-approved research institutes at University of Waterloo. Both institutes were established in 2010 and renewed in 2015. As of November 2021, WICI has now also been approved by Senate for another five-year term.

After a year of careful consultation with members and stakeholders, the Directors of WICI and WISIR hereby propose that WISIR become a sub-centre of WICI moving forward. Complex systems collaboration, research and education are deeply embedded in WISIR's core research and curricula, and many of the members of WISIR are currently also members of WICI. Both institutes have operated successfully for the past five years with modest budgets to deliver meaningful and impactful activities in their respective and often overlapping areas. Sub-centering will save the University of Waterloo significant administrative load in overseeing and operating two separate institutes and will provide opportunities to streamline synergistic and complementary strengths to generate more impactful research.

Senators may review the materials considered by council in the link in the motion, or beginning at page 8 on the Agenda for Council's 10 January 2022 meeting.

/mh kw Jeff Casello
Associate Vice-President, Graduate Studies and
Postdoctoral Affairs

Charmaine Dean
Vice President, Research & International

This page intentionally left blank.

University of Waterloo
SENATE GRADUATE & RESEARCH COUNCIL
and
SENATE UNDERGRADUATE COUNCIL
Report to Senate
28 February 2022

Senate Graduate & Research Council (SGRC) met on 10 January 2022 and 14 February 2022 and Senate Undergraduate Council (SUC) met on 9 November 2021 and 11 January 2022. Each council considered the following items in accordance with [Senate Bylaw 2](#) (section 4.03, 5.03), and agreed to forward these items to Senate for approval as part of the regular agenda.

Further details are available at:

<https://uwaterloo.ca/secretariat/committees-and-councils/senate-undergraduate-council>

<https://uwaterloo.ca/secretariat/committees-and-councils/senate-graduate-research-council>

FOR APPROVAL

ACADEMIC CALENDAR DATES 2021-2022

1. **Motion:** To approve revised academic calendar dates for 2021-2022 and calendar guidelines for establishing academic dates as presented in Appendix 1.

Rationale: The in-person exam days for online courses have now been established and replace the “TBD” designation in the table of academic calendar dates approved at the 16 November 2020 meeting of Senate.

UNIVERSITY JURISDICTION TEXT

2. **Motion:** To approved revised university jurisdiction and disclaimer language in the Undergraduate Studies Academic Calendar and Graduate Student Academic Calendar as outlined in Appendix 2, effective on approval by Senate.

Rationale: The circumstances of the COVID-19 pandemic have given the University the opportunity to review its operational frameworks and policies related to disruptive events beyond the University’s control, such as severe weather, malicious acts and disease or health emergencies. The revised calendar text is one of the updates recommended as a result of this review with the intention of clarifying policies, roles and responsibilities of the University and students when impacted by a disruptive event, particularly one of extended duration such as the pandemic. This text will appear in both calendars to ensure consistency between the two. The last paragraph of the new text headed, “COVID-19 Pandemic” will be removed when the pandemic has concluded.

/kw & rw

Jeff Casello
Associate Vice-President,
Graduate Studies and Postdoctoral Affairs

Charmaine Dean
Vice President,
Research & International

David DeVidi
Associate Vice-President, Academic

**OFFICE OF THE REGISTRAR REPORT TO
SENATE UNDERGRADUATE COUNCIL**

January 2022

1. REGULATIONS

1.1 Academic Calendar Dates, 2021-2022 (Revised)

	Winter 2022	Spring 2022
Classes End	Apr. 5 (T)	July 26 (T)
Make-up Day(s) for in-term holidays	N/A	July 25 (M) for May 23 (M) July 26 (T) for July 1 (F schedule)
Pre-Examination Study Day(s)	Apr. 6,7 (W,R)	July 27, 28 (W,R)
Examinations Begin	Apr. 8 (F)	July 29 (F)
In-Person Exam Days for Online/ Remote Courses	TBD Apr. 8,9 (F,S)	TBD Aug. 5, 6 (F,S)
Examinations on Sunday	N/A	N/A
Examinations End (including Emergency Day)	Apr. 26 (T)	Aug. 13 (S)

Symbols and abbreviations: (M) Monday, (T) Tuesday, (W) Wednesday, (R) Thursday, (F) Friday, (S) Saturday, (U) Sunday, N/A – Not Applicable

Extract of the Guidelines for Determining Academic Calendar of 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.

12. In calculating examination days, Saturdays which fall within the period are included, whereas Sundays and statutory or University holidays are excluded.

Exceptions:

Examinations will not be scheduled on the Saturday following Good Friday when that day falls within the examination schedule or the Saturday of the Civic Day weekend.

The first Sunday within the examination period may be used when required to accommodate the prescribed number of examination days in the Fall Term.

14. That Online Course Examination Days in each term be the first consecutive Friday and Saturday in the examination period.

Rationale for Exceptions

Rule 12

The Online Course Examinations for Spring 2022 have been moved to the second consecutive Friday and Saturday in the examination period due to the Civic Day weekend.

Prepared by:

C. Newell Kelly, Registrar

December 2021

Appendix 2: Revised Undergraduate and Graduate Studies Calendar Text

(bold = new; strikeout=deleted)

Undergraduate Studies Academic Calendar

Calendar page: <https://ugradcalendar.uwaterloo.ca/page/uWaterloo-Undergraduate-Calendar-Access>

About the Calendar

The Undergraduate Studies Academic Calendar (the “Calendar”) is the primary contractual document between undergraduate students and the University of Waterloo. Students are advised that in addition to the Calendar, students’ relationships with the University are governed by University Policies, guidelines, and academic regulations that are established by the University under its governing bodies.

The Calendar provides official information about **admissions**, courses, programs and plans, related **Policies**, **guidelines**, and **academic** regulations for both students and applicants, as well as general information about the University. By the act of registration each student becomes bound by the **University Policies of the University of Waterloo, guidelines, and academic regulations established by the University’s governing bodies**. Students are responsible for familiarizing themselves with the **Policies, guidelines, and academic** regulations, general information, and specific requirements contained in the Calendar.

The *University of Waterloo Act*, SO 1972, c. 200,s.11 (“Act”) establishes two governing bodies for the University: the Board of Governors and the Senate. The Act further defines the membership of the two governing bodies to include representatives who are administrators, faculty members, graduate students, staff, and undergraduate students. The Act identifies the inclusion of these representatives “to achieve more fully the objects of the University” and to “broaden the representation on the said governing bodies.”

The University’s effective governance is predicated on the engagement of its stakeholders in decision-making affecting University operations. That notwithstanding, from time to time it may be necessary to implement changes to University operations, including those governed by this Calendar, in timelines and through processes that are atypical but still subject to the authority of Senate or its delegate bodies or, where appropriate, the Board of Governors.

The University is also bound, in all of its activities, by the Ontario *Human Rights Code*, RSO 1990, c H.19.

The University reserves the right to change without notice any information contained in this Calendar, including but not limited to that related to tuition and other fees, standards of admission, course delivery or format, continuation of study, and the offering or requirements for the granting of degrees, diplomas, or certificates in any or all of its programs.

In these instances, the University of Waterloo shall make reasonable efforts to notify students of such changes as soon as practical.

~~The course listings and academic programs and plans described in the Calendar represent Senate approved requirements and electives for completion of degree requirements. The Senate and Board of Governors of the University of Waterloo reserve the right to invoke changes in this Calendar at any time without prior notice. The Registrar has authority to make editorial changes. Changes made after publication are noted on the Amendments page.~~

Calendar page: <https://ugradcalendar.uwaterloo.ca/page/uWaterloo-Jurisdiction>

The University of Waterloo exercises its statutory jurisdiction and authority with respect to the operation, protection, and control of its property and plant, and the regulation of persons on campus insofar as is necessary to ensure the orderly performance of the University's functions.

The University reserves the right to

- refuse admission or readmission to any ~~candidate or to~~ **applicant who demonstrates behaviours or activities that are inconsistent with the values of the University, as articulated in University Policies and guidelines, and as assessed by the Office of the Registrar, in consultation with the appropriate associate dean, the Secretariat, and Legal and Immigration Services.**
- **pursue disciplinary action including but without limitation requiring** ~~require~~ a student to withdraw when a student demonstrates behaviours or activities that are non-compliant with University Policies or guidelines, including but not limited to those related to the safety of the University community; or ~~when, in the opinion of University officials, a student poses a danger to the University community.~~
- require a student to withdraw from a **program or course(s)** for academic or other reasons **as directed by University Policies, guidelines, or academic regulations.**

Access to Programs, Plans, and Courses

The publication of this Calendar does not bind the University to the provision of courses, programs, schedules of study, or facilities as listed herein.

Practical **or unforeseen** circumstances, such as significant budget shortfalls or the unavailability of qualified personnel, may restrict the actual choices available to students when compared with those listed in the Calendar or in other University publications.

- The University reserves the right to limit access to, or to withdraw, courses or programs/plans.
- In such circumstances the University will endeavour, to the best of its ability, to enable students to complete their degree requirements in a satisfactory manner.
- In the event that existing resources make it necessary to limit admission to a program or plan, the admission process will be based on competition for the spaces available.

Disruptive Events

The University may face disruptive events beyond its reasonable control, such as (without limitation) strikes, lock-outs, floods, severe weather, disease or health emergencies, and malicious acts including through the Internet.

In the event that the University ~~must~~ takes decisions in **the** face of **such major** disruptive events ~~beyond its control~~, it will do so **having reasonable regard to, among other things, on** the direction of medical or other authorities, as appropriate, and will use its ~~best~~ **reasonable** efforts to minimize the academic consequences to its students.

- **Tuition and mandatory fees:**
 - **Continue to be set regardless of the method of instruction.**
 - **Will not be refunded or adjusted in the event instruction occurs by an alternate delivery model for all or any part of the academic year.**
 - **Will be refunded in the event students voluntarily withdraw for the remainder of the term, in accordance with standard withdrawal timelines.**
- The University may revise, at any time, the format of course offerings or academic milestones such that courses or milestones are offered in whole or in part on an alternate delivery model to in-person classes, in accordance with university policies, which are subject to change from time to time.

COVID-19 Pandemic

In March 2020, the World Health Organization declared a global pandemic of the virus leading to COVID-19. Members of the University community, including ^{26 of 48} students and employees, are asked to and expected to abide

by the guidelines and recommendations of the local public health authorities, as well as any guidelines or rules that the University implements in an effort to reduce the public health risk posed by the COVID-19 pandemic. The circumstances of the pandemic continue to be unpredictable and evolving. The University community must recognize that risks exist, including the risk of contracting COVID-19, and that such risks cannot be eliminated.

Graduate Studies Academic Calendar

Current Graduate Studies Academic Calendar (GSAC) page (include the link to the web pagewhere the changes are to be made):

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

<https://uwaterloo.ca/graduate-studies-academic-calendar/general-information-and-regulations/important-notice>

(underline=new; strikeout=deleted)

Current Graduate Studies Academic Calendar content:	Proposed Graduate Studies Academic Calendar content:
<p>Graduate Studies Academic Calendar</p> <p>This is the homepage for the University of Waterloo Graduate Studies Academic Calendar.</p> <p>The Graduate Studies Academic Calendar is the main contractual document between the student and the University. Material provided by a department/Faculty, which is additional to that contained in the Graduate Studies</p>	<p>Graduate Studies Academic Calendar</p> <p>This is the homepage for the University of Waterloo Graduate Studies Academic Calendar.</p> <p>The Graduate Studies Academic Calendar <u>(the “Calendar”)</u> is the <u>primary</u> contractual document between <u>graduate students</u> and the University <u>of Waterloo</u>. Students are advised that in addition to the <u>Calendar</u>, students’ relationships with the <u>University</u> are governed by <u>University Policies</u>.</p>

~~Academic Calendar, is also deemed to be a university/student contract.~~

Important notices

Disclaimer

~~The course listings and academic programs described in the Calendar represent Senate-approved requirements for the completion of graduate degrees. Circumstances beyond the control of the University may result in restrictions in the number and range of course and program choices, or other resources available to students as compared with those listed herein. Prospective students or new registrants should consult the most current printed or electronic information available from Graduate Studies and Postdoctoral Affairs (GSPA) or the various academic departments. Department Graduate Officers should be consulted by applicants prior to submission of their application to graduate studies, and by currently registered students prior to course selection.~~

University jurisdiction

~~The University exercises its statutory jurisdiction and authority with respect to the operations, protection and control of its property and plant and the regulation of persons on campus insofar as is necessary to ensure the orderly performance of the University's functions.~~

~~All members of the University community, as members of society at large, are subject to the law (federal, provincial, municipal) with respect to their actions, whether those actions occur on or off campus.~~

~~By registering and paying fees, students assume responsibility for knowing the regulations and pertinent procedures as set forth in this calendar.~~

~~The University reserves the right to require a student to withdraw from a program for academic reasons.~~

guidelines, and academic regulations that are established by the University under its governing bodies.

Important notices

Disclaimer

The Graduate Studies Academic Calendar (the "Calendar") provides official information about admissions, courses, academic programs, related Policies, guidelines, and academic regulations for both students and applicants, as well as general information about the University.

By the act of registration each student becomes bound by the University Policies, guidelines, and academic regulations established by the University's governing bodies. Students are responsible for familiarizing themselves with the Policies, guidelines, and academic regulations, general information, and specific requirements contained in the Calendar.

The *University of Waterloo Act*, SO 1972, c. 200, s. 11 ("Act") establishes two governing bodies for the University: the Board of Governors and the Senate. The Act further defines the membership of the two governing bodies to include representatives who are administrators, faculty members, graduate students, staff and undergraduate students. The Act identifies the inclusion of these representatives "to achieve more fully the objects of the University" and to "broaden the representation on the said governing bodies."

The University's effective governance is predicated on the engagement of its stakeholders in decision-making affecting University operations. That notwithstanding, from time to time it may be necessary to implement changes to University operations, including those governed by this Calendar, in timelines and through processes that are atypical but still subject to the authority of Senate or its delegate bodies or, where appropriate, the Board of Governors.

Current Graduate Studies Academic Calendar content:	Proposed Graduate Studies Academic Calendar content:
<p>The Senate and Board of Governors of the University of Waterloo reserve the right to invoke changes in this Calendar, in either its printed or electronic form, at any time without prior notice.</p>	<p>The University is also bound, in all of its activities, by the Ontario <i>Human Rights Code</i>, RSO 1990, c H.19.</p> <p>The University reserves the right to change without notice any information contained in this Calendar, including but not limited to that related to tuition and other fees, standards of admission, course delivery or format, continuation of study, and the offering or requirements for the granting of degrees, diplomas, or certificates in any or all of its programs.</p> <p><u>In these instances, the University of Waterloo shall make reasonable efforts to notify students of such changes as soon as practical.</u></p> <p>University jurisdiction</p> <p>The University exercises its statutory jurisdiction and authority with respect to the operations, protection and control of its property and plant and the regulation of persons on campus insofar as is necessary to ensure the orderly performance of the University's functions.</p> <p><u>The University reserves the right to refuse admission or readmission to any candidate or to require a student to withdraw when a student demonstrates behaviors or activities that are non-compliant with University Policies including but not limited to those related to the safety of the University community. The University also reserves the right to require a student to withdraw from a program or course(s) for academic or other reasons as directed by University Policies, guidelines or academic regulations.</u></p> <ul style="list-style-type: none"> • refuse admission or readmission to any applicant who demonstrates behaviours or activities that are inconsistent with the values of the University, as articulated in University Policies and guidelines, and as assessed by Graduate Studies and Postdoctoral Affairs, in consultation with the appropriate associate dean, the Secretariat, and Legal and Immigration Services. • pursue disciplinary action including but without limitation requiring a student to withdraw when a student demonstrates behaviours or activities that are non-compliant with University Policies or guidelines, including but not limited to those

	<p>related to the safety of the University community; or</p> <ul style="list-style-type: none">• require a student to withdraw from a program or course(s) for academic or other reasons as directed by University Policy, guidelines, or academic regulations. <p><u>Access to Programs and Courses</u></p> <p><u>The publication of this Calendar does not bind the University to the provision of courses, programs, schedules of study, or facilities as listed herein.</u></p> <p><u>Practical or unforeseen circumstances, such as significant budget shortfalls or the unavailability of qualified personnel, may restrict the actual choices available to students when compared</u></p>
--	---

Current Graduate Studies Academic Calendar content:	Proposed Graduate Studies Academic Calendar content:
	<p><u>with those listed in the Calendar or in other University publications.</u></p> <ul style="list-style-type: none"> • <u>The University reserves the right to limit access to, or to withdraw, courses or programs.</u> • <u>In such circumstances the University will endeavour, to the best of its ability, to enable students to complete their degree requirements in a satisfactory manner.</u> • <u>In the event that existing resources make it necessary to limit admission to a program, the admission process will be based on competition for the spaces available.</u> <p><u>Disruptive Events</u></p> <p><u>The University may face disruptive events beyond its reasonable control, such as (without limitation) strikes, lock-outs, floods, severe weather, disease or health emergencies, and malicious acts including through the Internet.</u></p> <p><u>In the event that the University takes decisions in the face of such disruptive events, it will do so having reasonable regard to, among other things, the direction of medical or other authorities, as appropriate, and will use its reasonable efforts to minimize the academic consequences to its students.</u></p> <ul style="list-style-type: none"> • <u>Tuition and mandatory fees:</u> <ul style="list-style-type: none"> ○ <u>Continue to be set regardless of the method of instruction.</u> ○ <u>Will not be refunded or adjusted in the event instruction occurs by an alternate delivery model for all or any part of the academic year.</u> ○ <u>Will be refunded in the event students voluntarily withdraw for the remainder of the term, in accordance with standard withdrawal timelines.</u> • <u>The University may revise, at any time, the format of course offerings or academic milestones such that courses or milestones are offered in whole or in part on an alternate delivery model to in-person classes, in accordance with</u>

Current Graduate Studies Academic Calendar content:	Proposed Graduate Studies Academic Calendar content:
	<p data-bbox="997 300 1471 363"><u>University Policies, which are subject to change from time to time.</u></p> <p data-bbox="901 401 1170 432"><u>COVID-19 Pandemic</u></p> <p data-bbox="901 455 1511 919"><u>In March 2020, the World Health Organization declared a global pandemic of the virus leading to COVID-19. Members of the University community, including students and employees, are asked to and expected to abide by the guidelines and recommendations of the local public health authorities, as well as any guidelines or rules that the University implements in an effort to reduce the public health risk posed by the COVID-19 pandemic. The circumstances of the pandemic continue to be unpredictable and evolving. The University community must recognize that risks exist, including the risk of contracting COVID-19, and that such risks cannot be eliminated.</u></p>

University of Waterloo
SENATE UNDERGRADUATE COUNCIL
Report to Senate
28 February 2022

Senate Undergraduate Council met on 11 January 2022 and agreed to forward the following items to Senate for approval in the regular agenda.

Further details are available: <https://uwaterloo.ca/secretariat/committees-and-councils/senate-undergraduate-council>

FOR APPROVAL

ACADEMIC PLAN CHANGES

Faculty of Science **Honours Life Physics**

- 1. Motion:** That Senate approve the inactivation of the Honours Life Physics, Honours Life Physics, Biophysics Specialization, and Honours Life Physics, Medical Physics Specialization plans, both regular and co-operative, and the creation of a new plan, Honours Biological and Medical Physics (regular and co-operative), which combines aspects of both biophysics and medical physics, effective 1 September 2023.

Background and Rationale: Currently, there is low enrollment in the Life Physics plans, including both specializations, Biophysics and Medical Physics. Reducing all plans to one new plan, and removing some of the unique, low-enrolment courses required only by these plans, should help provide a common foundation in first year, and help enable the same career path for students more efficiently.

Currently, all Honours Physics plans require PHYS 121/122, except for most Honours Life Physics plans, which permit students to get through the entire program with PHYS 111/112. The proposed new plan, Honours Biological and Medical Physics, will require PHYS 121/122 over PHYS 111/112, thus providing a common foundation in first year for all students getting degrees in Physics, with the added benefit of making it easier to shift programs within Physics, if desired. The existing Life Physics plans have speciality courses PHYS 224 and 224L with low enrolment; Honours Biological and Medical Physics will require PHYS 242 and 242L, like every other program in physics, again, providing a common foundation and reducing teaching tasks.

Honours Biological and Medical Physics will provide students with an interdisciplinary background suitable for careers in both biophysics and medical physics, while at the same time, providing students with flexibility to specialize in diverse areas of biology and/or physics including, but not limited to, medical imaging and computational biophysics.

CS 114 is added to the requirements, and MATH 227 and MATH 228 remain requirements, as is currently required in both Life Physics specializations. As such, a slightly higher number of students are expected in MATH courses which are currently not required for Honours Life Physics. Approval has been sought and provided by the Faculty of Mathematics.

The ENGL/SPCOM 193 communication course is sequenced in the Year 1 winter term, whereas currently, all Honours Life Physics plans sequence the course in Year 1 fall. This change in student

volume in these courses for fall and winter, starting fall 2023, has been approved by the Faculty of Arts.

The plan will have 14.25 required units and another 7.0 elective units of which 3.5 must be chosen from program elective lists.

Proposed New Calendar Text

Honours Biological and Medical Physics (Regular and Co-op)

Honours Biological and Medical Physics is available in both systems of study: regular and co-operative.

Honours Biological and Medical Physics is an interdisciplinary plan offered jointly by the Department of Biology and the Department of Physics and Astronomy. It provides students with a background suitable for careers in both biophysics and medical physics, while providing flexibility to specialize in diverse areas of biology and/or physics, such as medical imaging and computational biophysics.

Continuing in Honours Biological and Medical Physics (regular and co-op) requires a minimum cumulative overall average of 60%, a minimum cumulative Biology average of 60%, and a minimum cumulative Physics average of 60%.

Successful completion requires:

1. 21.25 units distributed as follows:
 - 7.0 PHYS units: PHYS 121, PHYS 121L, PHYS 122, PHYS 122L, PHYS 225, PHYS 256, PHYS 256L, PHYS 280/BIOL 280, PHYS 233 or PHYS 234, PHYS 242, PHYS 242L, PHYS 358, PHYS 380, PHYS 383, PHYS 395, and PHYS 396
 - 3.0 CHEM units: CHEM 120, CHEM 120L, CHEM 123, CHEM 123L, CHEM 237, CHEM 237L, CHEM 266, and CHEM 266L
 - 2.0 MATH units: MATH 127, MATH 128, MATH 227, and MATH 228
 - 1.25 BIOL units: BIOL 130, BIOL 130L, and BIOL 273 OR BIOL 239
 - 0.5 CS unit: CS 114
 - 0.5 ENGL unit: ENGL 193/SPCOM 193
 - 7.0 elective units distributed as follows:
 - 2.0 units chosen from: PHYS 124, PHYS 249, PHYS 263, (PHYS 267 or STAT 202), PHYS 334, PHYS 335, PHYS 342, PHYS 349, PHYS 359, PHYS 461, PHYS 483
 - 1.5 units chosen from: BIOL 201, BIOL 239, BIOL 240, BIOL 240L, BIOL 266, BIOL 273, BIOL 308, BIOL 373, BIOL 373L, AMATH 382/BIOL 382, CHEM 267, CHEM 267L
 - 3.5 units chosen from any subject, with a maximum of 1.0 lab units
2. Enrolment in PHYS 10 when offered.
3. Co-operative program requirements (when applicable).

Notes

1. If BIOL 239 or BIOL 273 is used to satisfy the 1.25 BIOL units requirement, it can't be selected again to satisfy the elective unit requirement.
2. At least 1.0 elective lecture unit must be at the 400-level in PHYS or BIOL.
3. BIOL 240L, BIOL 373L and CHEM 267L require the lecture component as either a prerequisite or corequisite.

4. Students should consult their program advisor when considering program electives to focus their studies in areas of medical physics, biophysics, biomedical imaging, or computational biological and medical physics.
5. Students should also consult the graduate [CAMPEP accredited program](#) of interest for preferred prerequisites.

/rmw

David DeVidi
Associate Vice-President, Academic

This page intentionally left blank.

UNIVERSITY OF WATERLOO
2021/22 Operating Income Budget

Senate
February 28, 2022

	Estimated 2021/22		Estimated 2021/22	
	As at April 6, 2021	Increase / (Decrease)	As at February 1, 2022	
	\$000	\$000	\$000	
INCOME				
Operating Grant				
Enrolment	162,703	-	162,703	
SMA3 Performance Outcomes	87,920	-	87,920	
Special Purpose	5,389	216	5,605	
International Student Recovery	(5,676)	(222)	(5,898)	
Transfers to AFIW	(12,804)	-	(12,804)	
	<u>237,532</u>	<u>(6)</u>	<u>237,526</u>	
Tuition				
Domestic - Undergraduate	232,229	7,679	239,908	Note 1
Domestic - Graduate	29,611	(543)	29,068	
International - Undergraduate	261,933	(12,921)	249,012	Note 2
International - Graduate	48,150	5,381	53,531	Note 3
Transfers to AFIW	(20,522)	(307)	(20,829)	
	<u>551,401</u>	<u>(711)</u>	<u>550,690</u>	
Other Revenue				
Co-op Recovery	24,516	1,067	25,583	Note 4
Student Services Fees	15,625	(1,900)	13,725	Note 5
Research Overhead	10,607	-	10,607	
Interest	9,600	-	9,600	Note 6
Services to AFIW	3,909	36	3,945	
Miscellaneous Income	9,670	-	9,670	Note 7
	<u>73,927</u>	<u>(797)</u>	<u>73,130</u>	
Total Income	<u><u>862,860</u></u>	<u><u>(1,514)</u></u>	<u><u>861,346</u></u>	

Note 1: The increase in Domestic Undergraduate tuition is due to new students exceeding forecasts.

Note 2: The decrease in International Undergraduate tuition is due to new students lower than forecasts.

Note 3: The increase in International Graduate tuition is due to new students in Master's exceeding forecasts.

Note 4: The increase in Co-op Recovery Fees is primarily driven by undergraduate new students exceeding forecasts.

Note 5: The decrease in Student Services Fees is due to the pandemic related Spring 2021 waiver of the Athletics and Recreation fee.

Note 6: The investment income earned on operational funds is based on current and forecasted cash management and investment plans.

Note 7: Miscellaneous income includes application fees, rental income and various other fees such as transcripts, verification letters, etc.

UNIVERSITY OF WATERLOO
2021/22 Operating Expense Budget

Senate
February 28, 2022

	Estimated 2021/22 As at April 6, 2021 \$000	Increase / (Decrease) \$000	Estimated 2021/22 As at February 1, 2022 \$000	
EXPENSES				
Salary and Wages				
Current salaries and wages	491,577	-	491,577	
Benefits				
Current benefits	114,300	-	114,300	
Faculty professional expense reimbursement plan	2,792	-	2,792	
Parental leave supplement	2,500	-	2,500	
Total benefits	119,592	-	119,592	
Total salaries and benefits	611,169	-	611,169	
Student Support	56,467	-	56,467	
Other				
Capital Project Financing	2,000	-	2,000	
Insurance	3,000	-	3,000	
Library acquisitions	8,519	-	8,519	
Municipal taxes	3,050	-	3,050	
University Fund	43,100	-	43,100	Note 1
Utilities	22,925	-	22,925	
Total other	82,594	-	82,594	
Supplies and expenses	124,849	(1,650)	123,199	Note 2
Gross expenses	875,079	(1,650)	873,429	
Cost recoveries	(11,520)	-	(11,520)	Note 3
Estimated net expenses	863,559	(1,650)	861,909	
Estimated income	862,860		861,346	
Surplus (Unfunded deficit)	(699)		(563)	
% of income	-0.08%		-0.07%	

General: Opening 'Estimated 2021/22' budget balances have been regrouped for consistency with the current year presentation.

Note 1: The University Fund is used strategically for funding the University's strategic priorities and managing risk.

Note 2: Supplies and expenses reflects the budget for a variety of non-salary operating expenses of the Faculties and Academic Support Units such as supplies, enterprise software, maintenance, professional services, etc. The decrease in supplies and expenses is a result of updated business plans and expense management.

Note 3: Chargeouts and cost recoveries primarily include recoveries from Ancillary Enterprises (Housing, Food Services, Print & Retail Solutions, Watcard and Parking) for space charges and administrative support.

Vice-President, Research & International

Report to Senate

February 2022

Introduction

This report to Senate highlights successful research outputs and outcomes for the period December 2021 – January 2022 by the thematic areas as outlined in Waterloo's Strategic Plan 2020-25.

ADVANCING RESEARCH FOR GLOBAL IMPACT

R1 - Research strengths to solve real-world problems

Awards and Distinctions

- **[DarwinAI](#) and the Aspire Food Group awarded the International Research Center in Artificial Intelligence (IRCAI) Top 10 Outstanding Project for 2021**, using artificial intelligence (AI) to advance the UN's sustainability goals

DarwinAI, a company that was co-founded by **Alexander Wong** (Systems Design Engineering) and other Waterloo alumni, produces visual quality inspection solutions using their proprietary Explainable AI (XAI) technology for a wide range of global industries, including advanced manufacturing and industrial automation. The DarwinAI solution combines automated visual inspection and Explainable AI (XAI) with IoT sensor data analysis to optimize yield and provide real-time insights into plant conditions and operations. The technology will debut at the opening of Aspire's new commercial facility in London, Ontario, later this year, to [farm crickets](#) as a source of protein. Wong is leading the development of AI algorithms for the facility.

Tri-Council and Other Funding

- **Kelly Skinner, Applied Public Health Chair**, School of Public Health Sciences, \$1.15M over six years for a total of \$8 million

Dr. Skinner is one of seven new Applied Public Health Chairs to carry out research programs in important areas of public health and work with public health agencies to implement their findings in new or improved policies and programs. Dr. Skinner's research area focuses on the intersection between food security, climate change, and Indigenous communities in northern and remote regions. Applied Public Health Chairs are leaders in public health research.

R3 - Leveraging partnerships for research impact

- **Kelly Grindrod and Nancy Waite**, School of Pharmacy: Connect, Collaborate and Tailor (CCT): Co-designing multimedia tools for COVID-19 vaccinations and beyond, Immunization Partnership Fund, \$499,651

This is one of 67 new projects funded in the [Immunization Partnership Fund](#). This funding is designed to protect Canadians from COVID-19 and other vaccine preventable diseases by supporting health partners in three priority areas: 1) Building capacity of health care providers as vaccinators and vaccination promoters; 2) supporting community-based COVID-19 education, promotion, and outreach; and 3) building capacity for evidence-based vaccination communication.

Grindrod and Waite are expanding their ongoing work to develop multimedia tools that target vaccine hesitancy through their national Pharmacy5in5 (5in5) multimedia and online education program. Developed by Grindrod, 5in5 is an innovative computer-based education platform that incorporates game elements and user-centred design to help busy pharmacists build skills and confidence around medications and vaccines.

Dr. Nancy Waite, an expert in vaccine hesitancy and vaccine delivery in pharmacies and co-lead of the Ontario Pharmacy Evidence Network (OPEN), will guide the 5in5 team through a theory-informed model called “Connect-Collaborate-Tailor (CCT)” to develop materials aimed at addressing COVID-19 vaccine hesitancy.

Waterloo International Agreements

Waterloo International facilitated the signing of five agreements as follows:

1. China University of Petroleum Beijing (CUPB), Joint Academic 2+2, China.
2. China University of Mining & Technology (CUMT), Joint Academic 2+2, China.
3. Tokyo Institution of Technology (Tokyo Tech), Student Mobility, Exchange, Japan.
4. Kyoto University, Student Mobility, Exchange, Japan.
5. Directorate General of Higher Education of the Ministry of Education, Culture, Research, and Technology of the Republic of Indonesia (DGHERT), Scholarship Funding Agreement, Indonesia.

On October 13, 2021, Waterloo International and the Student Success Office presented to Australia National University on various international education projects that are underway in a session that was facilitated by the High Commission of Canada to Australia. The Australian National University and the University of Waterloo have a rich history of inter-institutional connections including a student exchange agreement and close research collaboration.

On November 25, 2021, Waterloo International hosted Paul Davidson, President and CEO of Universities Canada at the University's International Operations Council

meeting. Paul Davidson presented and discussed his perspectives on international education and how Universities Canada is active in internationalization.

Gateway for Enterprises to discover Innovation (GEDI)

Rogers

- Rogers provided \$1000 sponsorship to the Waterloo Formula Electric Team, a group of students from the University of Waterloo that compete in the Formula SAE electric and Formula Hybrid race car competition against several universities around the world (<http://waterlooformulaelectric.com/>)